Terraprobe

Consulting Geotechnical & Environmental Engineering
Construction Materials Inspection & Testing

PHASE II ENVIRONMENTAL SITE ASSESSMENT
6463 TRAFALGAR ROAD
MILTON, ONTARIO

Prepared for: **TRGI West Properties Inc.**
c/o Ruland Properties Inc.
7501 Keele Street Suite, 100
Vaughan, ON
L4K 1Y2

Attention: Mr. Jason Sheldon

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Terraprobe Inc.

Greater Toronto
11 Indell Lane
Brampton, Ontario L6T 3Y3
(905) 796-2650 Fax: 796-2250

Hamilton – Niagara
903 Barton Street, Unit 22
Stoney Creek, Ontario L8E 5P5
(905) 643-7560 Fax: 643-7559

Central Ontario
220 Bayview Drive, Unit 25
Barrie, Ontario L4N 4Y8
(705) 739-8355 Fax: 739-8369

Northern Ontario
1012 Kelly Lake Rd., Unit 1
Sudbury, Ontario P3E 5P4
(705) 670-0460 Fax: 670-0558

www.terraprobe.ca

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1.0 EXECUTIVE SUMMARY

York Trafalgar Management Corp. on behalf of TRGI West Properties Inc. c/o Ruland Properties Inc., retained Terraprobe Inc. (Terraprobe) to complete a Phase II Environmental Site Assessment (Phase II ESA) of the property located at 6463 Trafalgar Road in Milton, Ontario, hereinafter referred to as 'the Property'.

The Property is an irregular shaped parcel of land with an area of approximately 4.1 hectares (10.2 acres). For discussion purposes, Trafalgar Road is assumed to be aligned in a north-south direction. The Property has frontage along the east side of Trafalgar Road of approximately 116 m, and extends to the east approximately 300 m. The Property is bound to the north by rural residential properties, to the east and south by agricultural fields, and to the west by Trafalgar Road.

The Property is in mixed residential and agricultural Property Use as defined by the Ministry of the Environment, Conservation and Parks (MECP). It is understood that the potential future use of the Property will be for residential use. It is understood that the Phase II ESA is currently required for due diligence purposes related to the potential purchase of the Property. 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 of the MECP. If, in the future, an RSC becomes a requirement, the Phase II ESA report will require updates to satisfy all of the requirements of O.Reg. 153/04. The Phase II ESA is required to investigate the Areas of Potential Environmental Concern (APECs) for the Contaminants of Potential Concern (CoPCs) that have been identified on the Property.

A Phase I ESA completed on the Property by Terraprobe entitled, *"Phase I Environmental Site Assessment, 6463 Trafalgar Road, Milton, Ontario;* dated March 9, 2022; File No. 7-22-0008-41", indicated two (2) 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 1 Site Condition Standards for Residential, Parkland, Institutional, Industrial, Commercial, and Community Property Use with coarse textured soils (MECP Table 1 SCS).
- Six (6) boreholes (BH1 to BH6) were completed between May 2nd and May 4th, 2022 extending to depths of 6.1 metres below ground surface (mbgs). Three (3) of the boreholes (BH1, BH3 and BH5) were instrumented with monitoring wells, installed at depths of 6.1 mbgs.
- Based on water level measurements on May 26, 2022, the ground water elevation at all three (3) monitoring wells was 186.7 masl.
- In general the boreholes encountered surficial topsoil and fill material overlying clayey silt glacial till, silts and sands, and a lower clayey silt glacial till stratum.

- No exceedances of the applicable Site Conditions Standards were noted in the fill or native soil located on the Property.
- No exceedances of the applicable Site Condition Standards were noted in the ground water located on the Property.

2.0 INTRODUCTION

York Trafalgar Management Corp. on behalf of TRGI West Properties Inc. c/o Ruland Properties Inc., retained Terraprobe Inc. (Terraprobe) to complete a Phase II Environmental Site Assessment on the Property located at 6463 Trafalgar Road in Milton, Ontario (the Property). The general location of the Property is presented in Figure 1.

The Property is currently occupied by a residential dwelling and agricultural land. A gravel driveway extends east through the central portion of the Property and leads to a telephone tower located on the southeast corner of the Property. The Property is in mixed residential and agricultural Property Use as defined by the Ministry of the Environment, Conservation and Parks (MECP). It is understood that the potential future use of the Property will be for residential use. On this basis, a Record of Site Condition is not a mandatory requirement with the MECP as the Property is not undergoing a change in Property use to a more sensitive use. If, in the future, an RSC becomes a requirement, the Phase II ESA will require updates to satisfy the requirements of Ontario Regulation 153/04. The work was carried out for due diligence purposes related to the potential purchase of the Property.

2.1 Site Description

The Property is an irregular shaped parcel of land with an area of approximately 4.1 hectares (10.2 acres). For discussion purposes, Trafalgar Road is assumed to be aligned in a north-south direction. The Property has frontage along the east side of Trafalgar Road of approximately 116 m, and extends to the east approximately 300 m. The Property is bound to the north by rural residential properties, to the east and south by agricultural fields, and to the west by Trafalgar Road.

2.2 Property Ownership

The Property information is as follows:

Municipal Addresses	6463 Trafalgar Road, Milton
Legal Description	PT LT 8, CON 8 TRAF NS, Part 1, 20R6676; Milton/Trafalgar
PIN(s)	24938-0017 (LT)
Zoning	The Property is zoned A1 (Agricultural Zone) as per the Town of Milton Zoning By-law 144-2003.
Area	Approximately 4.1 hectares (10.2 acres)
Property Owner Information	Judith Will
Persons, other than Property Owner, who engaged the Qualified Person to conduct the Phase II ESA	Mr. York Gruehl York Trafalgar Management Corp. on behalf of TRGI West Properties Inc. c/o Ruland Properties Inc.

2.3 Current and Proposed Future Uses

The Property is currently occupied by a residential dwelling and agricultural land. A gravel driveway extends east through the central portion of the Property and leads to a telephone tower located on the southeast corner of the Property. The current property use would be considered mixed Residential and Agricultural Property Use as defined by O.Reg. 153/04.

Terraprobe understands that the proposed future use of the Property will be for Residential Property Use.

2.4 Applicable Site Condition Standard

The applicable soil and ground water Standards for the Property were determined to be those in Table 1 - Full Depth Background Site Condition Standards 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, coarse textured soil (MECP Table 1 SCS).

These are 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 located in, adjacent to, or within 30 m of an area of natural significance or provincially significant wetland.
- 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.

Correspondence with the Halton Region indicated that the Property was located within 30 m of an Environmentally Sensitive Area and therefore Table 1: Full Depth Background Site Condition Standards should be applied due to the presence of a natural heritage system located on the southwest portion of the Property.

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 (COPCs) 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 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

The ground surface elevation in the vicinity of the Property is approximately 190 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.

The nearest water body is a tributary of East Sixteen Mile Creek, located approximately 22 m southeast of the Property. East Sixteen Mile Creek located approximately 100 m southwest of the Property. The approximate depth to ground water is 3.0 to 4.0 m below ground surface as indicated by a well record within the Study Area. Ground water is interpreted to flow towards the southwest.

Based on published geological information for the general area, the near surface soil at and in the vicinity of the subject Property generally consists of Pleistocene age Halton Till, comprised predominantly of silt to silty clay, high in matrix carbonate content and clast poor.

The Borehole logs and the grain size analyses are found in Appendix A and B, respectfully.

3.2 Previous Investigation Review

Previous environmental investigations for the Property are summarized below:

Terraprobe has previously completed a Phase I ESA of the Property in March 2022. The results of the investigation were presented in the following report.

Report Title	Phase I Environmental Site Assessment, 6463 Trafalgar Road, Milton, Ontario
Report Date	March 9, 2022
Prepared By	Terraprobe Inc. File no 7-22-0008-41
Prepared For	TRGI West Properties Inc. c/o Ruland Properties Inc.

- 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.
- The Phase I ESA identified two (2) APECs on the Property caused by two (2) on-site PCAs. The APECs have been divided into two (2) area groups on the Property.
- A Phase II ESA was recommended in order to eliminate the concern of potential adverse environmental impact on the Phase I 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 (Ground-water, soil and/or sediment)
APEC 1: (On-Site) Former dwelling infilling	Area of former dwelling (southwest portion of Property)	#30 – Importation of Fill Material of Unknown Quality	On-site	Metals, Hydride Metals, ORPs, PHCs, VOCs, BTEX, PAHs, OCs	Soil and Ground Water
APEC 2: (On-Site) Historical agricultural use	Agricultural Portion of the Property	#40 – Pesticides (including herbicides, fungicides and anti-fouling agent) manufacturing, processing, bulk storage and large-scale applications	On-site	Metals, H-M, CN-, CR(VI), Hg, OCs	Soil and Ground Water

4.0 SCOPE OF THE INVESTIGATION

4.1 Overview of Site Investigation

In May 2022, Terraprobe conducted the following subsurface work at the Property. The subsurface work was completed as part of the concurrent Geotechnical Investigation to satisfy the requirements of the Phase II ESA:

- Completion of six (6) boreholes (BH1 to BH6) to a maximum depth of 6.1 m below existing grades.
- Installation of monitoring wells in three (3) boreholes (BH1, BH3 and BH5) to depths of 6.1 m.
- Laboratory analysis of selected soil samples for parameters including:
    - Metals
    - Hydride Metals
    - Other Regulated Parameters (ORPs)
        - Boron, hot water soluble (HWS)
        - 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)
- 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) monitoring wells (BH1, BH3 and BH5) for:
    - Metals
    - Hydride Metals
    - Other Regulated Parameters (ORPs)
        - 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 does not include the trip blank that was collected. Field protocols are provided in Appendix C.

Date	Scope of Investigation	Scope of Soil Analysis	Scope of Ground Water Analysis
May 2, 2022	• Drilled four (4) boreholes (BH1 to BH4) and sampled for soil • Installed two (2) monitoring wells (BH1 and BH3)	• 6 metals analyses • 6 H-M analyses • 6 ORPs analyses • 3 PHC analyses • 3 BTEX analyses • 3 VOC analyses • 3 PAH analyses • 4 OC Pest analyses	
May 3, 2022	• Drilled one (1) borehole (BH5) and sampled for soil • Installed one (1) monitoring wells (BH5)	• 1 metals analysis • 1 H-M analysis • 1 ORPs analysis • 1 OC Pest analysis	
May 4, 2022	• Drilled one (1) borehole (BH6) and sampled for soil	• 1 metals analysis • 1 H-M analysis • 1 ORPs analysis • 1 OC Pest analysis	
May 17, 2022	• Took water levels of all monitoring wells (BH1, BH3 and BH5) • Developed all monitoring wells (BH1, BH3 and BH5) • Surveyed all borehole and monitoring well locations		
May 26, 2022	• Took water levels of all monitoring wells (BH1, BH3 and BH5) • Stabilized and sampled all monitoring wells (BH1, BH3 and BH5)		• 4 metals analyses • 4 H-M analyses • 4 ORPs analyses • 2 VOC analyses • 2 PHCs analyses • 2 BTEX analyses • 3 OC Pest analyses • 2 PAH analyses
July 8, 2022	• Took water levels of all monitoring wells (BH1, BH3 and BH5) • Stabilized and sampled all monitoring wells (BH1, BH3 and BH5)		• 3 metals analyses

Notes:

- PHCs – Petroleum Hydrocarbons
- VOCs – Volatile Organic Compounds
- H-M – Hydride Metals
- PAHs – Polycyclic Aromatic Hydrocarbons
- BTEX – Benzene, Toluene, Ethylbenzene, Xylene
- OCs – Organochlorine Pesticides
- ORPs – Other Regulated Parameters (for soil include B-HWS, CN-, CrVI, Hg, pH, EC and SAR) (for ground water include CN-, CrVI, Hg, Na, Cl-, pH)

4.2 Media Investigated

Sampling and analysis was conducted for soil and ground water on the Property. No surface water bodies were present on the Property; therefore, sediment sampling and surface water sampling was not conducted as part of this investigation. Soil sampling of boreholes was conducted by use of a split spoon sampling device. Ground water samples were collected with a peristaltic pump.

4.3 Deviations from Sampling and Analysis Plan

There were no deviations from the sampling and analysis plan during the investigation.

4.4 Impediments

There were no impediments 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 investigation generally followed the methods outlined in the following documents:

- Ontario Ministry of the Environment, Conservation and Parks *"Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario"* (December 1996)

The methods used during the subsurface investigation did not differ from the associated standard operating procedures.

5.2 Drilling

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

Borehole	BH1 to BH6
Date of Work	May 2nd to 4th, 2022
Name of Contractor	Kodiak Drilling
Equipment Used	Track mounted drill rig (Geoprobe), 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

Soil samples for submission for analytical testing were collected from the split spoon samples. Samples were collected and submitted from fill and native soil, were applicable. Terraprobe personnel carried out all sampling of the materials. A clean pair of disposable latex gloves was worn for each sample.

The boreholes were sampled on the dates provided in the table below:

Sample ID	Depth / Elev. (m) / (masl)	Strata	Date Sampled	Soil							
				Metals	H-M	ORPs	VOCs	PHCs	BTEX	OC Pest	PAHs
BH1 SA1	0.0-0.6/ 188.6-188.0	Fill	May 2/22	✓	✓	✓				✓	✓
BH1 SA2	0.8-1.4/ 187.8-187.2	Fill	May 2/22				✓	✓	✓		
BH1 SA4	2.3-2.9/ 186.3-185.7	Native	May 2/22	✓	✓	✓					✓
BH1 SA5	3.1-3.7/ 185.5-184.9	Native	May 2/22				✓	✓	✓		
BH3 SA1	0.0-0.6/ 188.6-188.0	Fill	May 2/22	✓	✓	✓				✓	
BH3 SA2	0.8-1.4/ 187.8-187.2	Fill/Native	May 2/22				✓	✓	✓		
BH4 SA1	0.0-0.6/ 189.6-189.0	Fill	May 2/22	✓	✓	✓				✓	
BH4 SA2	0.8-1.4/ 188.8-188.2	Fill	May 2/22				✓	✓	✓		
BH5 SA1	0.0-0.6/ 188.5-187.9	Native	May 3/22	✓	✓	✓				✓	
BH6 SA1	0.0-0.6/ 188.2-187.6	Fill	May 4/22	✓	✓	✓				✓	
Dup 1 (BH4 SA1)	0.0-0.6/ 189.6-189.0	Fill	May 2/22	✓	✓	✓				✓	
Dup 2 (BH1 SA4)	2.3-2.9/ 186.3-185.7	Native	May 2/22	✓	✓	✓					✓
Dup 3 (BH1 SA5)	3.1-3.7/ 185.5-184.9	Native	May 2/22				✓	✓	✓		

5.4 Soil: 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 (BH1, BH3 and BH8) by a drilling sub-contractor on May 2nd and 3rd, 2022 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 steel monument protective casings. The well installation detail can be found on the Borehole Log (Appendix A).

5.6 Ground Water: Field Measurement of Water Quality Parameters

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.

The monitoring wells were sampled on the following dates for the parameters selected:

Monitoring Well	Screen/Sample Elevation (masl)	Date Sampled	Metals	H-M	ORPs	VOCs	PHCs	BTEX	OCs	PAHs
BH1	185.6-182.5	May 26/22	✓	✓	✓	✓	✓	✓		✓
BH3	185.6-182.5	May 26/22	✓	✓	✓				✓	
BH5	185.5-182.4	May 26/22	✓	✓	✓				✓	
Dup1 (BH5)	185.5-182.4	May 26/22	✓	✓	✓				✓	
Dup2 (BH1)	185.6-182.5	May 26/22				✓	✓	✓		✓

Notes: * ORPs included Hg, CN-, and Cr(VI) only

- PHCs – Petroleum Hydrocarbons
- VOCs – Volatile Organic Compounds
- H-M – Hydride Metals
- BTEX – Benzene, Toluene, Ethylbenzene, Xylene
- ORPs – Other Regulated Parameters (for soil include B-HWS, CN-, CrVI, Hg, pH,) (for ground water include CN-, CrVI, Hg, pH)

Terraprobe returned to the Property on July 8, 2022 and collected an additional round of ground water samples from each of the three (3) monitoring well locations, which were analysed for metals.

5.8 Analytical Testing

Analytical testing of soil and groundwater was conducted by AGAT Laboratories Ltd.

5.9 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

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

5.10 Quality Assurance and Quality Control Measures

Sample containers supplied by the Laboratory were used for all sampling conducted on the subject Property. All sampling containers were identified with laboratory supplied labels. Samples were placed in coolers with loose ice after collection for transportation to the laboratory. Chains of Custody were completed for all samples submitted to the laboratory. Sample hold times were met for all submitted soil and groundwater samples.

During soil sampling, the split spoon sampling device was washed between samples to minimize cross-contamination. While handling all samples Terraprobe staff used nitrile gloves. Fresh gloves were used for each sample to avoid cross contamination.

6.0 REVIEW AND EVALUATION

Borehole elevations are provided relative to geodetic datum. The horizontal coordinates are reported relative to the Universal Transverse Mercator geographic coordinate system (NAD 83 Zone 17T). The boreholes were surveyed for horizontal coordinates using a hand held GPS and geodetic elevations were surveyed using a Trimble R10 Global Navigation Satellite System (GNSS).

The subsurface soil and ground water conditions encountered in the boreholes are presented on the attached Borehole Logs. 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. The subsurface conditions have been confirmed in a series of widely spaced boreholes, and will vary between and beyond the borehole locations. The discussion has been simplified in terms of the major soil strata.

6.1 Geology

The following stratigraphy is based on the borehole findings from six (6) boreholes completed at the Property between May 2nd to 4th, 2022, as well as the geotechnical laboratory testing conducted on selected representative soil samples.

In general, four main stratigraphic units were encountered which included surficial topsoil and fill material overlying clayey silt glacial till, silts and sands, and a lower clayey silt glacial till stratum.

