Terraprobe

Consulting Geotechnical & Environmental Engineering
Construction Materials Inspection & Testing

UPDATED PHASE TWO ENVIRONMENTAL SITE ASSESSMENT 16114 AIRPORT ROAD CALEDON, ONTARIO

Prepared for:

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File No. 1-16-0543-42.3
December 13, 2019

1.0 EXECUTIVE SUMMARY

Terraprobe Inc. (Terraprobe) was retained by Shacca Caledon Holdings c/o Glen Schnarr & Associates Inc. to conduct an Updated Phase Two Environmental Site Assessment (ESA) of the property located at 16114 Airport Road, Caledon, Ontario, hereinafter referred to as "the Property or Property". The Property is located at the northwest quadrant of the intersection between Walkers Road and Airport Road in the Town of Caledon, Ontario. Access to the Property is via Airport Road.

The Property is irregular in shape, and covers an area of approximately 4.1 ha (approximately 10.1 acres). The east portion of the Property is occupied by a residential dwelling. The remainder of the Property consists of undeveloped vacant lands. The western and southeastern portions of the Property are identified as wooded areas. The surrounding area is predominantly residential in land use. The Property is proposed to be redeveloped as a residential sub-division. The Development Concept Plan dated April 12, 2016, prepared by Glen Schnarr & Associates Inc. envisages a mixed use development consisting of:

- 51 Condo Townhouse units
- Retail commercial Building A (Existing Heritage House)
- Retail commercial Building B (one storey retail plaza – approx. 940 m^2)
- 2.25 m wide strip of land along the eastern Property boundary for road widening purposes
- 15 m x 15 m turn rounding (daylight triangle) at the intersection of Airport Road and Walkers Road.

The proposed development will also include access roadways and parking areas, and will be serviced with municipal piped water and sanitary sewer system.

Terraprobe conducted a Phase One ESA for the Property in January 2017 and an Updated Phase One ESA in 2019. The Phase One ESAs identified areas of potential environmental concern at the Property. A Phase Two ESA was conducted to assess the soil and ground water quality in the areas of potential environmental concerns identified on the Property and to determine what, if any, requirements exist for further investigation and/or remediation. The Phase One ESA had identified the following areas of potential environmental concern on the Property.

Areas of Potential Environmental Concern

The identified areas of potential environmental concern (APEC) and potential contaminants of concern (PCOC) are summarized below.

APEC	Location of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
APEC 1	South Central Portion of the Property	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Off-Site (PCA1)	Petroleum Hydrocarbons (PHCs) + Benzene, Toluene, Ethylbenzene, Xylene (BTEX)	Soil & Groundwater
APEC 2	South Central Portion of the Property	Other 1 – Ontario Spills	Off-Site (PCA2)	PHCs + BTEX	Soil & Groundwater

This Updated Phase Two ESA was conducted in accordance with the Phase Two ESA standards as defined by Ontario Regulation 153/04, as amended (O/Reg. 153/04), and in accordance with generally accepted professional practices.

The scope of work for the Updated Phase Two ESA was developed based on the results of the previous Phase One ESA and Phase Two ESA completed at the Property by Terraprobe in 2017 and the Updated Phase One ESA completed in 2019. The subsurface investigation in 2017 consisted of drilling twenty one (21) boreholes and installation of nine (9) monitoring wells on the Property. The subsurface investigation was completed in conjunction with geotechnical and hydrogeological investigations. Additional six (6) boreholes were advanced on the Property and all the boreholes were also equipped with monitoring wells. Based upon the results of the Updated Phase Two ESA, the following conclusions are presented:

- The general stratigraphy at the Property, as observed in the boreholes, consists of a surficial layer of topsoil underlain by silty sand to sandy silt earth fill, which in turn is underlain by native deposits of sand, sandy silt to silt and sand, which extended to the full depth of investigation.
- The depth to ground water in monitoring wells installed on the Property ranged between approximately 2.8 m to 5.6 m below grade. Based on the groundwater elevation contours, the direction of ground water flow is towards the east/southeast.
- The applicable Site Condition Standards (SCS) are the Ontario Ministry of the Environment, Conservation and Parks Standards identified as Table 1 Full Depth Background Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community land use.
- The parameters analysed for soil samples included: petroleum hydrocarbons (fraction F1 to F4), BTEX compounds, metals and inorganics and pH.
- All analytical soil sample results met the MECP Table 1 Site Condition Standards (SCS) for Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use for the analysed parameters.
- The ground water samples were collected from nine (9) monitoring wells and analysed for PHCs and BTEX. The results of the ground water samples met the applicable Table 1 Standards for all analysed parameters.