6.1.1 Topsoil

Boreholes 1, 2, 5 and 6 encountered between 75 mm and 800 mm of surficial topsoil.

6.1.2 Earth Fill

Underlying the topsoil Boreholes 1, 2, and 6 encountered earth fill extending to depths of 0.8 to 1.8 m below grade (Elev. 186.8 to 187.8 masl). The earth fill generally consisted of silty sand with varying amounts of gravel. The silty sand earth fill was generally brown and moist.

Boreholes 3 and 4 encountered earth fill at the surface, extending to depths of 0.9 to 1.8 m below grade. The earth fill at Boreholes 3 and 4 consisted of clayey silt with trace to some sand, rootlets and intermixed topsoil, and was generally brown and moist.

Standard Penetration Testing carried out within the earth fill determined N values ranging from 1 to 9 blows per 0.3 m, indicating a very loose to loose state of packing. The in-situ water content of the samples of earth fill recovered from ranged from approximately 16 to 23 percent.

6.1.3 Upper Clayey Silt (Glacial Till)

Underlying the topsoil and earth fill all boreholes encountered a stratum of clayey silt glacial till with trace sand and gravel extending to depths of 3.8 to 6.7 m below existing grade (Elev. 181.7 to 184.9 masl). The clayey silt till was generally brown and moist, turning grey and wet between 3.0 and 3.8 m below grade. Wet sand seams within the clayey silt glacial till were observed between 4.3 and 4.9 m in Boreholes 1, 2, 3 and 5. Boreholes 1, 2, and 3 were terminated within this stratum. Standard Penetration testing carried out within the clayey silt till determined N values ranging from 13 to greater than 50 blows per 0.3 m, indicating a stiff to hard consistency. The in-situ water content of the samples of clayey silt till recovered from the boreholes ranged from approximately 9 to 26 percent.

6.1.4 Silts and Sands

Underlying the clayey silt glacial till, Borehole 4 encountered a stratum of sandy silt with trace gravel, extending to a depth of 6.7 m below grade (Elev. 182.9 masl), which was the termination depth of the borehole. The Silty sand glacial till was generally grey and wet. Standard Penetration Testing carried out within the silty sand glacial till indicated a single N value of 41, indicating a dense state of packing. The in-situ water content of the silty sand glacial till was approximately 12 percent.

Underlying the clayey silt glacial till, Boreholes 5 and 6 encountered a stratum of silty to sandy silt, extending to depths of 4.6 to 6.4 m below grade (Elev. 182.1 to 183.6 masl). The silt was generally grey and wet. Standard Penetration Testing carried out within the silt indicated N value ranging from 15 to 21 blows per 0.3 m, indicating a compact state of packing. The in-situ water content of the silt ranged from approximately 18 to 25 percent.

6.1.5 Lower Clayey Silt (Glacial Till)

Underlying the silt/sandy silt, Boreholes 5 and 6 encountered a lower stratum of clayey silt glacial till with trace sand and gravel extending to depths of 6.7 m below existing grade (Elev. 181.5 to 181.8 masl). The lower clayey silt till was generally grey and moist. Boreholes 5 and 6 were terminated within this stratum. Standard Penetration testing carried out within the lower clayey silt till determined N values ranging from 29 to greater than 50 blows per 0.3 m, indicating a very stiff to hard consistency. The in-situ water content of the samples of clayey silt till recovered from the boreholes ranged from approximately 11 to 14 percent.

6.2 Ground Water: Elevations and Flow Direction

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 (BH101, BH102 and BH108) using a Solinst interface probe.

Well ID	BH1		BH3		BH5	
Well Depth (mbgs)	6.1		6.1		6.1	
Ground Elev. (masl)	188.6		188.6		188.5	
Top of Screen (masl)	185.6		185.6		185.5	
Bottom of Screen (masl)	182.5		182.5		182.4	
Date	WL (mbgs)	Elev. (masl)	WL (mbgs)	Elev. (masl)	WL (mbgs)	Elev. (masl)
2022/05/17	1.8	186.8	1.8	186.8	1.6	186.9
2022/05/26	1.9	186.7	1.9	186.7	1.8	186.7
2022/07/08	2.5	186.1	2.5	186.1	2.4	186.1

Based on the measurements in the monitoring wells, the ground water table is relatively stable at an elevation of 186.7 masl.

Ground water levels measured on May 26, 2022 by Terraprobe were used to interpret ground water flow direction beneath the Property. The ground water flow elevation at all monitoring wells was 186.7 masl. Ground water flow was not confirmed based on the static water level in the monitoring wells. The measured ground water elevations are presented on Figure 3.

The local ground water flow direction may fluctuate seasonally depending on the magnitude of precipitation and surface runoff, which will affect infiltration of surface water in particular at times such as significant snowmelt and rainfall events. Based on the local topography and the development level of the Property and the surrounding properties, only minor fluctuations of the natural ground water flow direction are expected.

6.3 Ground Water: Hydraulic Gradients and Hydraulic Conductivity

The soils on the Property were generally in the clayey silt range, and would thus likely have hydraulic conductivities in the range of 10^{-7} to 10^{-9} m/s or lower. According to Freeze and Cherry (1979), the typical hydraulic conductivities of the strata investigated at the Property are:

- Fill 10^{-6} m/s
- Clayey Silt 10^{-7} m/s to 10^{-9} m/s

The horizontal hydraulic gradient cannot be calculated as the ground water elevation was the same at all three (3) monitoring well locations on May 26, 2022.

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 different stratigraphy.

6.4 Soil Texture

Four (4) grain size analyses were completed to determine soil texture.

Sample ID	Sample Depth (m)	Soil Type	% smaller then 75 micrometres	Soil Texture as per MECP standard
BH1 SA6	3.8-4.4	Silt and clay some sand trace gravel	82.3	Medium to Fine
BH3 SA3	1.5-2.1	Clayey silt with sand trace gravel	73.6	Medium to Fine
BH4 SA8	6.1-6.7	Silty sand trace gravel and clay	39.2	Coarse
BH5 SA7	4.6-5.2	Sand and silt trace clay	63.9	Medium to Fine

The results indicate that the silt and clay, clayey silt, and sand and silt from depths of approximately 1.4 to 4.4 were classified as medium to fine textured soil. On this basis, at least two thirds of the soil on the property was considered medium to fine textured soil. However, the more conservative coarse textured soil standards were used as they had no impact on the amount or type of exceedances. Grain size analyses are provided in Appendix B.

6.5 Soil: Field Screening

Soil vapour field screening was conducted on all soil samples. Vapour concentrations for the samples collected in the field ranged from 0 ppm to 5 ppm. Complete soil field screening results are presented on the Borehole Log in Appendix A. No staining or odorous soils were observed during drilling.

6.6 Soil Quality

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

Metals in Soil

A total of eight (8) samples including duplicates were submitted for analysis of metals and compared to the MECP Table 1 SCS. No metal exceedances of the MECP Table 1 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 C.

Hydride Metals in Soil

A total of eight (8) samples including duplicates were submitted for analysis of hydride metals and compared to the MECP Table 1 SCS. No hydride metals exceedances of the MECP Table 1 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 C.

Other Regulated Parameters in Soil

A total of eight (8) ORP samples including duplicates were submitted for analysis of ORPs and compared to the MECP Table 1 SCS. No ORP exceedances of the MECP Table 1 SCS were noted in the samples analyzed. All ORP samples are summarized in Table 1 and the laboratory certificates of analysis are presented in Appendix C.

Volatile Organic Compounds in Soil

A total of five (5) samples including duplicates were submitted for analysis of volatile organic compounds and compared to the MECP Table 1 SCS. No VOC exceedances of the MECP Table 1 SCS were noted in the samples analyzed. All VOC samples are summarized in Table 2 and the laboratory certificates of analysis are provided in Appendix C.

Petroleum Hydrocarbons in Soil

A total of five (5) samples including duplicates were submitted for analysis of petroleum hydrocarbons and compared to the MECP Table 1 SCS. No petroleum hydrocarbon exceedances of the MECP Table 1 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 C.

Benzene, Toluene, Ethylbenzene, and Xylenes in Soil

A total of five (5) samples including duplicates were submitted for analysis of BTEX and compared to the MECP Table 1 SCS. No BTEX exceedances of the MECP Table 1 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 C.

Organochlorine Pesticides in Soil

A total of six (6) samples including duplicates were submitted for analysis of organochlorine pesticides and compared to the MECP Table 1 SCS. No OC Pest exceedances of the MECP Table 1 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 C.

Polycyclic Aromatic Hydrocarbons in Soil

A total of three (3) samples including duplicates were submitted for analysis of polycyclic aromatic hydrocarbons and compared to the MECP Table 1 SCS. No PAH exceedances of the MECP Table 1 SCS were noted in the samples analyzed. All PAH samples are summarized in Table 6 and the laboratory certificates of analysis are provided in Appendix C.

6.7 Ground Water Quality

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

- Metals
- Hydride Metals
- Other Regulated Parameters (ORPs)
  - Sodium
  - Mercury (Hg)
  - Cyanide (CN-)
  - Hexavalent Chromium (CrVI)
  - pH
  - Chloride
- Volatile Organic Compounds (VOCs)
- Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)
- Petroleum Hydrocarbons (PHCs)
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Organochlorine Pesticides (OC Pest)

Ground water samples were collected from the three (3) monitoring wells (BH1, BH3 and BH5) and submitted to a laboratory for chemical analysis. The results of the analyses were compared to the applicable MECP Site Condition Standards for the Property (MECP Table 1 SCS).

Metals in Ground Water

A total of four (4) samples including duplicates were submitted for analysis of metals and compared to the MECP Table 1 SCS. The following metal exceedances of the MECP Table 1 SCS were noted in the samples analyzed:

Sample ID	Parameter	MECP Table 1 SCS (µg/L)	Result May 26, 2022 (µg/L)	Result July 8, 2022
BH1	Copper	5	**11.7**	Meets
BH3	Copper	5	**33.4**	Meets
BH5	Copper	5	**21.9**	Meets

All metals samples are summarized in Table 7 and the laboratory certificates of analysis are provided in Appendix D.

Initially, copper exceedances were noted in the ground water at all well locations. A freshly drilled well has new mineral faces exposed as a result of drilling breaking rock/exposing unweathered soil. It is not uncommon to get a short-lived burst of high metals that tapers off over time as the newly exposed mineral faces weather/get hard water deposits on them. Concentrations of copper and other metals being slightly elevated have frequently been associated with ground water samples collected from till above the Queenston Shale elsewhere in Southern Ontario and do not necessarily imply impact. A second round of ground water samples were collected on July 8, 2022 and analyzed for metals. The results indicated that copper met the MECP Table 1 SCS.

As a result, the apparent initial exceedances of the MECP Table 1 SCS for copper are attributed to background conditions associated with freshly exposed mineral faces. On this basis, the QP believes copper is not a contaminant of concern in the ground water.

Hydride Metals in Ground Water

A total of four (4) samples including duplicates were submitted for analysis of hydride metals and compared to the MECP Table 1 SCS. No hydride metals exceedances of the MECP Table 1 SCS were noted in the samples analyzed. All hydride metals samples are summarized in Table 7 and the laboratory certificates of analysis are provided in Appendix D.

Other Regulated Parameters in Ground Water

A total of four (4) ORP samples including duplicates were submitted for analysis of ORPs and compared to the MECP Table 1 SCS. No ORP exceedances of the MECP Table 1 SCS were noted in the samples

analyzed. All ORP samples are summarized in Table 7 and the laboratory certificates of analysis are presented in Appendix D.

Volatile Organic Compounds in Ground Water

A total of two (2) samples including duplicates were submitted for analysis of volatile organic compounds and compared to the MECP Table 1 SCS. No VOC exceedances of the MECP Table 1 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 D.

Petroleum Hydrocarbons in Soil

A total of two (2) samples including duplicates were submitted for analysis of petroleum hydrocarbons and compared to the MECP Table 1 SCS. No petroleum hydrocarbon exceedances of the MECP Table 1 SCS were noted in the samples analyzed. All PHC samples are summarized in Table 9 and the laboratory certificates of analysis are provided in Appendix D.

Benzene, Toluene, Ethylbenzene, and Xylenes in Soil

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

Organochlorine Pesticides in Soil

A total of three (3) samples including duplicates were submitted for analysis of organochlorine pesticides and compared to the MECP Table 1 SCS. No OC Pest exceedances of the MECP Table 1 SCS were noted in the samples analyzed. All OC Pest samples are summarized in Table 11 and the laboratory certificates of analysis are provided in Appendix D.

Polycyclic Aromatic Hydrocarbons in Soil

A total of two (2) samples including duplicates were submitted for analysis of polycyclic aromatic hydrocarbons and compared to the MECP Table 1 SCS. No PAH exceedances of the MECP Table 1 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 D.

6.8 Sediment Quality

No sediment sampling was conducted as part of this investigation.

6.9 Quality Assurance and Quality Control Results

In general, samples were handled in accordance with the Analytical Protocol with respect to holding time, preservation method, storage requirement and sample container type. Laboratory results were compared to MECP standards for quality control under Ontario Regulation 153/04 which require laboratory results to meet specific method detection limit (MDL) requirements. In general, the sampling and analyses performed conformed with the following:

- Ministry of the Environment Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario.
- Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.I of the Environmental Protection Act of Ontario.

The objectives of the investigation were met. All laboratory Certificates of Analysis are provided in Appendix C.

7.0 CONCLUSIONS

York Trafalgar Management Corp. on behalf of TRGI West Properties Inc. c/o Ruland Properties Inc., retained Terraprobe Inc. (Terraprobe) to complete a Phase II Environmental Site Assessment (Phase II ESA) of the property located at 6463 Trafalgar Road in Milton, Ontario, hereinafter referred to as 'the Property'.

The Property is an irregular shaped parcel of land with an area of approximately 4.1 hectares (10.2 acres). For discussion purposes, Trafalgar Road is assumed to be aligned in a north-south direction. The Property has frontage along the east side of Trafalgar Road of approximately 116 m, and extends to the east approximately 300 m. The Property is bound to the north by rural residential properties, to the east and south by agricultural fields, and to the west by Trafalgar Road.

The Property is in mixed residential and agricultural Property Use as defined by the Ministry of the Environment, Conservation and Parks (MECP). It is understood that the potential future use of the Property will be for residential use. It is understood that the Phase II ESA is currently required for due diligence purposes related to the potential purchase of the Property. 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 of the MECP. If, in the future, an RSC becomes a requirement, the Phase II ESA report will require updates to satisfy all of the requirements of O.Reg. 153/04. The Phase II ESA is required to investigate the Areas of Potential Environmental Concern (APECs) for the Contaminants of Potential Concern (CoPCs) that have been identified on the Property.

A Phase I ESA completed on the Property by Terraprobe entitled, *"Phase I Environmental Site Assessment, 6463 Trafalgar Road, Milton, Ontario;* dated March 9, 2022; File No. 7-22-0008-41", indicated two (2) 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 1 Site Condition Standards for Residential, Parkland, Institutional, Industrial, Commercial, and Community Property Use with coarse textured soils (MECP Table 1 SCS).
- Six (6) boreholes (BH1 to BH6) were completed between May 2nd and May 4th, 2022 extending to depths of 6.1 metres below ground surface (mbgs). Three (3) of the boreholes (BH1, BH3 and BH5) were instrumented with monitoring wells, installed at depths of 6.1 mbgs.
- Based on water level measurements on May 26, 2022, the ground water elevation at all three (3) monitoring wells was 186.7 masl.
- In general, the boreholes encountered surficial topsoil and fill material overlying clayey silt glacial till, silts and sands, and a lower clayey silt glacial till stratum.

- No exceedances of the applicable Site Conditions Standards were noted in the fill or native soil located on the Property.
- No exceedances of the applicable Site Condition Standards were noted in the ground water located on the Property.

7.1 Signatures

The Phase II ESA has been 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 and reviewed, and on an assessment of the existing conditions on the Property.

The Phase II ESA was not completed in accordance with Ontario Regulation (O. Reg.) 153/04 (Records of Site Condition–Part XV.1 of the Environmental Protection Act). Should a Record of Site Condition (RSC) be a requirement in the future, additional investigations will be required to meet O.Reg. 153/04.

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., C.Tech.
Environmental Scientist

Amber Brooks, B.Sc.
Project Manager

David Mably, P.Eng
Senior Environmental Engineer

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.1 of the Environmental Protection Act.*

6. Terraprobe, March 9, 2022. *Draft Phase I Environmental Site Assessment, 6463 Trafalgar Road, Milton, Ontario.* File no. 7-22-0008-41.

9.0 LIMITATIONS

This report was prepared for the exclusive use of York Trafalgar Management Corp., TRGI West Properties Inc. c/o Ruland Properties Inc. and their legal counsel and is intended to provide an assessment of the environmental condition on the property located at 6463 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 site may have been adversely affected by past and present practices at the site, and/or those of the surrounding properties prior to purchase 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.

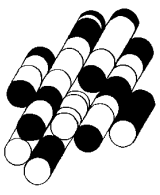
The assessment should not be considered a comprehensive audit that eliminates all risks of encountering environmental problems. The information presented in this report is based on information collected during the completion of the investigation conducted by Terraprobe Inc. It is based on conditions at the subject 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.

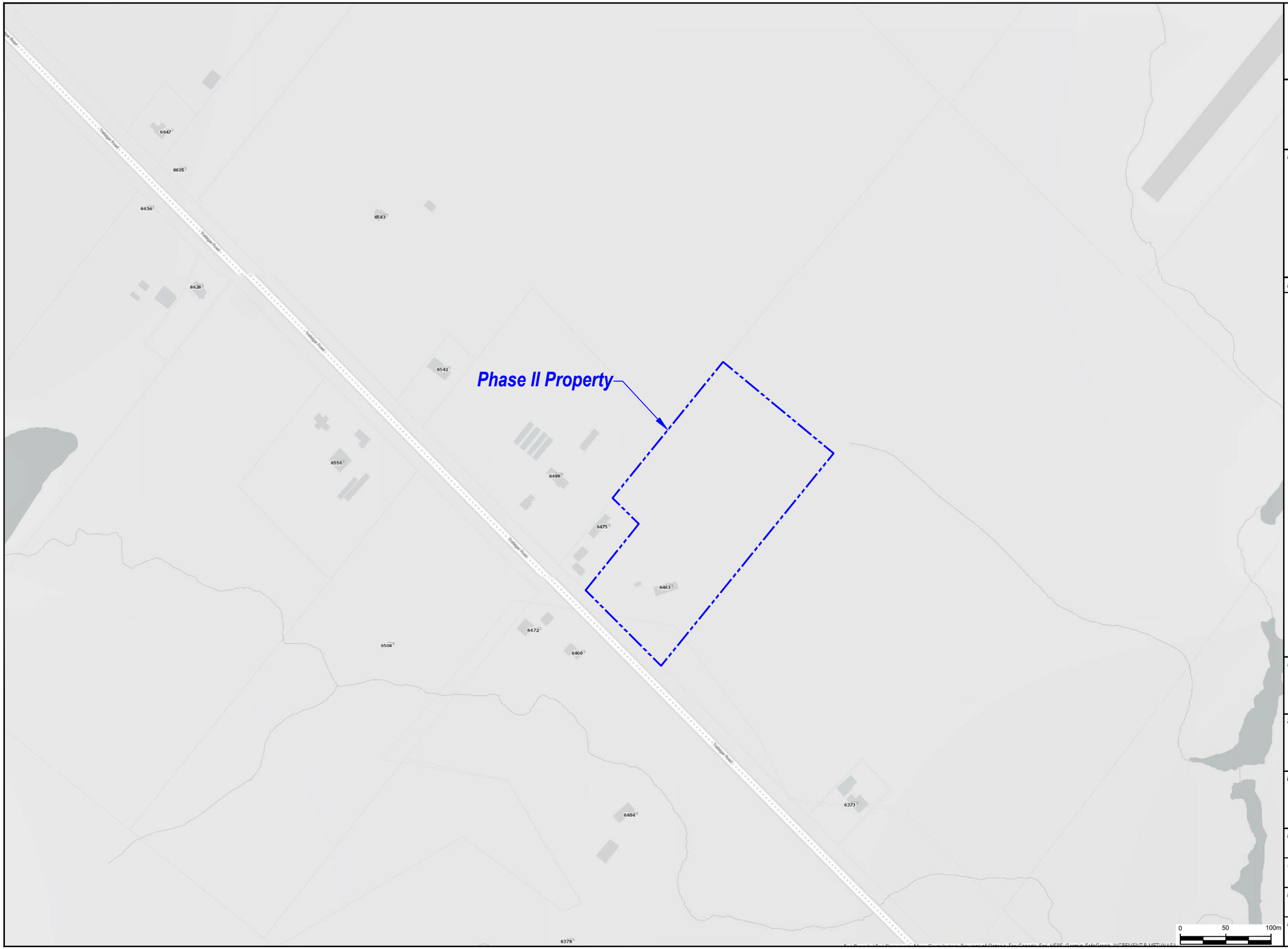
There is no warranty expressed or implied by this report regarding the environmental status of the subject property. Professional judgment was exercised in gathering and analyzing information collected by our staff, as well as that submitted by others. The conclusions presented are the product of professional 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 subject property is encountered, or in the event that the outstanding responses from the regulatory agencies indicate outstanding issues on file with respect to the subject property, Terraprobe should be notified in order that we may re-evaluate the findings of this assessment and provide amendments, as required.

FIGURES

TERRAPROBE INC.





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

Reference:
MiltonGIS

Notes:
Project North

Legend:
Phase II Property Boundary

Project Title:
Phase II Environmental Site Assessment

Site Location:
6463 Trafalgar Road
Milton, Ontario

Figure Title:
Property Location

Designed By: KG	***File No.:*** 7-22-0008-42
Drawn By: AA	***Scale:*** As Shown
Reviewed By: BW	***Figure No.:*** 1
Date: July 2022	

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

Reference:
MiltonGIS

Notes:
Project North

Legend:
- Phase II Property Boundary
- Borehole/Monitoring Well Location
- APEC 1 - (PCA#30)
- APEC 2 - (PCA#40)

Project Title:
Phase II Environmental Site Assessment

Site Location:
6463 Trafalgar Road
Milton, Ontario

Figure Title:
Borehole, Monitoring Well and APEC Location Plan

Designed By: KG	*File No.:* 7-22-0008-42
Drawn By: AA	*Scale:* As Shown
Reviewed By: BW	*Figure No.:* 2
Date: July 2022	

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

Reference:
MiltonGIS

Notes:
Project North

Legend:
- Phase II Property Boundary
- Borehole/Monitoring Well Location
- 188.61 Stabilized Ground Water Level (May26, 2022)

Project Title:
Phase II Environmental Site Assessment

Site Location:
6463 Trafalgar Road
Milton, Ontario

Figure Title:
Ground Water Flow Direction

Designed By: KG	***File No.:*** 7-22-0008-42
Drawn By: AA	***Scale:*** As Shown
Reviewed By: BW	***Figure No.:*** 3
Date: July 2022	

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TABLES

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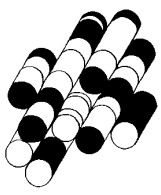


Table 1
Soil Quality Analysis
Metals & Inorganics
6463 Trafalgar Road
Milton, Ontario
Project No. 7-22-0008-42

					Duplicate				Duplicate		
Sample Description		**MECP**		**BH1 SA1**	**BH1 SA4**	**DUP2**	**BH3 SA1**	**BH4 SA1**	**DUP1**	**BH5 SA1**	**BH6 SA1**
Date Sampled		**Table 1**		**05/02/2022**	**05/02/2022**	**05/02/2022**	**05/02/2022**	**05/02/2022**	**05/02/2022**	**05/03/2022**	**05/04/2022**
Lab ID	**Unit**	**RPI/ICC**	**RDL**	**3830060**	**3830062**	**3830064**	**3830084**	**3830085**	**3830088**	**3830086**	**3830087**
Sample Depth (mbgs)		**SCS**		**0.0-0.6**	**2.3-2.9**	**2.3-2.9**	**0.0-0.6**	**0.0-0.6**	**0.0-0.6**	**0.0-0.6**	**0.0-0.6**
Sample Elevation (masl)				**188.6-188.0**	**186.3-185.7**	**186.3-185.7**	**188.6-188.0**	**189.6-189.0**	**189.6-189.0**	**188.5-187.9**	**188.2-187.6**
Parameter											
Metals											
Barium	µg/g	220	2.0	42.4	75.4	90.4	85.2	101	98.9	71.0	45.6
Beryllium	µg/g	2.5	0.4	<0.4	0.8	0.9	1.0	1.1	1.0	0.8	0.5
Boron	µg/g	36	5	5	12	12	8	8	8	8	<5
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	70	5	10	20	25	24	28	26	21	13
Cobalt	µg/g	21	0.5	4.3	11.4	15.5	10.6	12.4	12.2	9.5	4.0
Copper	µg/g	92	1.0	23.2	22.5	32.4	21.6	22.4	21.8	38.2	18.6
Lead	µg/g	120	1	17	9	11	13	16	15	12	12
Molybdenum	µg/g	2	0.5	0.5	0.6	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	µg/g	82	1	11	26	34	24	27	25	24	12
Silver	µg/g	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.50	<0.50	0.56	0.70	0.81	0.93	0.92	0.87	0.53
Vanadium	µg/g	86	0.4	17.2	26.8	36.2	38.8	44.0	42.5	31.9	19.6
Zinc	µg/g	290	5	52	54	69	77	86	84	70	60
Hydride Metals											
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	5	7	7	9	9	8	6	6
Selenium	µg/g	1.5	0.8	<0.8	<0.8	<0.8	1.0	1.0	0.9	1.0	0.9
Other Regulated Parameters											
Boron (Hot Water Soluble)	µg/g	NV	0.10	0.39	0.21	0.18	0.58	0.61	0.58	0.24	0.33
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.57	0.005	0.163	0.187	0.168	NA	NA	NA	NA	NA
Sodium Adsorption Ratio (2:1) (Calc.	N/A	2.4	N/A	0.129	0.299	0.288	NA	NA	NA	NA	NA
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	6.22	6.69	6.84	6.58	6.31	6.40	6.65	6.68

Comments:
Results compared to MECP 2011 Table 1 Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community Land Use in a Coarse Textured Soil Condition
RDL - Reported Detection Limit; G / S - Guideline / Standard
RDL exceeded Standard
Sample result exceeded Standard
NV- No Value
NA-Not Analyzed

Table 2
Soil Quality Analysis
Volatile Organic Compounds
6463 Trafalgar Road
Milton, Ontario
Project No. 7-22-0008-42

					Duplicate			
Sample Description	**Unit**	**MECP**	**RDL**	**BH1 SA2**	**BH1 SA5**	**DUP3**	**BH3 SA2**	**BH4 SA2**
Date Sampled		**Table 1**		**05/02/2022**	**05/02/2022**	**05/02/2022**	**05/02/2022**	**05/02/2022**
Lab ID		**RPI/ICC**		**3830061**	**3830063**	**3830065**	**3830089**	**3830090**
Sample Depth (mbgs)		**SCS**		**0.8-1.4**	**3.1-3.7**	**3.1-3.7**	**0.8-1.4**	**0.8-1.4**
Sample Elevation (masl)				**187.7-187.2**	**185.5-184.9**	**185.5-184.9**	**187.8-187.2**	**188.8-188.2**
Parameter								
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.05	0.05	<0.05	<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	<0.04	<0.04
Chlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Comments:
Results compared to MECP 2011 Table 1 Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community Land Use in a Coarse Textured Soil Condition
RDL - Reported Detection Limit; G / S - Guideline / Standard
RDL exceeded Standard
Sample result exceeded Standard
NV- No Value
NA-Not Analyzed

Table 3
Soil Quality Analysis
Petroleum Hydrocarbons
6463 Trafalgar Road
Milton, Ontario
Project No. 7-22-0008-42

					Duplicate			
Sample Description	**Unit**	**MECP**	**RDL**	**BH1 SA2**	**BH1 SA5**	**DUP3**	**BH3 SA2**	**BH4 SA2**
Date Sampled		**Table 1**		**05/02/2022**	**05/02/2022**	**05/02/2022**	**05/02/2022**	**05/02/2022**
Lab ID		**RPI/ICC**		**3830061**	**3830063**	**3830065**	**3830089**	**3830090**
Sample Depth (mbgs)		**SCS**		**0.8-1.4**	**3.1-3.7**	**3.1-3.7**	**0.8-1.4**	**0.8-1.4**
Sample Elevation (masl)				**187.7-187.2**	**185.5-184.9**	**185.5-184.9**	**187.8-187.2**	**188.8-188.2**
Parameter								
F1 (C6 - C10)	µg/g	25	5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA	NA	NA

Comments:
Results compared to MECP 2011 Table 1 Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community Land Use in a Coarse Textured Soil Condition
RDL - Reported Detection Limit; G / S - Guideline / Standard
RDL exceeded Standard
Sample result exceeded Standard
NV- No Value
NA-Not Analyzed

Table 4
Soil Quality Analysis
Benzene, Toluene, Ethylbenzene, Xylene
6463 Trafalgar Road
Milton, Ontario
Project No. 7-22-0008-42

					Duplicate			
Sample Description	**Unit**	**MECP**	**RDL**	**BH1 SA2**	**BH1 SA5**	**DUP3**	**BH3 SA2**	**BH4 SA2**
Date Sampled		**Table 1**		**05/02/2022**	**05/02/2022**	**05/02/2022**	**05/02/2022**	**05/02/2022**
Lab ID		**RPI/ICC**		**3830061**	**3830063**	**3830065**	**3830089**	**3830090**
Sample Depth (mbgs)		**SCS**		**0.8-1.4**	**3.1-3.7**	**3.1-3.7**	**0.8-1.4**	**0.8-1.4**
Sample Elevation (masl)				**187.7-187.2**	**185.5-184.9**	**185.5-184.9**	**187.8-187.2**	**188.8-188.2**
Parameter								
Benzene	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	ug/g	0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g	NV	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g	NV	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Comments:
Results compared to MECP 2011 Table 1 Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community Land Use in a Coarse Textured Soil Condition
RDL - Reported Detection Limit; G / S - Guideline / Standard
RDL exceeded Standard
Sample result exceeded Standard
NV- No Value
NA-Not Analyzed

Table 5
Soil Quality Analysis
Organochlorine Pesticides
6463 Trafalgar Road
Milton, Ontario
Project No. 7-22-0008-42

						Duplicate			
Sample Description	**Unit**	**MECP**	**RDL**	**BH1 SA1**	**BH3 SA1**	**BH4 SA1**	**DUP1**	**BH5 SA1**	**BH6 SA1**
Date Sampled		**Table 1**		**05/02/2022**	**05/02/2022**	**05/02/2022**	**05/02/2022**	**05/03/2022**	**05/04/2022**
Lab ID		**RPI/ICC**		**3830060**	**3830084**	**3830085**	**3830088**	**3830086**	**3830087**
Sample Depth (mbgs)		**SCS**		**0.0-0.6**	**0.0-0.6**	**0.0-0.6**	**0.0-0.6**	**0.0-0.6**	**0.0-0.6**
Sample Elevation (masl)				**188.6-188.0**	**188.6-188.0**	**189.6-189.0**	**189.6-189.0**	**188.5-187.9**	**188.2-187.6**
Parameter									
Hexachloroethane	µg/g	0.01	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Gamma-Hexachlorocyclohexane	µg/g	0.01	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Aldrin	µg/g	0.05	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
Endosulfan I	µg/g	NV	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan II	µg/g	NV	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
Alpha-Chlordane	µg/g	NV	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
gamma-Chlordane	µg/g	NV	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
op'-DDE	ug/g	NV	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDE	µg/g	NV	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDE	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDD	µg/g	NV	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDD	µg/g	NV	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDD	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDT	µg/g	NV	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDT	µg/g	NV	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDT (Total)	µg/g	1.4	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
Endrin	µg/g	0.04	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Methoxychlor	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	µg/g	0.01	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	µg/g	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Comments:
Results compared to MECP 2011 Table 1 Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community Land Use in a Coarse Textured Soil Condition
RDL - Reported Detection Limit; G / S - Guideline / Standard
RDL exceeded Standard
Sample result exceeded Standard
NV- No Value
NA-Not Analyzed

Table 6
Soil Quality Analysis
Polycyclic Aromatic Hydrocarbons
6463 Trafalgar Road
Milton, Ontario
Project No. 7-22-0008-42

					Duplicate	
Sample Description	**Unit**	**MECP**	**RDL**	**BH1 SA1**	**BH1 SA4**	**DUP2**
Date Sampled		**Table 1**		**05/02/2022**	**05/02/2022**	**05/02/2022**
Lab ID		**RPI/ICC**		**3830060**	**3830062**	**3830064**
Sample Depth (mbgs)		**SCS**		**0.0-0.6**	**2.3-2.9**	**2.3-2.9**
Sample Elevation (masl)						
Parameter						
Naphthalene	µg/g	0.09	0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	0.12	0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.16	0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.56	0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	1	0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.36	0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	2.8	0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.48	0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.23	0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	0.68	0.05	<0.05	<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	0.59	0.05	<0.05	<0.05	<0.05

Comments:
Results compared to MECP 2011 Table 1 Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community Land Use in a Coarse Textured Soil Condition
RDL - Reported Detection Limit; G / S - Guideline / Standard
RDL exceeded Standard
Sample result exceeded Standard
NV- No Value
NA-Not Analyzed

Table 7
Ground Water Quality Analysis
Metals & Inorganics
6463 Trafalgar Road
Milton, Ontario
Project No. 7-22-0008-42

								Duplicate		
Sample Description	**Unit**	**MECP**	**RDL**	**BH1**	**BH1**	**BH3**	**BH3**	**BH5**	**DUP1**	**BH5**
Date Sampled		**Table 1**		**05/26/2022**	**2022-07-08**	**05/26/2022**	**2022-07-08**	**05/26/2022**	**05/26/2022**	**2022-07-08**
Lab ID		**RPI/ICC**		**3907398**	**4075648**	**3907395**	**4075655**	**3907387**	**3907400**	**4075656**
Screen/Sample Depth (mbgs)		**SCS**		**3.0-6.1**	**3.0-6.1**	**3.0-6.1**	**3.0-6.1**	**3.0-6.1**	**3.0-6.1**	**3.0-6.1**
Screen/Sample Elevation (masl)				**185.6-182.5**	**185.6-182.5**	**185.6-182.5**	**185.6-182.5**	**185.5-182.4**	**185.5-182.4**	**185.5-182.4**
Parameter										
Metals										
Dissolved Barium	µg/L	610	2.0	129	104	132	128	86.5	130	157
Dissolved Beryllium	µg/L	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	1700	10.0	194	158	186	160	103	140	127
Dissolved Cadmium	µg/L	0.5	0.20	<0.20	0.25	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	11	2.0	<2.0	<2.0	2.8	<2.0	<2.0	6.9	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	<0.50	<0.50	0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Copper	µg/L	5	1.0	**11.7**	<1.0	**33.4**	<1.0	**21.9**	3.7	<1.0
Dissolved Lead	µg/L	1.9	0.50	<0.50	<0.50	0.68	<0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	23	0.50	9.46	9.02	5.10	4.93	5.10	6.79	6.44
Dissolved Nickel	µg/L	14	1.0	3.3	<1.0	5.4	<1.0	1.8	2.9	1.1
Dissolved Silver	µg/L	0.3	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	8.9	0.50	1.63	1.62	1.22	1.73	1.14	1.71	3.27
Dissolved Vanadium	µg/L	3.9	0.40	<0.40	<0.40	1.00	0.55	0.64	1.16	0.52
Dissolved Zinc	µg/L	160	5.0	9.8	<5.0	11.8	<5.0	9.4	7.1	<5.0
Hydride Metals										
Dissolved Antimony	µg/L	1.5	1.0	<1.0	NA	<1.0	NA	<1.0	<1.0	NA
Dissolved Arsenic	µg/L	13	1.0	4.8	NA	3.2	NA	2.4	3.0	NA
Dissolved Selenium	µg/L	5	1.0	<1.0	NA	<1.0	NA	<1.0	1.5	NA
Other Regulated Parameters										
Mercury	µg/L	0.1	0.02	<0.02	NA	<0.02	NA	<0.02	<0.02	NA
Chromium VI	µg/L	25	2.000	<2.000	NA	<2.000	NA	<2.000	3.44	NA
Cyanide, Free	µg/L	5	2	<2	NA	<2	NA	<2	<2	NA
Electrical Conductivity	uS/cm	NA	2	720	NA	602	NA	566	567	NA
pH	pH Units		NA	7.88	NA	7.92	NA	7.95	7.95	NA