Based on the results of the Phase Two ESA, there is no soil and ground water samples with contaminants found at levels exceeding the SCS, therefore, no contaminants are found in, at or under the Property.

Based on the findings of the Updated Phase Two ESA, the environmental status of the Property is considered to meet the applicable MECP Table 1 SCS. A Record of Site Condition, if required, can be filed for the Property at this time.

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2.0 INTRODUCTION

Terraprobe Inc. (Terraprobe) was retained by Shacca Caledon Holdings c/o Glen Schnarr & Associates Inc. to complete a Phase Two Environmental Site Assessment (ESA) of the Property identified as 16114 Airport Road, Caledon, Ontario (Property). The Property is located on the northwest quadrant of the intersection between Walkers Road and Airport Road in the Town of Caledon, Ontario. Access to the Property is via Airport Road.

The Property is irregular in shape, and covers an area of approximately 4.1 ha (approximately 10.1 acres). The east portion of the Property is occupied by a residential dwelling. The remainder of the Property consists of undeveloped vacant lands. The western and southeastern portions of the Property are identified as wooded areas. The surrounding area is predominantly residential in land use. The Property is proposed to be redeveloped as a residential sub-division. As per the Development Concept Plan, dated April 12, 2016, prepared by Glen Schnarr & Associates Inc., the proposed development will consist of the following:

- 51 Condo Townhouse units
- Retail commercial Building A (Existing Heritage House)
- Retail commercial Building B (one storey retail plaza – approx. 940 m^2)
- 2.25 m strip of land along the eastern Property boundary for road widening purposes
- 15 m x 15 m turn rounding (daylight triangle) at the intersection of Airport Road and Walkers Road.

The proposed development will also include access roadways and parking areas, and will be serviced with municipal piped water and sanitary sewer system. The western portion of the Property and the eastern edge of the Property will be conveyed to the Town of Caledon (the "Town"). The Town of Caledon has identified the requirements for a Phase One and Phase Two ESA completed in accordance with O. Reg 153/04, as amended, as a condition for site plan approval process.

Terraprobe conducted a Phase One ESA for the Property in January 2017. The Phase One ESA identified Areas of Potential Environmental Concern (APECs) at the Property and recommended to conduct a Phase Two ESA to investigate the identified APECs.

A previous Phase Two ESA was conducted in February 2017 to assess the soil and ground water quality on the Property in the areas of potential environmental concerns and to determine what, if any, requirements exist for further investigation and/or remediation. No contaminants of concerns were observed during the investigation. All analytical soil and ground water samples met the applicable Ontario Ministry of the Environment, Conservation and Parks (MECP) Table 2 Standards for Residential/Parkland/Institutional Property Use in a potable ground water condition. (Table 2 RPI). The Table 2 RPI Standards were considered applicable to the Property.

A site visit was conducted in August 2019. A Geophysical Survey was conducted on the Property in the vicinity of the building and identified a suspected underground storage tank (UST) near the southeast

corner of the building. During excavation the buried tank was noted to be an abandoned sewage septic tank that was removed. An aboveground storage tank (AST) was also observed on the adjacent property located to the south at 7 Walker Road.

Additional subsurface investigation was required to investigate the newly identified Area of Potential Environmental Concerns associated with the adjacent AST.

2.1 Site Description

The Property is irregular in shape, and covers an area of approximately 4.1 ha (approximately 10.1 acres). The east portion of the Property is occupied by a residential dwelling. The remainder of the Property consists of undeveloped vacant lands. The western and southeastern portions of the Property are identified as wooded areas. The surrounding area is predominantly residential in land use. Surface water at the Property is expected to drain into the swale located along Airport Road, which ultimately discharges into the storm sewers.

The location of the Property is shown in Figure 1. General site features are presented on the Site and Borehole/Monitoring Well Location Plan (Figure 3). Site Plan is presented in Appendix A.