Comments:

Results compared to MECP 2011 Table 1 Site Condition Standards for
Residential/Parkland/Institutional/Industrial/Commercial/Community Land Use in a Coarse Textured Soil Condition

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

RDL exceeded Standard

Sample result exceeded Standard

Results are considered anomalous, the QP does not believe copper is a contaminant of concern in ground water

NV- No Value

NA-Not Analyzed

Table 8
Ground Water Quality Analysis
Volatile Organic Compounds
6463 Trafalgar Road
Milton, Ontario
Project No. 7-22-0008-42

				Duplicate		
Sample Description	**Unit**	**MECP**	**RDL**	**BH1**	**DUP2**	**Trip Blank**
Date Sampled		**Table 1**		**05/26/2022**	**05/26/2022**	**05/26/2022**
Lab ID		**RPI/ICC**		**3907398**	**3907401**	**3907415**
Screen/Sample Depth (mbgs)		**SCS**		**3.0-6.1**	**3.0-6.1**	
Screen/Sample Elevation (masl)				**185.6-182.5**	**185.6-182.5**	**-**
Parameter						
Dichlorodifluoromethane	µg/L	590	0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L	NV	0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L	NV	0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20

Comments:
Results compared to MECP 2011 Table 1 Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community Land Use in a Coarse Textured Soil Condition
RDL - Reported Detection Limit; G / S - Guideline / Standard
RDL exceeded Standard
Sample result exceeded Standard
NV- No Value
NA-Not Analyzed

Table 9
Ground Water Quality Analysis
Petroleum Hydrocarbons
6463 Trafalgar Road
Milton, Ontario
Project No. 7-22-0008-42

				Duplicate	
Sample Description	**Unit**	**MECP**	**RDL**	**BH1**	**DUP2**
Date Sampled		**Table 1**		**05/26/2022**	**05/26/2022**
Lab ID		**RPI/ICC**		**3907398**	**3907401**
Screen/Sample Depth (mbgs)		**SCS**		**3.0-6.1**	**3.0-6.1**
Screen/Sample Elevation (masl)				**185.6-182.5**	**185.6-182.5**
Parameter					
F1 (C6-C10)	µg/L	420	25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA

Comments:
Results compared to MECP 2011 Table 1 Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community Land Use in a Coarse Textured Soil Condition
RDL - Reported Detection Limit; G / S - Guideline / Standard
RDL exceeded Standard
Sample result exceeded Standard
NV- No Value
NA-Not Analyzed

Table 10
Ground Water Quality Analysis
Volatile Organic Compounds
6463 Trafalgar Road
Milton, Ontario
Project No. 7-22-0008-42

				Duplicate		
Sample Description	**Unit**	**MECP**	**RDL**	**BH1**	**DUP2**	**Trip Blank**
Date Sampled		**Table 1**		**05/26/2022**	**05/26/2022**	**05/26/2022**
Lab ID		**RPI/ICC**		**3907398**	**3907401**	**3907415**
Screen/Sample Depth (mbgs)		**SCS**		**3.0-6.1**	**3.0-6.1**	
Screen/Sample Elevation (masl)				**185.6-182.5**	**185.6-182.5**	**-**
Parameter						
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
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
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20

Comments:
Results compared to MECP 2011 Table 1 Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community Land Use in a Coarse Textured Soil Condition
RDL - Reported Detection Limit; G / S - Guideline / Standard
RDL exceeded Standard
Sample result exceeded Standard
NV- No Value
NA-Not Analyzed

Table 11
Ground Water Quality Analysis
Organochlorine Pesticides
6463 Trafalgar Road
Milton, Ontario
Project No. 7-22-0008-42

					Duplicate	
Sample Description	**Unit**	**MECP**	**RDL**	**BH3**	**BH5**	**DUP1**
Date Sampled		**Table 1**		**05/26/2022**	**05/26/2022**	**05/26/2022**
Lab ID		**RPI/ICC**		**3907395**	**3907387**	**3907400**
Screen/Sample Depth (mbgs)		**SCS**		**3.0-6.1**	**3.0-6.1**	**3.0-6.1**
Screen/Sample Elevation (masl)				**185.6-182.5**	**185.5-182.4**	**185.5-182.4**
Parameter						
Gamma-Hexachlorocyclohexane	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Heptachlor	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Aldrin	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Heptachlor Epoxide	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Endosulfan I	µg/L	NV	0.05	<0.05	<0.05	<0.05
Endosulfan II	µg/L	NV	0.05	<0.05	<0.05	<0.05
Endosulfan	µg/L	0.05	0.05	<0.05	<0.05	<0.05
alpha - chlordane	µg/L	NV	0.04	<0.04	<0.04	<0.04
gamma-Chlordane	µg/L	NV	0.04	<0.04	<0.04	<0.04
Chlordane	µg/L	0.06	0.04	<0.04	<0.04	<0.04
op'-DDE	µg/L	NV	0.01	<0.01	<0.01	<0.01
pp'-DDE	µg/L	NV	0.01	<0.01	<0.01	<0.01
DDE	µg/L	10	0.01	<0.01	<0.01	<0.01
op'-DDD	µg/L	NV	0.05	<0.05	<0.05	<0.05
pp'-DDD	µg/L	NV	0.05	<0.05	<0.05	<0.05
DDD	µg/L	1.8	0.05	<0.05	<0.05	<0.05
op'-DDT	µg/L	NV	0.04	<0.04	<0.04	<0.04
pp'-DDT	µg/L	NV	0.05	<0.05	<0.05	<0.05
DDT	µg/L	0.05	0.04	<0.04	<0.04	<0.04
Dieldrin	µg/L	0.05	0.02	<0.02	<0.02	<0.02
Endrin	µg/L	0.05	0.05	<0.05	<0.05	<0.05
Methoxychlor	µg/L	0.05	0.04	<0.04	<0.04	<0.04
Hexachlorobenzene	ug/L	0.01	0.01	<0.01	<0.01	<0.01
Hexachlorobutadiene	ug/L	0.01	0.01	<0.01	<0.01	<0.01
Hexachloroethane	ug/L	0.01	0.01	<0.01	<0.01	<0.01

Comments:
Results compared to MECP 2011 Table 1 Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community Land Use in a Coarse Textured Soil Condition
RDL - Reported Detection Limit; G / S - Guideline / Standard
RDL exceeded Standard
Sample result exceeded Standard
NV- No Value
NA-Not Analyzed

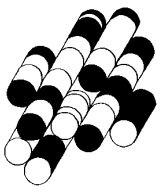
Table 12
Ground Water Quality Analysis
Polycyclic Aromatic Hydrocarbons
6463 Trafalgar Road
Milton, Ontario
Project No. 7-22-0008-42

				Duplicate	
Sample Description	**Unit**	**MECP**	**RDL**	**BH1**	**DUP2**
Date Sampled		**Table 1**		**05/26/2022**	**05/26/2022**
Lab ID		**RPI/ICC**		**3907398**	**3907401**
Screen/Sample Depth (mbgs)		**SCS**		**3.0-6.1**	**3.0-6.1**
Screen/Sample Elevation (masl)				**185.6-182.5**	**185.6-182.5**
Parameter					
Naphthalene	µg/L	7	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	0.1	0.10	<0.10	<0.10
Anthracene	µg/L	0.1	0.10	<0.10	<0.10
Fluoranthene	µg/L	0.41	0.20	<0.20	<0.20
Pyrene	µg/L	0.2	0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	0.2	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	2	0.20	<0.20	<0.20

Comments:
Results compared to MECP 2011 Table 1 Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community Land Use in a Coarse Textured Soil Condition
RDL - Reported Detection Limit; G / S - Guideline / Standard
RDL exceeded Standard
Sample result exceeded Standard
NV- No Value
NA-Not Analyzed

APPENDIX A

TERRAPROBE INC.



LOG OF BOREHOLE 1

Terraprobe

Project No. : 7-22-0008-01	Client : York Trafalgar Management Corp	Originated by : KG
Date started : May 2, 2022	Project : 6463 Trafalgar Road	Compiled by : PC
Sheet No. : 1 of 1	Location : Milton, Ontario	Checked by : PC

Position : E: 597226, N: 4822290 (UTM 17T) Elevation Datum : Geodetic

Rig type : Geoprobe Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value
	188.6	**GROUND SURFACE**				
0		75mm **TOPSOIL**		1	SS	7
		FILL, silty sand, trace gravel, very loose to loose, brown				
1				2	SS	1
	186.8					
	1.8	**CLAYEY SILT**, with embedded sand and gravel, very stiff to hard, grey (GLACIAL TILL)		3	SS	28
2				4	SS	42
3				5	SS	19
		...becoming grey at 3.8m depth		6	SS	13
4						
		...wet sand seams at 4.9m depth		7	SS	25
5						
6				8	SS	74
	181.9					
	6.7	**END OF BOREHOLE**				

Elevation Scale (m): 188, 187, 186, 185, 184, 183, 182

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: 5, PID: 5, PID: 0, PID: 0, PID: 5, PID: 0, PID: 0, PID: 0

Instrument Details

Unstabilized Water Level

Lab Data and Comments

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

SS1 Analysis: M&I, PAH, Pest.
SS2 Analysis: VOC, PHC
SS4 Analysis: M&I, PAH
SS5 Analysis: VOC, PHC
7 13 45 35

Unstabilized water level measured at 4.3 m below ground surface; borehole caved to 4.6 m below ground surface upon completion of drilling.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
May 17, 2022	1.8	186.8
May 26, 2022	1.9	186.7
Jul 8, 2022	2.5	186.1

file: 7-22-0008-01 - 6463 trafalgar rd milton.gpj

Terraprobe

LOG OF BOREHOLE 2

Project No. : 7-22-0008-01 | Client : York Trafalgar Management Corp | Originated by : KG

Date started : May 2, 2022 | Project : 6463 Trafalgar Road | Compiled by : PC

Sheet No. : 1 of 1 | Location : Milton, Ontario | Checked by : PC

Position : E: 597275, N: 4822334 (UTM 17T) | Elevation Datum : Geodetic

Rig type : Geoprobe | Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value
0	188.4	**GROUND SURFACE**				
	188.2	150mm **TOPSOIL**				
	0.2	**FILL**, silty sand, very loose, brown		1	SS	4
	187.6					
	0.8	**CLAYEY SILT**, with embedded sand and gravel, very stiff to hard, brown (GLACIAL TILL)		2	SS	15
1				3	SS	24
2				4	SS	32
3		...becoming grey at 3.3m depth		5	SS	23
4				6	SS	18
5		...wet sand seams at 4.9m depth		7	SS	20
6				8	SS	63
	181.7					
	6.7	**END OF BOREHOLE**				

Elevation Scale (m): 188, 187, 186, 185, 184, 183, 182

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

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

Unstabilized water level measured at 4.3 m below ground surface; borehole caved to 4.6 m below ground surface upon completion of drilling.

50 mm dia. monitoring well installed.

file: 7-22-0008-01 - 6463 trafalgar rd milton.gpj

LOG OF BOREHOLE 3

Terraprobe

Project No. : 7-22-0008-01	Client : York Trafalgar Management Corp	Originated by : KG
Date started : May 2, 2022	Project : 6463 Trafalgar Road	Compiled by : PC
Sheet No. : 1 of 1	Location : Milton, Ontario	Checked by : PC

Position : E: 597377, N: 4822335 (UTM 17T) Elevation Datum : Geodetic

Rig type : Geoprobe Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value
0	188.6	**GROUND SURFACE**				
		FILL, clayey silt, trace to some sand, with intermixed topsoil, very loose, brown		1	SS	3
	187.7					
1	0.9	**CLAYEY SILT**, with embedded sand and gravel, very stiff to hard, brown (GLACIAL TILL)		2	SS	13
				3	SS	21
2				4	SS	31
3				5	SS	46
		...becoming grey at 3.8m depth		6	SS	19
4						
		...wet sand seams at 4.9m depth		7	SS	18
5						
				8	SS	51
6	181.9					
	6.7	**END OF BOREHOLE**				

Elevation Scale (m): 188, 187, 186, 185, 184, 183, 182

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&I, Pest.

SS2 Analysis:
VOC, PHC

8 20 43 29

Borehole was dry and open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
May 17, 2022	1.8	186.8
May 26, 2022	1.9	186.7
Jul 8, 2022	2.5	186.1

file: 7-22-0008-01 - 6463 trafalgar rd milton.gpj

LOG OF BOREHOLE 4

Terraprobe

Project No. : 7-22-0008-01	Client : York Trafalgar Management Corp	Originated by : KG
Date started : May 2, 2022	Project : 6463 Trafalgar Road	Compiled by : PC
Sheet No. : 1 of 1	Location : Milton, Ontario	Checked by : PC

Position : E: 597425, N: 4822396 (UTM 17T) Elevation Datum : Geodetic

Rig type : Geoprobe Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	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	**189.6**	**GROUND SURFACE**					189					
	188.8 / 0.8	**FILL**, clayey silt, trace sand, rootlets, with intermixed topsoil, very loose, brown		1	SS	4				PID: 0		SS1 Analysis: M&I, Pest.
1	187.8 / 1.8	**FILL**, fine to medium sand, trace silt, clay, loose, brown		2	SS	9	188			PID: 0		SS2 Analysis: VOC, PHC
2		**CLAYEY SILT**, with embedded sand and gravel, stiff to hard, brown (GLACIAL TILL)		3	SS	10				PID: 0		
				4	SS	22	187			PID: 0		
3		...becoming grey at 3.0m depth		5	SS	48				PID: 0		
				6	SS	26	186			PID: 0		▽
4				7	SS	18	185			PID: 0		
5							184					
6	183.5 / 6.1	**SILTY SAND**, dense, grey, wet (GLACIAL TILL)		8	SS	41				PID: 0		9 56 27 8
	182.9 / 6.7	**END OF BOREHOLE**					183					

Unstabilized water level measured at 4.3 m below ground surface; borehole caved to 4.6 m below ground surface 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 (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

file: 7-22-0008-01 - 6463 trafalgar rd milton.gpj

LOG OF BOREHOLE 5

Terraprobe

Project No. : 7-22-0008-01	Client : York Trafalgar Management Corp	Originated by : KG
Date started : May 3, 2022	Project : 6463 Trafalgar Road	Compiled by : PC
Sheet No. : 1 of 1	Location : Milton, Ontario	Checked by : PC

Position : E: 597347, N: 4822460 (UTM 17T) Elevation Datum : Geodetic

Rig type : Geoprobe Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
0	188.5	**GROUND SURFACE**				
		SILTY TOPSOIL, with rootlets, (reworked), loose, brown		1	SS	6
	187.7					
	0.8	**CLAYEY SILT**, with embedded sand and gravel, stiff to hard, brown (GLACIAL TILL)		2	SS	23
1				3	SS	33
2				4	SS	42
3		...becoming grey at 3.3m depth		5	SS	30
4		...wet sand seams at 4.3m depth		6	SS	19
	183.9					
	4.6	**SANDY SILT**, compact, grey, wet		7	SS	15
5						
6	182.1			8	SS	29
	6.4	**CLAYEY SILT**, with embedded sand and gravel, very stiff, grey (GLACIAL TILL)				
	181.8					
	6.7	**END OF BOREHOLE**				

Elevation Scale (m): 188, 187, 186, 185, 184, 183, 182

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&I, Pest.

0 48 46 6

Unstabilized water level measured at 4.9 m below ground surface; borehole caved to 5.5 m below ground surface upon completion of drilling.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
May 17, 2022	1.6	186.9
May 26, 2022	1.8	186.7
Jul 8, 2022	2.4	186.1

file: 7-22-0008-01 - 6463 trafalgar rd milton.gpj

LOG OF BOREHOLE 6

Terraprobe

Project No. : 7-22-0008-01	Client : York Trafalgar Management Corp	Originated by : KG
Date started : May 4, 2022	Project : 6463 Trafalgar Road	Compiled by : PC
Sheet No. : 1 of 1	Location : Milton, Ontario	Checked by : PC

Position : E: 597257, N: 4822383 (UTM 17T) Elevation Datum : Geodetic

Rig type : Geoprobe Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value
0	188.2	**GROUND SURFACE**				
		405mm **TOPSOIL**		1	SS	4
	187.8					
	0.4	**FILL**, silty sand, very loose, brown				
	187.4					
	0.8	**CLAYEY SILT**, with embedded sand and gravel, stiff to hard, brown (GLACIAL TILL)		2	SS	31
1				3	SS	33
2				4	SS	47
3		...becoming grey at 3.0m depth		5	SS	26
	184.4					
	3.8	**SILT**, compact, grey, wet		6	SS	21
	183.6					
	4.6	**CLAYEY SILT**, with embedded sand and gravel, hard, grey (GLACIAL TILL)		7	SS	37
5						
6				8	SS	53
	181.5					
	6.7	**END OF BOREHOLE**				

Elevation Scale (m): 188, 187, 186, 185, 184, 183, 182

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&I, Pest.

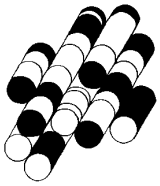
Unstabilized water level measured at 4.3 m below ground surface; borehole caved to 4.6 m below ground surface upon completion of drilling.

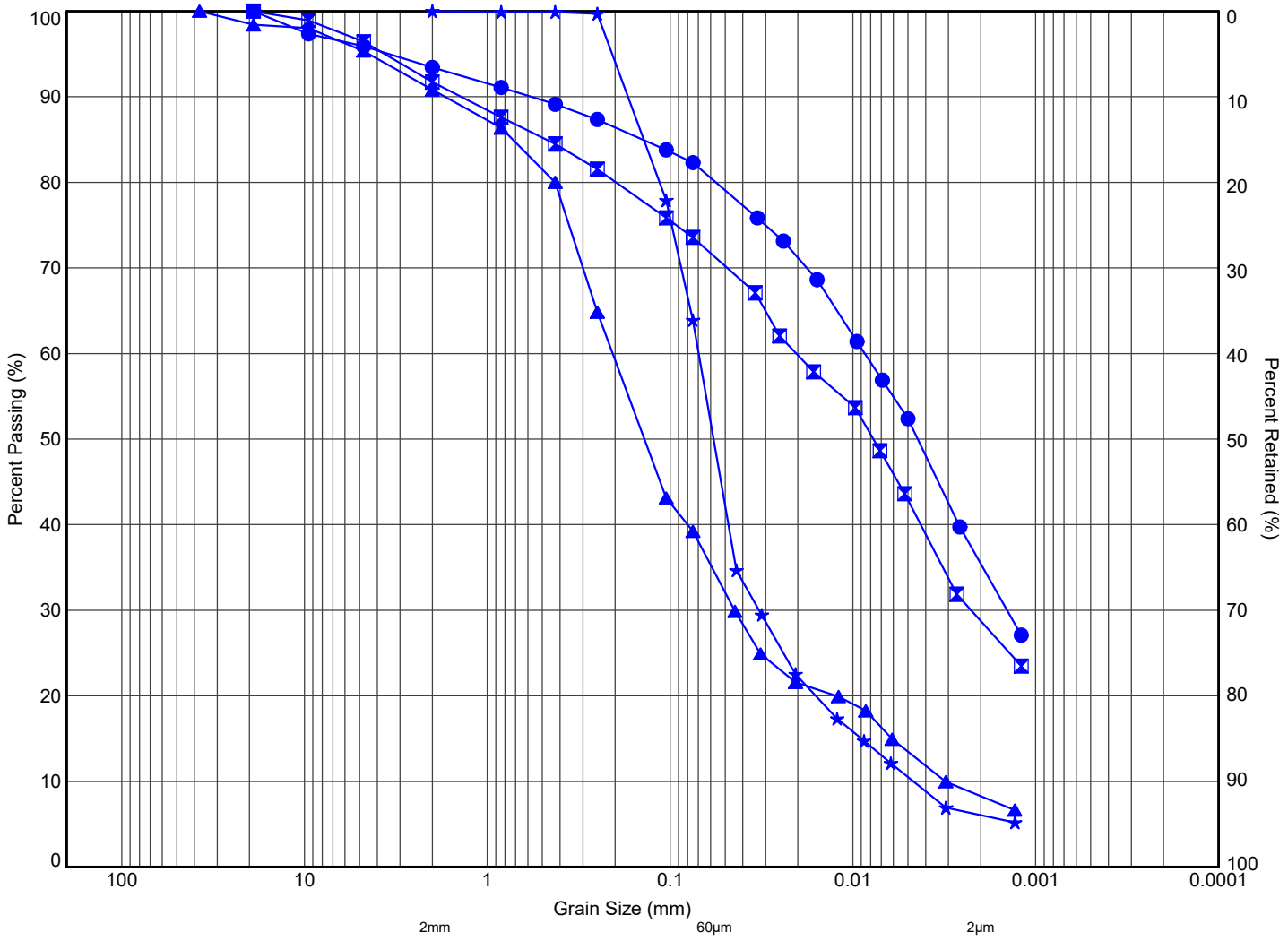
50 mm dia. monitoring well installed.

file: 7-22-0008-01 - 6463 trafalgar rd milton.gpj

APPENDIX B

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, %)*
●	**1**	SS6	4.1	184.5	7	13	45	35	
⊠	**3**	SS3	1.8	186.8	8	20	43	29	
▲	**4**	SS8	6.4	183.2	9	56	27	8	
★	**5**	SS7	4.9	183.6	0	48	46	6	

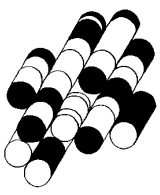
Terraprobe
903 Barton Street, Unit 22, Stoney Creek ON L8E 5P5
(905) 643-7560

Title: **GRAIN SIZE DISTRIBUTION**

File No.: **7-22-0008-01**

APPENDIX C

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: 7-22-0008-42
AGAT WORK ORDER: 22H892548
SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician
TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer
DATE REPORTED: May 30, 2022
PAGES (INCLUDING COVER): 20
VERSION*: 1

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

*Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *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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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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FAX (905)712-5122
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Certificate of Analysis

AGAT WORK ORDER: 22H892548

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

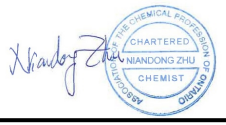
O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2022-05-06

DATE REPORTED: 2022-05-30

		SAMPLE DESCRIPTION:		BH1 SA1	BH1 SA4	DUP2	BH3 SA1	BH4 SA1	BH5 SA1	BH6 SA1	DUP1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2022-05-02	2022-05-02	2022-05-02	2022-05-02	2022-05-02	2022-05-03	2022-05-04	2022-05-02
Parameter	Unit	G / S	RDL	3830060	3830062	3830064	3830084	3830085	3830086	3830087	3830088
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	5	7	7	9	9	6	6	8
Barium	µg/g	220	2.0	42.4	75.4	90.4	85.2	101	71.0	45.6	98.9
Beryllium	µg/g	2.5	0.4	<0.4	0.8	0.9	1.0	1.1	0.8	0.5	1.0
Boron	µg/g	36	5	5	12	12	8	8	8	<5	8
Boron (Hot Water Soluble)	µg/g	NA	0.10	0.39	0.21	0.18	0.58	0.61	0.24	0.33	0.58
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	70	5	10	20	25	24	28	21	13	26
Cobalt	µg/g	21	0.5	4.3	11.4	15.5	10.6	12.4	9.5	4.0	12.2
Copper	µg/g	92	1.0	23.2	22.5	32.4	21.6	22.4	38.2	18.6	21.8
Lead	µg/g	120	1	17	9	11	13	16	12	12	15
Molybdenum	µg/g	2	0.5	0.5	0.6	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	µg/g	82	1	11	26	34	24	27	24	12	25
Selenium	µg/g	1.5	0.8	<0.8	<0.8	<0.8	1.0	1.0	1.0	0.9	0.9
Silver	µg/g	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.50	<0.50	0.56	0.70	0.81	0.93	0.87	0.53	0.92
Vanadium	µg/g	86	0.4	17.2	26.8	36.2	38.8	44.0	31.9	19.6	42.5
Zinc	µg/g	290	5	52	54	69	77	86	70	60	84
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.57	0.005	0.163	0.187	0.168					
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	2.4	N/A	0.129	0.299	0.288					
pH, 2:1 CaCl2 Extraction	pH Units		NA	6.22	6.69	6.84	6.58	6.31	6.65	6.68	6.40

Certified By:



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

Certificate of Analysis

AGAT WORK ORDER: 22H892548

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

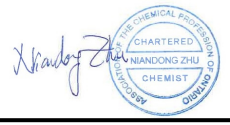
DATE RECEIVED: 2022-05-06 **DATE REPORTED: 2022-05-30**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

3830060-3830088 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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AGAT WORK ORDER: 22H892548

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-06

DATE REPORTED: 2022-05-30

		SAMPLE DESCRIPTION:		BH1 SA1	BH3 SA1	BH4 SA1	BH5 SA1	BH6 SA1	DUP1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2022-05-02	2022-05-02	2022-05-02	2022-05-03	2022-05-04	2022-05-02
Parameter	**Unit**	**G / S**	**RDL**	**3830060**	**3830084**	**3830085**	**3830086**	**3830087**	**3830088**
Hexachloroethane	µg/g	0.01	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Gamma-Hexachlorocyclohexane	µg/g	0.01	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Aldrin	µg/g	0.05	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
Endosulfan I	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan II	µg/g		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
Alpha-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
gamma-Chlordane	µg/g		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
op'-DDE	ug/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDE	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDE	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDD	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDD	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDD	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDT	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDT	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDT (Total)	µg/g	1.4	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
Endrin	µg/g	0.04	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Methoxychlor	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	µg/g	0.01	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	µg/g	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Moisture Content	%		0.1	7.6	6.3	5.3	3.6	14.2	18.4
wet weight OC	g		0.01	10.44	10.38	10.75	10.92	10.32	10.76
Surrogate	**Unit**	**Acceptable Limits**							
TCMX	%	50-140		73	104	96	88	73	78
Decachlorobiphenyl	%	50-140		86	102	96	108	97	88

Certified By: Jinkal Patel

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

Certificate of Analysis

AGAT WORK ORDER: 22H892548

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-06

DATE REPORTED: 2022-05-30

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

3830060-3830088 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

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
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Certificate of Analysis

AGAT WORK ORDER: 22H892548

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-06

DATE REPORTED: 2022-05-30

		SAMPLE DESCRIPTION:		BH1 SA1	BH1 SA4	DUP2
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2022-05-02	2022-05-02	2022-05-02
Parameter	**Unit**	**G / S**	**RDL**	**3830060**	**3830062**	**3830064**
Naphthalene	µg/g	0.09	0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	0.12	0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.16	0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.56	0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	1	0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.36	0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	2.8	0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.48	0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.46	0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	0.68	0.05	<0.05	<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	0.59	0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	7.6	4.0	4.2
Surrogate	**Unit**	**Acceptable Limits**				
Naphthalene-d8	%	50-140		78	100	68
Acridine-d9	%	50-140		96	105	78
Terphenyl-d14	%	50-140		85	87	93

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

3830060-3830064 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Jinkal Patel

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
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Certificate of Analysis

AGAT WORK ORDER: 22H892548

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-06 **DATE REPORTED: 2022-05-30**

		SAMPLE DESCRIPTION:		BH1 SA2	BH1 SA5	DUP3	BH3 SA2	BH4 SA2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2022-05-02	2022-05-02	2022-05-02	2022-05-02	2022-05-02
Parameter	**Unit**	**G / S**	**RDL**	**3830061**	**3830063**	**3830065**	**3830089**	**3830090**
F1 (C6 - C10)	µg/g	25	5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA	NA	NA
Moisture Content	%		0.1	6.9	5.7	4.8	11.5	13.8
Surrogate	**Unit**	**Acceptable Limits**						
Toluene-d8	% Recovery	50-140		80	78	73	76	89
Terphenyl	%	60-140		65	81	75	68	70

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

3830061-3830090 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.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
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Certificate of Analysis

AGAT WORK ORDER: 22H892548

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-06

DATE REPORTED: 2022-05-30

SAMPLE DESCRIPTION:				BH1 SA2	BH1 SA5	DUP3	BH3 SA2	BH4 SA2
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2022-05-02	2022-05-02	2022-05-02	2022-05-02	2022-05-02
Parameter	Unit	G / S	RDL	3830061	3830063	3830065	3830089	3830090
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.05	0.05	<0.05	<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	<0.04	<0.04
Chlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By: Pinkal Patel

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 22H892548

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-06 **DATE REPORTED: 2022-05-30**

		SAMPLE DESCRIPTION:		BH1 SA2	BH1 SA5	DUP3	BH3 SA2	BH4 SA2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2022-05-02	2022-05-02	2022-05-02	2022-05-02	2022-05-02
Parameter	**Unit**	**G / S**	**RDL**	**3830061**	**3830063**	**3830065**	**3830089**	**3830090**
Bromoform	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	6.9	5.7	4.8	11.5	13.8
Surrogate	**Unit**	**Acceptable Limits**						
Toluene-d8	% Recovery	50-140		80	78	73	76	89
4-Bromofluorobenzene	% Recovery	50-140		75	111	109	110	108

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

3830061-3830090 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

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: 22H892548

PROJECT: 7-22-0008-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

Soil Analysis

RPT Date: May 30, 2022			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	3830060	3830060	<0.8	<0.8	NA	< 0.8	97%	70%	130%	96%	80%	120%	84%	70%	130%
Arsenic	3830060	3830060	5	5	0.0%	< 1	127%	70%	130%	105%	80%	120%	108%	70%	130%
Barium	3830060	3830060	42.4	43.0	1.4%	< 2.0	102%	70%	130%	103%	80%	120%	112%	70%	130%
Beryllium	3830060	3830060	<0.4	<0.4	NA	< 0.4	114%	70%	130%	103%	80%	120%	115%	70%	130%
Boron	3830060	3830060	5	5	NA	< 5	87%	70%	130%	101%	80%	120%	100%	70%	130%
Boron (Hot Water Soluble)	3830060	3830060	0.39	0.39	NA	< 0.10	96%	60%	140%	100%	70%	130%	101%	60%	140%
Cadmium	3830060	3830060	<0.5	<0.5	NA	< 0.5	103%	70%	130%	96%	80%	120%	103%	70%	130%
Chromium	3830060	3830060	10	11	NA	< 5	109%	70%	130%	104%	80%	120%	111%	70%	130%
Cobalt	3830060	3830060	4.3	4.3	0.0%	< 0.5	106%	70%	130%	111%	80%	120%	105%	70%	130%
Copper	3830060	3830060	23.2	23.3	0.4%	< 1.0	105%	70%	130%	104%	80%	120%	92%	70%	130%
Lead	3830060	3830060	17	18	5.7%	< 1	103%	70%	130%	95%	80%	120%	92%	70%	130%
Molybdenum	3830060	3830060	0.5	0.5	NA	< 0.5	121%	70%	130%	109%	80%	120%	107%	70%	130%
Nickel	3830060	3830060	11	11	0.0%	< 1	116%	70%	130%	110%	80%	120%	99%	70%	130%
Selenium	3830060	3830060	<0.8	<0.8	NA	< 0.8	97%	70%	130%	98%	80%	120%	107%	70%	130%
Silver	3830060	3830060	<0.5	<0.5	NA	< 0.5	103%	70%	130%	105%	80%	120%	97%	70%	130%
Thallium	3830060	3830060	<0.5	<0.5	NA	< 0.5	104%	70%	130%	112%	80%	120%	109%	70%	130%
Uranium	3830060	3830060	<0.50	<0.50	NA	< 0.50	96%	70%	130%	99%	80%	120%	92%	70%	130%
Vanadium	3830060	3830060	17.2	18.0	4.5%	< 0.4	101%	70%	130%	110%	80%	120%	113%	70%	130%
Zinc	3830060	3830060	52	49	5.9%	< 5	105%	70%	130%	99%	80%	120%	99%	70%	130%
Chromium, Hexavalent	3816029		<0.2	<0.2	NA	< 0.2	103%	70%	130%	99%	80%	120%	98%	70%	130%
Cyanide, Free	3830085	3830085	<0.040	<0.040	NA	< 0.040	86%	70%	130%	108%	80%	120%	96%	70%	130%
Mercury	3830060	3830060	<0.10	<0.10	NA	< 0.10	103%	70%	130%	100%	80%	120%	106%	70%	130%
Electrical Conductivity (2:1)	3829965		1.10	1.11	0.9%	< 0.005	97%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	3830060	3830060	0.129	0.123	4.8%	NA									
pH, 2:1 CaCl2 Extraction	3830060	3830060	6.22	6.45	3.6%	NA	97%	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
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: 22H892548

PROJECT: 7-22-0008-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

Trace Organics Analysis

RPT Date: May 30, 2022			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) - PAHs (Soil)															
Naphthalene	3833688		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	74%	50%	140%	89%	50%	140%
Acenaphthylene	3833688		< 0.05	< 0.05	NA	< 0.05	74%	50%	140%	85%	50%	140%	74%	50%	140%
Acenaphthene	3833688		< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	96%	50%	140%	85%	50%	140%
Fluorene	3833688		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	81%	50%	140%	96%	50%	140%
Phenanthrene	3833688		< 0.05	< 0.05	NA	< 0.05	71%	50%	140%	85%	50%	140%	81%	50%	140%
Anthracene	3833688		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	96%	50%	140%	82%	50%	140%
Fluoranthene	3833688		< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	67%	50%	140%	96%	50%	140%
Pyrene	3833688		< 0.05	< 0.05	NA	< 0.05	71%	50%	140%	85%	50%	140%	83%	50%	140%
Benz(a)anthracene	3833688		< 0.05	< 0.05	NA	< 0.05	82%	50%	140%	78%	50%	140%	82%	50%	140%
Chrysene	3833688		< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	95%	50%	140%	81%	50%	140%
Benzo(b)fluoranthene	3833688		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	90%	50%	140%	85%	50%	140%
Benzo(k)fluoranthene	3833688		< 0.05	< 0.05	NA	< 0.05	82%	50%	140%	72%	50%	140%	92%	50%	140%
Benzo(a)pyrene	3833688		< 0.05	< 0.05	NA	< 0.05	71%	50%	140%	81%	50%	140%	66%	50%	140%
Indeno(1,2,3-cd)pyrene	3833688		< 0.05	< 0.05	NA	< 0.05	74%	50%	140%	82%	50%	140%	84%	50%	140%
Dibenz(a,h)anthracene	3833688		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	93%	50%	140%	75%	50%	140%
Benzo(g,h,i)perylene	3833688		< 0.05	< 0.05	NA	< 0.05	72%	50%	140%	94%	50%	140%	95%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)															
F1 (C6 - C10)	3830090	3830090	<5	<5	NA	< 5	121%	60%	140%	114%	60%	140%	93%	60%	140%
F2 (C10 to C16)	3820600		< 10	< 10	NA	< 10	99%	60%	140%	115%	60%	140%	108%	60%	140%
F3 (C16 to C34)	3820600		< 50	< 50	NA	< 50	96%	60%	140%	90%	60%	140%	75%	60%	140%
F4 (C34 to C50)	3820600		< 50	< 50	NA	< 50	84%	60%	140%	71%	60%	140%	78%	60%	140%
Moisture Content	3830086	3830086	3.61	4.86	29.5%	< 0.1	NA			NA			NA		
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	3830090	3830090	<0.05	<0.05	NA	< 0.05	105%	50%	140%	92%	50%	140%	115%	50%	140%
Vinyl Chloride	3830090	3830090	<0.02	<0.02	NA	< 0.02	117%	50%	140%	105%	50%	140%	101%	50%	140%
Bromomethane	3830090	3830090	<0.05	<0.05	NA	< 0.05	88%	50%	140%	111%	50%	140%	109%	50%	140%
Trichlorofluoromethane	3830090	3830090	<0.05	<0.05	NA	< 0.05	96%	50%	140%	116%	50%	140%	111%	50%	140%
Acetone	3830090	3830090	<0.50	<0.50	NA	< 0.50	104%	50%	140%	99%	50%	140%	102%	50%	140%
1,1-Dichloroethylene	3830090	3830090	<0.05	<0.05	NA	< 0.05	83%	50%	140%	118%	60%	130%	97%	50%	140%
Methylene Chloride	3830090	3830090	<0.05	<0.05	NA	< 0.05	92%	50%	140%	106%	60%	130%	94%	50%	140%
Trans- 1,2-Dichloroethylene	3830090	3830090	<0.05	<0.05	NA	< 0.05	90%	50%	140%	97%	60%	130%	85%	50%	140%
Methyl tert-butyl Ether	3830090	3830090	<0.05	<0.05	NA	< 0.05	107%	50%	140%	101%	60%	130%	113%	50%	140%
1,1-Dichloroethane	3830090	3830090	<0.02	<0.02	NA	< 0.02	98%	50%	140%	88%	60%	130%	98%	50%	140%
Methyl Ethyl Ketone	3830090	3830090	<0.50	<0.50	NA	< 0.50	98%	50%	140%	90%	50%	140%	96%	50%	140%
Cis- 1,2-Dichloroethylene	3830090	3830090	<0.02	<0.02	NA	< 0.02	119%	50%	140%	89%	60%	130%	108%	50%	140%
Chloroform	3830090	3830090	<0.04	<0.04	NA	< 0.04	97%	50%	140%	105%	60%	130%	111%	50%	140%
1,2-Dichloroethane	3830090	3830090	<0.03	<0.03	NA	< 0.03	101%	50%	140%	87%	60%	130%	120%	50%	140%
1,1,1-Trichloroethane	3830090	3830090	<0.05	<0.05	NA	< 0.05	105%	50%	140%	92%	60%	130%	97%	50%	140%

AGAT Laboratories
5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
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Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H892548

PROJECT: 7-22-0008-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

Trace Organics Analysis (Continued)

RPT Date: May 30, 2022			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
Carbon Tetrachloride	3830090	3830090	<0.05	<0.05	NA	< 0.05	110%	50%	140%	92%	60%	130%	110%	50%	140%
Benzene	3830090	3830090	<0.02	<0.02	NA	< 0.02	87%	50%	140%	87%	60%	130%	90%	50%	140%
1,2-Dichloropropane	3830090	3830090	<0.03	<0.03	NA	< 0.03	95%	50%	140%	85%	60%	130%	94%	50%	140%
Trichloroethylene	3830090	3830090	<0.03	<0.03	NA	< 0.03	92%	50%	140%	111%	60%	130%	106%	50%	140%
Bromodichloromethane	3830090	3830090	<0.05	<0.05	NA	< 0.05	113%	50%	140%	89%	60%	130%	107%	50%	140%
Methyl Isobutyl Ketone	3830090	3830090	<0.50	<0.50	NA	< 0.50	88%	50%	140%	87%	50%	140%	97%	50%	140%
1,1,2-Trichloroethane	3830090	3830090	<0.04	<0.04	NA	< 0.04	113%	50%	140%	116%	60%	130%	96%	50%	140%
Toluene	3830090	3830090	<0.05	<0.05	NA	< 0.05	90%	50%	140%	100%	60%	130%	81%	50%	140%
Dibromochloromethane	3830090	3830090	<0.05	<0.05	NA	< 0.05	116%	50%	140%	115%	60%	130%	87%	50%	140%
Ethylene Dibromide	3830090	3830090	<0.04	<0.04	NA	< 0.04	98%	50%	140%	105%	60%	130%	86%	50%	140%
Tetrachloroethylene	3830090	3830090	<0.05	<0.05	NA	< 0.05	112%	50%	140%	110%	60%	130%	106%	50%	140%
1,1,1,2-Tetrachloroethane	3830090	3830090	<0.04	<0.04	NA	< 0.04	97%	50%	140%	112%	60%	130%	95%	50%	140%
Chlorobenzene	3830090	3830090	<0.05	<0.05	NA	< 0.05	106%	50%	140%	108%	60%	130%	89%	50%	140%
Ethylbenzene	3830090	3830090	<0.05	<0.05	NA	< 0.05	83%	50%	140%	88%	60%	130%	80%	50%	140%
m & p-Xylene	3830090	3830090	<0.05	<0.05	NA	< 0.05	92%	50%	140%	99%	60%	130%	99%	50%	140%
Bromoform	3830090	3830090	<0.05	<0.05	NA	< 0.05	90%	50%	140%	108%	60%	130%	113%	50%	140%
Styrene	3830090	3830090	<0.05	<0.05	NA	< 0.05	89%	50%	140%	89%	60%	130%	74%	50%	140%
1,1,2,2-Tetrachloroethane	3830090	3830090	<0.05	<0.05	NA	< 0.05	91%	50%	140%	96%	60%	130%	115%	50%	140%
o-Xylene	3830090	3830090	<0.05	<0.05	NA	< 0.05	92%	50%	140%	98%	60%	130%	76%	50%	140%
1,3-Dichlorobenzene	3830090	3830090	<0.05	<0.05	NA	< 0.05	104%	50%	140%	99%	60%	130%	106%	50%	140%
1,4-Dichlorobenzene	3830090	3830090	<0.05	<0.05	NA	< 0.05	115%	50%	140%	100%	60%	130%	110%	50%	140%
1,2-Dichlorobenzene	3830090	3830090	<0.05	<0.05	NA	< 0.05	109%	50%	140%	104%	60%	130%	103%	50%	140%
n-Hexane	3830090	3830090	<0.05	<0.05	NA	< 0.05	105%	50%	140%	81%	60%	130%	82%	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).

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

Hexachloroethane	3824210	< 0.005	< 0.005	NA	< 0.005	98%	50%	140%	75%	50%	140%	102%	50%	140%
Gamma-Hexachlorocyclohexane	3824210	< 0.005	< 0.005	NA	< 0.005	106%	50%	140%	83%	50%	140%	82%	50%	140%
Heptachlor	3824210	< 0.005	< 0.005	NA	< 0.005	108%	50%	140%	89%	50%	140%	88%	50%	140%
Aldrin	3824210	< 0.005	< 0.005	NA	< 0.005	102%	50%	140%	102%	50%	140%	92%	50%	140%
Heptachlor Epoxide	3824210	< 0.005	< 0.005	NA	< 0.005	101%	50%	140%	84%	50%	140%	98%	50%	140%
Endosulfan I	3824210	< 0.005	< 0.005	NA	< 0.005	101%	50%	140%	97%	50%	140%	82%	50%	140%
Endosulfan II	3824210	< 0.005	< 0.005	NA	< 0.005	104%	50%	140%	97%	50%	140%	79%	50%	140%
Alpha-Chlordane	3824210	< 0.005	< 0.005	NA	< 0.005	100%	50%	140%	105%	50%	140%	76%	50%	140%
gamma-Chlordane	3824210	< 0.005	< 0.005	NA	< 0.005	100%	50%	140%	98%	50%	140%	79%	50%	140%
op'-DDE	3824210	< 0.005	< 0.005	NA	< 0.005	105%	50%	140%	103%	50%	140%	79%	50%	140%
pp'-DDE	3824210	< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	100%	50%	140%	76%	50%	140%
op'-DDD	3824210	< 0.005	< 0.005	NA	< 0.005	105%	50%	140%	104%	50%	140%	81%	50%	140%
pp'-DDD	3824210	< 0.005	< 0.005	NA	< 0.005	101%	50%	140%	108%	50%	140%	80%	50%	140%
op'-DDT	3824210	< 0.005	< 0.005	NA	< 0.005	101%	50%	140%	96%	50%	140%	98%	50%	140%

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H892548

PROJECT: 7-22-0008-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

Trace Organics Analysis (Continued)

RPT Date: May 30, 2022			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
pp'-DDT	3824210		< 0.005	< 0.005	NA	< 0.005	105%	50%	140%	89%	50%	140%	105%	50%	140%
Dieldrin	3824210		< 0.005	< 0.005	NA	< 0.005	97%	50%	140%	98%	50%	140%	82%	50%	140%
Endrin	3824210		< 0.005	< 0.005	NA	< 0.005	90%	50%	140%	103%	50%	140%	86%	50%	140%
Methoxychlor	3824210		< 0.005	< 0.005	NA	< 0.005	107%	50%	140%	106%	50%	140%	106%	50%	140%
Hexachlorobenzene	3824210		< 0.005	< 0.005	NA	< 0.005	106%	50%	140%	103%	50%	140%	103%	50%	140%
Hexachlorobutadiene	3824210		< 0.01	< 0.01	NA	< 0.01	102%	50%	140%	92%	50%	140%	92%	50%	140%

Certified By:

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H892548

PROJECT: 7-22-0008-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

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TEL (905)712-5100
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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H892548

PROJECT: 7-22-0008-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Hexachloroethane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Aldrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan I	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan II	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
Alpha-Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
op'-DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
op'-DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
op'-DDT	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDT	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDT (Total)	ORG-91-5113	modified from EPA 3570, 3620C & 8081B	CALCULATION
Dieldrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
TCMX	ORG-91-5112	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H892548

PROJECT: 7-22-0008-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
wet weight OC	ORG-91-5113		BALANCE
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H892548

PROJECT: 7-22-0008-42

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

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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 #: 22H892.548

Cooler Quantity: LG cooler.

Arrival Temperatures: 5.8 | 5.9 | 6.0
1.6 | 4.9 | 5

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: TREE 1/6

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:

(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*)

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm — ____ (*Region*)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other ____ (*Indicate One*)

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

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

Turnaround Time (TAT) Required:

Regular TAT (Most Analysis) ☒ 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: 7-22-0008-42

Site Location:

Sampled By: KG

AGAT ID #: ____ 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 R

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	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: Total PCBs ☐ Aroclor	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	OC Pesticides excluding Metals + Inorganics EC/SAR							Potentially Hazardous or High Concentration (Y/N)
BH1 SA1	May 2/22	AM/PM	1	S	Limited Sample		X				X							X						
BH1 SA2	"	AM/PM	2	"	"				X				X											
BH1 SA4		AM/PM	1				X				X													
BH1 SA5		AM/PM	2						X				X											
DUP 2		AM/PM	1				X				X													
DUP 3		AM/PM	2						X				X											
BH3 SA1		AM/PM	2															X	X					
BH4 SA1		AM/PM	2															X	X					
BH5 SA1	May 3/22	AM/PM	1															X	X					
BH6 SA1	May 4/22	AM/PM	2															X	X					
DUP1	May 2/22	AM/PM	2															X	X					

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
K. Greenman	May 6/22	2:30pm	DAC	May 6/22	2:40pm
DAC	May 6/22	3pm	Paul Rahmanian		

'22 MAY 6 5:12pm

Page 1 of 2

No: T 123559

Document ID: DW-78-1511-020

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

Date Issued: December 9, 2020

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)

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)

- [x] Regulation 153/04 — Table 2 (*Indicate One*)
  - [ ] Ind/Com
  - [x] Res/Park
  - [ ] Agriculture
- Soil Texture *(Check One)*
  - [x] Coarse
  - [ ] Fine
- [ ] Excess Soils R406 — Table ____ (*Indicate One*)
- [ ] Regulation 558
- [ ] CCME
- [ ] Sewer Use — [ ] Sanitary [ ] Storm — ____ (*Region*)
- [ ] Prov. Water Quality Objectives (PWQO)
- [ ] Other ____ (*Indicate One*)

Is this submission for a **Record of Site Condition?** [ ] Yes [x] No

Report Guideline on *Certificate of Analysis* [x] Yes [ ] No

Project Information:

Project: 7-22-0008-42
Site Location:
Sampled By: KG
AGAT ID #: ____ 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 R
Address:
Email:

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 22H892548

Cooler Quantity: LG COOLER
Arrival Temperatures: 5.8 | 5.9 | 6.0
Custody Seal Intact: [ ] Yes [ ] No [ ] N/A
Notes: FREE ICE

Turnaround Time (TAT) Required:

Regular TAT (Most Analysis) [x] 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

[ ] 3 Business Days [ ] 2 Business Days [ ] Next Business Day

OR Date Required (Rush Surcharges May Apply): ____

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

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - CrVI, Hg, HWSB	O. Reg 153: BTEX, F1-F4 PHCs — Analyze F4G if required [ ] Yes [ ] No	O. Reg 153: PAHs	O. Reg 153: Total PCBs [ ] Aroclor	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: TCLP: [ ] M&I [ ] VOCs [ ] ABNs [ ] B(a)P [ ] PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: [ ] Metals [ ] VOCs [ ] SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
BH3 SA2	May 2/22	AM PM	2	S					X			X					
BH4 SA2	"	AM PM	2	"					X			X					
		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): Y. Greenman	Date: May 6/22	Time: 2:30pm	Samples Received By (Print Name and Sign): DMC	Date: may 6/22	Time: 2:40pm
Samples Relinquished By (Print Name and Sign): DMC	Date: may 6/22	Time: 3pm	Samples Received By (Print Name and Sign):	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

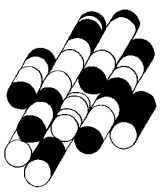
'22 MAY 6 5:13PM

Page 2 of 2

Nº: T 123560

APPENDIX D

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: 7-22-0008-42

AGAT WORK ORDER: 22H900360

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Jun 10, 2022

PAGES (INCLUDING COVER): 22

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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Certificate of Analysis

AGAT WORK ORDER: 22H900360

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-26

DATE REPORTED: 2022-06-10

		SAMPLE DESCRIPTION:		BH5	BH3	DUP1
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2022-05-26	2022-05-26	2022-05-26
Parameter	Unit	G / S	RDL	3907387	3907395	3907400
Gamma-Hexachlorocyclohexane	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Heptachlor	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Aldrin	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Heptachlor Epoxide	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Endosulfan I	µg/L		0.05	<0.05	<0.05	<0.05
Endosulfan II	µg/L		0.05	<0.05	<0.05	<0.05
Endosulfan	µg/L	0.05	0.05	<0.05	<0.05	<0.05
alpha - chlordane	µg/L		0.04	<0.04	<0.04	<0.04
gamma-Chlordane	µg/L		0.04	<0.04	<0.04	<0.04
Chlordane	µg/L	0.06	0.04	<0.04	<0.04	<0.04
op'-DDE	µg/L		0.01	<0.01	<0.01	<0.01
pp'-DDE	µg/L		0.01	<0.01	<0.01	<0.01
DDE	µg/L	10	0.01	<0.01	<0.01	<0.01
op'-DDD	µg/L		0.05	<0.05	<0.05	<0.05
pp'-DDD	µg/L		0.05	<0.05	<0.05	<0.05
DDD	µg/L	1.8	0.05	<0.05	<0.05	<0.05
op'-DDT	µg/L		0.04	<0.04	<0.04	<0.04
pp'-DDT	µg/L		0.05	<0.05	<0.05	<0.05
DDT	µg/L	0.05	0.04	<0.04	<0.04	<0.04
Dieldrin	µg/L	0.05	0.02	<0.02	<0.02	<0.02
Endrin	µg/L	0.05	0.05	<0.05	<0.05	<0.05
Methoxychlor	µg/L	0.05	0.04	<0.04	<0.04	<0.04
Hexachlorobenzene	ug/L	0.01	0.01	<0.01	<0.01	<0.01
Hexachlorobutadiene	ug/L	0.01	0.01	<0.01	<0.01	<0.01
Hexachloroethane	ug/L	0.01	0.01	<0.01	<0.01	<0.01
Surrogate	Unit	Acceptable Limits				
TCMX	%	50-140		79	101	85
Decachlorobiphenyl	%	60-140		82	104	89

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 22H900360

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-26

DATE REPORTED: 2022-06-10

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
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.

3907387-3907400 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
TEL (905)712-5100
FAX (905)712-5122
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Certificate of Analysis

AGAT WORK ORDER: 22H900360

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-26

DATE REPORTED: 2022-06-10

		SAMPLE DESCRIPTION:		BH1	DUP2
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2022-05-26	2022-05-26
Parameter	Unit	G / S	RDL	3907398	3907401
Naphthalene	µg/L	7	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	0.1	0.10	<0.10	<0.10
Anthracene	µg/L	0.1	0.10	<0.10	<0.10
Fluoranthene	µg/L	0.4	0.20	<0.20	<0.20
Pyrene	µg/L	0.2	0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	0.2	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	2	0.20	<0.20	<0.20
Sediment				NA	NA
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%	50-140		78	74
Acridine-d9	%	50-140		96	77
Terphenyl-d14	%	50-140		92	64

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
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.

3907398-3907401 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

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CANADA L4Z 1Y2
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Certificate of Analysis

AGAT WORK ORDER: 22H900360

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-26

DATE REPORTED: 2022-06-10

				SAMPLE DESCRIPTION:	BH1	DUP2
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2022-05-26	2022-05-26
Parameter	Unit	G / S	RDL		3907398	3907401
F1 (C6-C10)	µg/L	420	25		<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25
F2 (C10 to C16)	µg/L	150	100		<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100		<100	<100
F3 (C16 to C34)	µg/L	500	100		<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100		<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA
Sediment					Trace	Trace
Surrogate	Unit	Acceptable Limits				
Toluene-d8	%	50-140			94	95
Terphenyl	% Recovery	60-140			76	85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
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.

3907398-3907401 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

AGAT Laboratories

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
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Certificate of Analysis

AGAT WORK ORDER: 22H900360

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-26

DATE REPORTED: 2022-06-10

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2022-05-26
Parameter	Unit	G / S	RDL	3907415
Dichlorodifluoromethane	µg/L	590	0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20

Certified By: Pinkal Patel

AGAT Laboratories

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 22H900360

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-26

DATE REPORTED: 2022-06-10

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2022-05-26
Parameter	Unit	G / S	RDL	3907415
Bromoform	µg/L	5	0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10
o-Xylene	µg/L		0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		106
4-Bromofluorobenzene	% Recovery	50-140		80

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
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.

3907415 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Jinkal Patel

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 22H900360

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-26

DATE REPORTED: 2022-06-10

		SAMPLE DESCRIPTION:		BH1	DUP2
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2022-05-26	2022-05-26
Parameter	Unit	G / S	RDL	3907398	3907401
Dichlorodifluoromethane	µg/L	590	0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20

Certified By: Pinkal Patel

AGAT Laboratories
5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
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Certificate of Analysis

AGAT WORK ORDER: 22H900360

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-26

DATE REPORTED: 2022-06-10

				SAMPLE DESCRIPTION:	BH1	DUP2
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2022-05-26	2022-05-26
Parameter	Unit	G / S	RDL		3907398	3907401
Bromoform	µg/L	5	0.10		<0.10	<0.10
Styrene	µg/L	0.5	0.10		<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10		<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10		<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20
n-Hexane	µg/L	5	0.20		<0.20	<0.20
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140			94	95
4-Bromofluorobenzene	% Recovery	50-140			75	98

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
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.

3907398-3907401 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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
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Certificate of Analysis

AGAT WORK ORDER: 22H900360

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-05-26

DATE REPORTED: 2022-06-10

		SAMPLE DESCRIPTION:		BH5	BH3	BH1	DUP1
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2022-05-26	2022-05-26	2022-05-26	2022-05-26
Parameter	Unit	G / S	RDL	3907387	3907395	3907398	3907400
Dissolved Antimony	µg/L	1.5	1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	13	1.0	2.4	3.2	4.8	3.0
Dissolved Barium	µg/L	610	2.0	86.5	132	129	130
Dissolved Beryllium	µg/L	0.5	0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	1700	10.0	103	186	194	140
Dissolved Cadmium	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	11	2.0	<2.0	2.8	<2.0	6.9
Dissolved Cobalt	µg/L	3.8	0.50	<0.50	0.50	<0.50	<0.50
Dissolved Copper	µg/L	5	1.0	21.9	33.4	11.7	3.7
Dissolved Lead	µg/L	1.9	0.50	<0.50	0.68	<0.50	<0.50
Dissolved Molybdenum	µg/L	23	0.50	5.10	5.10	9.46	6.79
Dissolved Nickel	µg/L	14	1.0	1.8	5.4	3.3	2.9
Dissolved Selenium	µg/L	5	1.0	<1.0	<1.0	<1.0	1.5
Dissolved Silver	µg/L	0.3	0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	8.9	0.50	1.14	1.22	1.63	1.71
Dissolved Vanadium	µg/L	3.9	0.40	0.64	1.00	<0.40	1.16
Dissolved Zinc	µg/L	160	5.0	9.4	11.8	9.8	7.1
Mercury	µg/L	0.1	0.02	<0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	25	2.000	<2.000	<2.000	<2.000	3.44
Cyanide, Free	µg/L	5	2	<2	<2	<2	<2
Electrical Conductivity	uS/cm	NA	2	566	602	720	567
pH	pH Units		NA	7.95	7.92	7.88	7.95

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
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.

3907387-3907400 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Iris Verástegui

AGAT Laboratories

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

Exceedance Summary

AGAT WORK ORDER: 22H900360

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3907387	BH5	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Copper	µg/L	5	21.9
3907395	BH3	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Copper	µg/L	5	33.4
3907398	BH1	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Copper	µg/L	5	11.7

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5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-22-0008-42
SAMPLING SITE:

AGAT WORK ORDER: 22H900360
ATTENTION TO: Amber Brooks
SAMPLED BY:KG

Trace Organics Analysis

RPT Date: Jun 10, 2022			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)															
Gamma-Hexachlorocyclohexane	3907387	3907387	< 0.01	< 0.01	NA	< 0.01	92%	50%	140%	105%	50%	140%	104%	50%	140%
Heptachlor	3907387	3907387	< 0.01	< 0.01	NA	< 0.01	80%	50%	140%	107%	50%	140%	111%	50%	140%
Aldrin	3907387	3907387	< 0.01	< 0.01	NA	< 0.01	87%	50%	140%	118%	50%	140%	99%	50%	140%
Heptachlor Epoxide	3907387	3907387	< 0.01	< 0.01	NA	< 0.01	88%	50%	140%	117%	50%	140%	104%	50%	140%
Endosulfan I	3907387	3907387	< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	108%	50%	140%	98%	50%	140%
Endosulfan II	3907387	3907387	< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	112%	50%	140%	101%	50%	140%
alpha - chlordane	3907387	3907387	< 0.04	< 0.04	NA	< 0.04	85%	50%	140%	105%	50%	140%	99%	50%	140%
gamma-Chlordane	3907387	3907387	< 0.04	< 0.04	NA	< 0.04	86%	50%	140%	107%	50%	140%	98%	50%	140%
op'-DDE	3907387	3907387	< 0.01	< 0.01	NA	< 0.01	92%	50%	140%	106%	50%	140%	115%	50%	140%
pp'-DDE	3907387	3907387	< 0.01	< 0.01	NA	< 0.01	82%	50%	140%	112%	50%	140%	101%	50%	140%
op'-DDD	3907387	3907387	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	118%	50%	140%	84%	50%	140%
pp'-DDD	3907387	3907387	< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	102%	50%	140%	79%	50%	140%
op'-DDT	3907387	3907387	< 0.04	< 0.04	NA	< 0.04	80%	50%	140%	107%	50%	140%	108%	50%	140%
pp'-DDT	3907387	3907387	< 0.05	< 0.05	NA	< 0.05	75%	50%	140%	105%	50%	140%	112%	50%	140%
Dieldrin	3907387	3907387	< 0.02	< 0.02	NA	< 0.02	84%	50%	140%	107%	50%	140%	98%	50%	140%
Endrin	3907387	3907387	< 0.05	< 0.05	NA	< 0.05	80%	50%	140%	112%	50%	140%	99%	50%	140%
Methoxychlor	3907387	3907387	< 0.04	< 0.04	NA	< 0.04	76%	50%	140%	102%	50%	140%	113%	50%	140%
Hexachlorobenzene	3907387	3907387	< 0.01	< 0.01	NA	< 0.01	95%	50%	140%	114%	50%	140%	105%	50%	140%
Hexachlorobutadiene	3907387	3907387	< 0.01	< 0.01	NA	< 0.01	82%	50%	140%	105%	50%	140%	101%	50%	140%
Hexachloroethane	3907387	3907387	< 0.01	< 0.01	NA	< 0.01	80%	50%	140%	102%	50%	140%	110%	50%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	3904560		<0.40	<0.40	NA	< 0.40	111%	50%	140%	118%	50%	140%	75%	50%	140%
Vinyl Chloride	3904560		<0.17	<0.17	NA	< 0.17	113%	50%	140%	115%	50%	140%	110%	50%	140%
Bromomethane	3904560		<0.20	<0.20	NA	< 0.20	108%	50%	140%	112%	50%	140%	82%	50%	140%
Trichlorofluoromethane	3904560		<0.40	<0.40	NA	< 0.40	96%	50%	140%	101%	50%	140%	102%	50%	140%
Acetone	3904560		<1.0	<1.0	NA	< 1.0	96%	50%	140%	112%	50%	140%	91%	50%	140%
1,1-Dichloroethylene	3904560		<0.30	<0.30	NA	< 0.30	74%	50%	140%	90%	60%	130%	104%	50%	140%
Methylene Chloride	3904560		<0.30	<0.30	NA	< 0.30	78%	50%	140%	87%	60%	130%	120%	50%	140%
trans- 1,2-Dichloroethylene	3904560		<0.20	<0.20	NA	< 0.20	73%	50%	140%	87%	60%	130%	113%	50%	140%
Methyl tert-butyl ether	3904560		<0.20	<0.20	NA	< 0.20	111%	50%	140%	114%	60%	130%	104%	50%	140%
1,1-Dichloroethane	3904560		1.11	1.17	NA	< 0.30	107%	50%	140%	103%	60%	130%	78%	50%	140%
Methyl Ethyl Ketone	3904560		<1.0	<1.0	NA	< 1.0	90%	50%	140%	111%	50%	140%	103%	50%	140%
cis- 1,2-Dichloroethylene	3904560		<0.20	<0.20	NA	< 0.20	97%	50%	140%	97%	60%	130%	100%	50%	140%
Chloroform	3904560		<0.20	<0.20	NA	< 0.20	89%	50%	140%	103%	60%	130%	112%	50%	140%
1,2-Dichloroethane	3904560		<0.20	<0.20	NA	< 0.20	117%	50%	140%	108%	60%	130%	100%	50%	140%
1,1,1-Trichloroethane	3904560		<0.30	<0.30	NA	< 0.30	107%	50%	140%	100%	60%	130%	106%	50%	140%
Carbon Tetrachloride	3904560		<0.20	<0.20	NA	< 0.20	110%	50%	140%	86%	60%	130%	92%	50%	140%
Benzene	3904560		<0.20	<0.20	NA	< 0.20	101%	50%	140%	106%	60%	130%	117%	50%	140%
1,2-Dichloropropane	3904560		<0.20	<0.20	NA	< 0.20	106%	50%	140%	111%	60%	130%	90%	50%	140%

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: 7-22-0008-42
SAMPLING SITE:

AGAT WORK ORDER: 22H900360
ATTENTION TO: Amber Brooks
SAMPLED BY:KG

Trace Organics Analysis (Continued)

RPT Date: Jun 10, 2022			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
Trichloroethylene	3904560		<0.20	<0.20	NA	< 0.20	97%	50%	140%	91%	60%	130%	90%	50%	140%
Bromodichloromethane	3904560		<0.20	<0.20	NA	< 0.20	110%	50%	140%	98%	60%	130%	83%	50%	140%
Methyl Isobutyl Ketone	3904560		<1.0	<1.0	NA	< 1.0	79%	50%	140%	95%	50%	140%	98%	50%	140%
1,1,2-Trichloroethane	3904560		<0.20	<0.20	NA	< 0.20	109%	50%	140%	115%	60%	130%	114%	50%	140%
Toluene	3904560		<0.20	<0.20	NA	< 0.20	104%	50%	140%	100%	60%	130%	82%	50%	140%
Dibromochloromethane	3904560		<0.10	<0.10	NA	< 0.10	94%	50%	140%	119%	60%	130%	106%	50%	140%
Ethylene Dibromide	3904560		<0.10	<0.10	NA	< 0.10	105%	50%	140%	108%	60%	130%	107%	50%	140%
Tetrachloroethylene	3904560		<0.20	<0.20	NA	< 0.20	106%	50%	140%	98%	60%	130%	84%	50%	140%
1,1,1,2-Tetrachloroethane	3904560		<0.10	<0.10	NA	< 0.10	97%	50%	140%	100%	60%	130%	82%	50%	140%
Chlorobenzene	3904560		<0.10	<0.10	NA	< 0.10	109%	50%	140%	102%	60%	130%	81%	50%	140%
Ethylbenzene	3904560		<0.10	<0.10	NA	< 0.10	90%	50%	140%	88%	60%	130%	85%	50%	140%
m & p-Xylene	3904560		<0.20	<0.20	NA	< 0.20	115%	50%	140%	97%	60%	130%	77%	50%	140%
Bromoform	3904560		<0.10	<0.10	NA	< 0.10	112%	50%	140%	113%	60%	130%	113%	50%	140%
Styrene	3904560		<0.10	<0.10	NA	< 0.10	97%	50%	140%	101%	60%	130%	82%	50%	140%
1,1,2,2-Tetrachloroethane	3904560		<0.10	<0.10	NA	< 0.10	92%	50%	140%	106%	60%	130%	84%	50%	140%
o-Xylene	3904560		<0.10	<0.10	NA	< 0.10	96%	50%	140%	102%	60%	130%	81%	50%	140%
1,3-Dichlorobenzene	3904560		<0.10	<0.10	NA	< 0.10	116%	50%	140%	116%	60%	130%	100%	50%	140%
1,4-Dichlorobenzene	3904560		<0.10	<0.10	NA	< 0.10	101%	50%	140%	118%	60%	130%	102%	50%	140%
1,2-Dichlorobenzene	3904560		<0.10	<0.10	NA	< 0.10	105%	50%	140%	111%	60%	130%	98%	50%	140%
n-Hexane	3904560		<0.20	<0.20	NA	< 0.20	95%	50%	140%	108%	60%	130%	104%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6-C10)	3904560		<25	<25	NA	< 25	139%	60%	140%	109%	60%	140%	92%	60%	140%
F2 (C10 to C16)	3902550		< 100	< 100	NA	< 100	100%	60%	140%	68%	60%	140%	63%	60%	140%
F3 (C16 to C34)	3902550		< 100	< 100	NA	< 100	88%	60%	140%	72%	60%	140%	61%	60%	140%
F4 (C34 to C50)	3902550		< 100	< 100	NA	< 100	92%	60%	140%	64%	60%	140%	63%	60%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	3907401	3907401	<0.20	<0.20	NA	< 0.20	118%	50%	140%	94%	50%	140%	76%	50%	140%
Acenaphthylene	3907401	3907401	<0.20	<0.20	NA	< 0.20	98%	50%	140%	84%	50%	140%	67%	50%	140%
Acenaphthene	3907401	3907401	<0.20	<0.20	NA	< 0.20	112%	50%	140%	76%	50%	140%	87%	50%	140%
Fluorene	3907401	3907401	<0.20	<0.20	NA	< 0.20	99%	50%	140%	72%	50%	140%	81%	50%	140%
Phenanthrene	3907401	3907401	<0.10	<0.10	NA	< 0.10	97%	50%	140%	73%	50%	140%	82%	50%	140%
Anthracene	3907401	3907401	<0.10	<0.10	NA	< 0.10	88%	50%	140%	75%	50%	140%	84%	50%	140%
Fluoranthene	3907401	3907401	<0.20	<0.20	NA	< 0.20	89%	50%	140%	73%	50%	140%	82%	50%	140%
Pyrene	3907401	3907401	<0.20	<0.20	NA	< 0.20	92%	50%	140%	71%	50%	140%	81%	50%	140%
Benzo(a)anthracene	3907401	3907401	<0.20	<0.20	NA	< 0.20	67%	50%	140%	86%	50%	140%	72%	50%	140%
Chrysene	3907401	3907401	<0.10	<0.10	NA	< 0.10	77%	50%	140%	73%	50%	140%	81%	50%	140%
Benzo(b)fluoranthene	3907401	3907401	<0.10	<0.10	NA	< 0.10	71%	50%	140%	73%	50%	140%	82%	50%	140%
Benzo(k)fluoranthene	3907401	3907401	<0.10	<0.10	NA	< 0.10	107%	50%	140%	99%	50%	140%	89%	50%	140%
Benzo(a)pyrene	3907401	3907401	<0.01	<0.01	NA	< 0.01	73%	50%	140%	73%	50%	140%	84%	50%	140%

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-22-0008-42
SAMPLING SITE:

AGAT WORK ORDER: 22H900360
ATTENTION TO: Amber Brooks
SAMPLED BY:KG

Trace Organics Analysis (Continued)

RPT Date: Jun 10, 2022			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
Indeno(1,2,3-cd)pyrene	3907401	3907401	<0.20	<0.20	NA	< 0.20	76%	50%	140%	79%	50%	140%	81%	50%	140%
Dibenz(a,h)anthracene	3907401	3907401	<0.20	<0.20	NA	< 0.20	63%	50%	140%	69%	50%	140%	67%	50%	140%
Benzo(g,h,i)perylene	3907401	3907401	<0.20	<0.20	NA	< 0.20	79%	50%	140%	86%	50%	140%	90%	50%	140%
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	3897722		<0.40	<0.40	NA	< 0.40	99%	50%	140%	82%	50%	140%	71%	50%	140%
Vinyl Chloride	3897722		<0.17	<0.17	NA	< 0.17	107%	50%	140%	72%	50%	140%	81%	50%	140%
Bromomethane	3897722		<0.20	<0.20	NA	< 0.20	96%	50%	140%	81%	50%	140%	101%	50%	140%
Trichlorofluoromethane	3897722		<0.40	<0.40	NA	< 0.40	80%	50%	140%	89%	50%	140%	92%	50%	140%
Acetone	3897722		<1.0	<1.0	NA	< 1.0	88%	50%	140%	104%	50%	140%	86%	50%	140%
1,1-Dichloroethylene	3897722		<0.30	<0.30	NA	< 0.30	76%	50%	140%	103%	60%	130%	100%	50%	140%
Methylene Chloride	3897722		<0.30	<0.30	NA	< 0.30	87%	50%	140%	90%	60%	130%	94%	50%	140%
trans- 1,2-Dichloroethylene	3897722		<0.20	<0.20	NA	< 0.20	80%	50%	140%	81%	60%	130%	80%	50%	140%
Methyl tert-butyl ether	3897722		<0.20	<0.20	NA	< 0.20	114%	50%	140%	87%	60%	130%	85%	50%	140%
1,1-Dichloroethane	3897722		<0.30	<0.30	NA	< 0.30	110%	50%	140%	104%	60%	130%	107%	50%	140%
Methyl Ethyl Ketone	3897722		<1.0	<1.0	NA	< 1.0	83%	50%	140%	111%	50%	140%	89%	50%	140%
cis- 1,2-Dichloroethylene	3897722		<0.20	<0.20	NA	< 0.20	93%	50%	140%	83%	60%	130%	84%	50%	140%
Chloroform	3897722		<0.20	<0.20	NA	< 0.20	116%	50%	140%	95%	60%	130%	95%	50%	140%
1,2-Dichloroethane	3897722		<0.20	<0.20	NA	< 0.20	91%	50%	140%	74%	60%	130%	84%	50%	140%
1,1,1-Trichloroethane	3897722		<0.30	<0.30	NA	< 0.30	97%	50%	140%	74%	60%	130%	80%	50%	140%
Carbon Tetrachloride	3897722		<0.20	<0.20	NA	< 0.20	80%	50%	140%	80%	60%	130%	90%	50%	140%
Benzene	3897722		<0.20	<0.20	NA	< 0.20	116%	50%	140%	83%	60%	130%	87%	50%	140%
1,2-Dichloropropane	3897722		<0.20	<0.20	NA	< 0.20	108%	50%	140%	87%	60%	130%	91%	50%	140%
Trichloroethylene	3897722		<0.20	<0.20	NA	< 0.20	107%	50%	140%	78%	60%	130%	84%	50%	140%
Bromodichloromethane	3897722		<0.20	<0.20	NA	< 0.20	102%	50%	140%	82%	60%	130%	81%	50%	140%
Methyl Isobutyl Ketone	3897722		<1.0	<1.0	NA	< 1.0	89%	50%	140%	94%	50%	140%	94%	50%	140%
1,1,2-Trichloroethane	3897722		<0.20	<0.20	NA	< 0.20	99%	50%	140%	95%	60%	130%	101%	50%	140%
Toluene	3897722		<0.20	<0.20	NA	< 0.20	93%	50%	140%	82%	60%	130%	88%	50%	140%
Dibromochloromethane	3897722		<0.10	<0.10	NA	< 0.10	86%	50%	140%	78%	60%	130%	97%	50%	140%
Ethylene Dibromide	3897722		<0.10	<0.10	NA	< 0.10	88%	50%	140%	83%	60%	130%	95%	50%	140%
Tetrachloroethylene	3897722		<0.20	<0.20	NA	< 0.20	85%	50%	140%	72%	60%	130%	80%	50%	140%
1,1,1,2-Tetrachloroethane	3897722		<0.10	<0.10	NA	< 0.10	90%	50%	140%	78%	60%	130%	106%	50%	140%
Chlorobenzene	3897722		<0.10	<0.10	NA	< 0.10	92%	50%	140%	78%	60%	130%	84%	50%	140%
Ethylbenzene	3897722		<0.10	<0.10	NA	< 0.10	82%	50%	140%	73%	60%	130%	72%	50%	140%
m & p-Xylene	3897722		<0.20	<0.20	NA	< 0.20	88%	50%	140%	75%	60%	130%	81%	50%	140%
Bromoform	3897722		<0.10	<0.10	NA	< 0.10	94%	50%	140%	90%	60%	130%	103%	50%	140%
Styrene	3897722		<0.10	<0.10	NA	< 0.10	87%	50%	140%	88%	60%	130%	78%	50%	140%
1,1,2,2-Tetrachloroethane	3897722		<0.10	<0.10	NA	< 0.10	96%	50%	140%	99%	60%	130%	97%	50%	140%
o-Xylene	3897722		<0.10	<0.10	NA	< 0.10	87%	50%	140%	76%	60%	130%	81%	50%	140%

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

Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-22-0008-42
SAMPLING SITE:

AGAT WORK ORDER: 22H900360
ATTENTION TO: Amber Brooks
SAMPLED BY:KG

Trace Organics Analysis (Continued)

RPT Date: Jun 10, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	3897722		<0.10	<0.10	NA	< 0.10	87%	50%	140%	80%	60%	130%	85%	50%	140%
1,4-Dichlorobenzene	3897722		<0.10	<0.10	NA	< 0.10	87%	50%	140%	80%	60%	130%	83%	50%	140%
1,2-Dichlorobenzene	3897722		<0.10	<0.10	NA	< 0.10	84%	50%	140%	73%	60%	130%	77%	50%	140%
n-Hexane	3897722		<0.20	<0.20	NA	< 0.20	110%	50%	140%	94%	60%	130%	101%	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
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Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H900360

PROJECT: 7-22-0008-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

Water Analysis

RPT Date: Jun 10, 2022

PARAMETER	Batch	Sample Id	DUPLICATE Dup #1	DUPLICATE Dup #2	DUPLICATE RPD	Method Blank	REFERENCE MATERIAL Measured Value	REFERENCE MATERIAL Acceptable Limits Lower	REFERENCE MATERIAL Acceptable Limits Upper	METHOD BLANK SPIKE Recovery	METHOD BLANK SPIKE Acceptable Limits Lower	METHOD BLANK SPIKE Acceptable Limits Upper	MATRIX SPIKE Recovery	MATRIX SPIKE Acceptable Limits Lower	MATRIX SPIKE Acceptable Limits Upper
O. Reg. 153(511) - Metals & Inorganics (Water)															
Dissolved Antimony	3904073		<1.0	<1.0	NA	< 1.0	98%	70%	130%	103%	80%	120%	106%	70%	130%
Dissolved Arsenic	3904073		<1.0	<1.0	NA	< 1.0	110%	70%	130%	103%	80%	120%	105%	70%	130%
Dissolved Barium	3904073		86.8	86.2	0.7%	< 2.0	96%	70%	130%	100%	80%	120%	103%	70%	130%
Dissolved Beryllium	3904073		<0.50	<0.50	NA	< 0.50	107%	70%	130%	117%	80%	120%	110%	70%	130%
Dissolved Boron	3904073		65.9	68.4	3.7%	< 10.0	110%	70%	130%	118%	80%	120%	107%	70%	130%
Dissolved Cadmium	3904073		<0.20	<0.20	NA	< 0.20	98%	70%	130%	104%	80%	120%	103%	70%	130%
Dissolved Chromium	3904073		<2.0	<2.0	NA	< 2.0	101%	70%	130%	103%	80%	120%	98%	70%	130%
Dissolved Cobalt	3904073		<0.50	<0.50	NA	< 0.50	100%	70%	130%	102%	80%	120%	96%	70%	130%
Dissolved Copper	3904073		1.4	2.1	NA	< 1.0	98%	70%	130%	100%	80%	120%	92%	70%	130%
Dissolved Lead	3904073		<0.50	<0.50	NA	< 0.50	95%	70%	130%	96%	80%	120%	94%	70%	130%
Dissolved Molybdenum	3904073		1.42	1.37	NA	< 0.50	104%	70%	130%	107%	80%	120%	101%	70%	130%
Dissolved Nickel	3904073		<1.0	<1.0	NA	< 1.0	100%	70%	130%	99%	80%	120%	95%	70%	130%
Dissolved Selenium	3904073		<1.0	<1.0	NA	< 1.0	104%	70%	130%	110%	80%	120%	108%	70%	130%
Dissolved Silver	3904073		<0.20	<0.20	NA	< 0.20	97%	70%	130%	104%	80%	120%	101%	70%	130%
Dissolved Thallium	3904073		<0.30	<0.30	NA	< 0.30	99%	70%	130%	102%	80%	120%	102%	70%	130%
Dissolved Uranium	3904073		8.45	8.45	0.0%	< 0.50	91%	70%	130%	104%	80%	120%	107%	70%	130%
Dissolved Vanadium	3904073		0.77	1.00	NA	< 0.40	101%	70%	130%	107%	80%	120%	101%	70%	130%
Dissolved Zinc	3904073		11.5	<5.0	NA	< 5.0	101%	70%	130%	104%	80%	120%	98%	70%	130%
Mercury	3907387	3907387	<0.02	<0.02	NA	< 0.02	100%	70%	130%	100%	80%	120%	92%	70%	130%
Chromium VI	3892966		<2.000	<2.000	NA	< 2	103%	70%	130%	107%	80%	120%	112%	70%	130%
Cyanide, Free	3892445		<2	<2	NA	< 2	98%	70%	130%	109%	80%	120%	103%	70%	130%
Electrical Conductivity	3905392		1700	1700	0.0%	< 2	101%	90%	110%						
pH	3905392		7.61	7.60	0.1%	NA	102%	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

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: 22H900360

PROJECT: 7-22-0008-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
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
Aldrin	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
Endosulfan I	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan II	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
alpha - chlordane	ORG-91-5112	modified from EPA SW846 3510C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5112	modified from EPA SW846 3510C & 8081B	GC/ECD
Chlordane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
op'-DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
pp'-DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
op'-DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
pp'-DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
op'-DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
pp'-DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
Dieldrin	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
Methoxychlor	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
TCMX	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

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5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
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Method Summary

CLIENT NAME: TERRAPROBE INC
AGAT WORK ORDER: 22H900360
PROJECT: 7-22-0008-42
ATTENTION TO: Amber Brooks
SAMPLING SITE:
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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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
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 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	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
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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CANADA L4Z 1Y2
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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	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
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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

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: 22H900360

PROJECT: 7-22-0008-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

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 #: 22H900360

Cooler Quantity: LG COOLER

Arrival Temperatures: 9.5 | 10.7 | 9.1 / 7.3 | 8.4 | 7.9

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: FREE ICE

Report Information:

Company: Terraprobe
Contact: Amber Brooks
Address: 903 Barton St, unit 22, Stoney Creek L8E 5P5
Phone: 905 643 7560 Fax:
Reports to be sent to:
1. Email: abrooks@terraprobe.ca
2. Email: Kgreenman@terraprobe.ca

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)
☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm — ____ (Region)
☐ 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: 7-22-0008-42
Site Location:
Sampled By: KG
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 R
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	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs — Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	☐ OC Pesticides	Potentially Hazardous or High Concentration (Y/N)
~~BH4~~ vs BH5	May 26/22	AM PM	8	GW		Y	X										X	
BH3	"	AM PM	16	"		Y	X		X			X					X	
BH1	"	AM PM	16	"		Y	X		X	X		X						
Dup1	"	AM PM	8	"		Y	X										X	
Dup2	"	AM PM	10	↓					X	X		X						
Trip Blank	"	AM PM	3	-														
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																

Samples Relinquished By (Print Name and Sign): K. Greenman	Date: May 26/22	Time: 2:45pm	Samples Received By (Print Name and Sign): T. Sequinsew	Date: 05-26-22	Time: 3:30 pm	Page 1 of 1	
Samples Relinquished By (Print Name and Sign): BJAC	Date: May 27/22	Time: 3pm	Samples Received By (Print Name and Sign):	Date: 5/27/22	Time: 16:47		
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:	Nº: T 133525	

Document ID: DM-78-1511-021

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

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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: 7-22-0008-42
AGAT WORK ORDER: 22H918598
WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer
DATE REPORTED: Jul 15, 2022
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 after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- 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

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
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Certificate of Analysis

AGAT WORK ORDER: 22H918598

PROJECT: 7-22-0008-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

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

DATE RECEIVED: 2022-07-11

DATE REPORTED: 2022-07-15

		SAMPLE DESCRIPTION:		BH1	BH3	BH5
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2022-07-08	2022-07-08	2022-07-08
Parameter	Unit	G / S	RDL	4075648	4075655	4075656
Dissolved Barium	µg/L	610	2.0	104	128	157
Dissolved Beryllium	µg/L	0.5	0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	1700	10.0	158	160	127
Dissolved Cadmium	µg/L	0.5	0.20	0.25	<0.20	<0.20
Dissolved Chromium	µg/L	11	2.0	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	<0.50	<0.50	<0.50
Dissolved Copper	µg/L	5	1.0	<1.0	<1.0	<1.0
Dissolved Lead	µg/L	1.9	0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	23	0.50	9.02	4.93	6.44
Dissolved Nickel	µg/L	14	1.0	<1.0	<1.0	1.1
Dissolved Silver	µg/L	0.3	0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	8.9	0.50	1.62	1.73	3.27
Dissolved Vanadium	µg/L	3.9	0.40	<0.40	0.55	0.52
Dissolved Zinc	µg/L	160	5.0	<5.0	<5.0	<5.0

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
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.

4075648-4075656 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Iris Verástegui

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: 22H918598

PROJECT: 7-22-0008-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

Water Analysis

RPT Date: Jul 15, 2022			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 Barium	4074989		232	199	15.3%	< 2.0	95%	70%	130%	104%	80%	120%	109%	70%	130%
Dissolved Beryllium	4074989		<0.50	<0.50	NA	< 0.50	90%	70%	130%	94%	80%	120%	96%	70%	130%
Dissolved Boron	4074989		306	280	8.9%	< 10.0	98%	70%	130%	95%	80%	120%	106%	70%	130%
Dissolved Cadmium	4074989		<0.20	0.26	NA	< 0.20	100%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Chromium	4074989		<2.0	<2.0	NA	< 2.0	100%	70%	130%	99%	80%	120%	105%	70%	130%
Dissolved Cobalt	4074989		1.54	1.26	NA	< 0.50	99%	70%	130%	97%	80%	120%	101%	70%	130%
Dissolved Copper	4074989		2.4	2.6	NA	< 1.0	99%	70%	130%	100%	80%	120%	97%	70%	130%
Dissolved Lead	4074989		<0.50	<0.50	NA	< 0.50	97%	70%	130%	97%	80%	120%	99%	70%	130%
Dissolved Molybdenum	4074989		0.52	<0.50	NA	< 0.50	99%	70%	130%	105%	80%	120%	113%	70%	130%
Dissolved Nickel	4074989		10.0	8.3	18.6%	< 1.0	100%	70%	130%	95%	80%	120%	97%	70%	130%
Dissolved Silver	4074989		<0.20	<0.20	NA	< 0.20	101%	70%	130%	97%	80%	120%	98%	70%	130%
Dissolved Thallium	4074989		<0.30	<0.30	NA	< 0.30	101%	70%	130%	98%	80%	120%	100%	70%	130%
Dissolved Uranium	4074989		1.57	1.48	NA	< 0.50	100%	70%	130%	98%	80%	120%	103%	70%	130%
Dissolved Vanadium	4074989		0.41	0.53	NA	< 0.40	97%	70%	130%	100%	80%	120%	104%	70%	130%
Dissolved Zinc	4074989		36.7	33.2	10.0%	< 5.0	97%	70%	130%	99%	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: Iris Verástegui

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: 22H918598

PROJECT: 7-22-0008-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:KG

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
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 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

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 #: 22H918598

Cooler Quantity: 5m COOLER

Arrival Temperatures: 5.2 | 6.0 | 6.2
5.5 | 3.4 | 3.0

Custody Seal Intact: ☐Yes ☐No ☐N/A

Notes: BAGGED ICE

Report Information:

Company: Terraprobe
Contact: Amber Brooks
Address: 903 Barton St. Unit 22
Stoney Creek, L8E 5P5
Phone: 905 643 7560 Fax:
Reports to be sent to:
1. Email: abrooks@terraprobe.ca
2. Email: kgreenman@terraprobe.ca

Regulatory Requirements:

(Please check all applicable boxes)

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

☐ Excess Soils R406
Table (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
(Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
(Indicate One)

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

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

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: T-22-0008-42
Site Location:
Sampled By: KG
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 R
Address:
Email:

Sample Matrix Legend

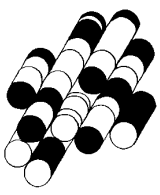
B	Biota
GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

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	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	O. Reg 153/04 metals excluding hydrides							Potentially Hazardous or High Concentration (Y/N)
BH1	July 8/22	AM/PM	1	GW		Y											X	X						
BH3	↓	AM/PM	↓	↓		Y											X	X						
BH5	↓	AM/PM	↓	↓		Y											X	X						
		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: July 8/22	Time: 3:45pm	Samples Received By (Print Name and Sign):	Date: July 8/22	Time: 4pm	'22 JUL 11 4:45pm	
Samples Relinquished By (Print Name and Sign):	Date: July 11/22	Time: 3pm	Samples Received By (Print Name and Sign): Chloe Pollock	Date:	Time:	Page 1 of 1	
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:	Nº: T 130445	

APPENDIX E

TERRAPROBE INC.



APPENDIX E: SAMPLING AND ANALYSIS PLAN

6463 Trafalgar Road, Milton

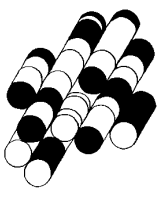
Project #7-22-0008-42

Borehole/ Confirmatory Sample	APEC	PCA	Media	Metals	H-M	ORPs	OC Pest	PHCs	VOCs	PAHs
BH1	APEC 1	#30 - Importatin of fill material of unknown quality	Soil & Ground Water	✓	✓	✓	✓	✓	✓	✓
BH3 to BH6	APEC 2	#40 - Pesticides (including herbicides, fungicides and anti-fouling agent) manufacturing, processing, bulk storage and large scale applications	Soil & Ground Water	✓	✓	✓	✓			

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

APPENDIX F

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