2.2 Phase Two Property Information

The Property information is provided in the following Table.

Municipal Address	**16114 Airport Road**	**Source**
Legal Description	Part Lot 4 Con 6 EHS, Town of Caledon, Rgional Municipality of Peel	Survey Plan of Property
PIN	14289-0188 (LT) and 14289-0186 (LT)	Survey Plan of Property
Zoning	Rural Residential (A2)	Town of Caledon Website
Property Owner Information	Shacca Caledon Holdings 210 Drumline Circle, Unit #1, Concord, Ontario Contact: Ugo Gulia	Chain of Title of Property

2.3 Current and Proposed Future Uses

The Property was used as a dog breeding house, and the Town of Caledon identifies the zoning of the Property as rural agricultural. The Property is proposed to be redeveloped as a residential sub-division with internal roadways and a retail commercial building. The proposed development will be serviced with municipal piped water and sanitary sewer system. The Town of Caledon has identified the requirement for a Phase Two Environmental Site Assessment (ESA) to be completed in accordance with Ontario Regulation 153/04, as amended, as a condition for the site plan approval process.

2.4 Applicable Site Condition Standard

The applicable Site Condition Standards (SCS) for the Subject Property were considered to be those contained in Table 1 of the April 15, 2011 Ontario Ministry of Environment, Conservation and Parks (MECP) "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" for Full Depth Background Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community lane use. This is considered to be the applicable Standard for the Property based on the following reasons:

- The intended use for the Property is residential.
- The Property is located within a rural area, where domestic water use may be supplied from local groundwater
- The Property is not located within 30 m of a surface water body.
- Bedrock across the Property is found at depths of greater than 2 m.
- Soil at the property was found to be coarse textured based on a review of the soil samples collected from the boreholes and the results of grain size analyses of representative soil samples on the Property.
- The soil pH was between 6 to 9 for surficial soils, and between 5 to 11 for subsurface soils.
- TRCA classified the western portion of the Property as a Locally Significant Wetland associated with the Caledon East Wetland Complex of the Humber River Watershed.

3.0 BACKGROUND INFORMATION

3.1 Physical Setting

The Property consists of gently rolling land with a maximum topographic relief of approximately 7 m. The elevation of the ground surface at the Property varies from 298 to 291 masl and slopes gently to the east-southeast towards Innis Lake & Widget Lake.

The Property is located within the watershed of the Humber River. The nearest surface water body is Innis Lake and Widget Lake, which are located approximately 1.9 km southeast and 2.1 km east of the Property, respectively. Groundwater is expected to follow the local topography and flow towards the east-southeast.

There are no permanent water courses found at the Property. Based on communication with Nicholas Carscone from the Toronto Region and Conservation Authority (TRCA), the western portion of the Property is classified as a Locally Significant Wetland associated with the Caledon East Wetland Complex of the Humber River Watershed. All surface water runoff flows towards the swale in the east, which runs along Airport Road, and ultimately discharges into the municipal sewer system.

The Property is situated within a physiographic region of Ontario known as the Niagara Escarpment. The overburden geology of Property is comprised of glaciofluvial ice contact deposits consisting of sand & gravel, with minor amounts of silt, clay and till. The bedrock on the Site is comprised of shale, limestone, dolostone and siltstone, part of the Queenston Formation (55a). Based on the MECP water well records, the bedrock is approximately 24 m below the ground surface.

3.2 Past Investigations

Previous investigations for the Property, which were completed by Terraprobe, are summarized below:

Report Title	Phase One Environmental Site Assessment 16114 Airport Road, Caledon, Ontario
Report Date	January 5, 2017
Prepared By	Terraprobe Inc. (Report Authors- Shama M. Qureshi, P.Eng., P.Geo., QP_{RA}, Muhammad Shahid, P. Geo, QP_{ESA}, and Ahmad Sarwar, B.Sc., G.I.T.)
Prepared For	Shacca Caledon Holdings c/o Glen Schnarr & Associates Inc.

- A Phase One ESA was completed for a larger property including the current Block 6 & 7 Property as per the requirement of O.Reg. 153/04. The Phase One Environmental Site Assessment (ESA) identified the following Areas of Potential Environmental Concern (APEC) on the Phase One Property:

APEC	Location of APEC on the property	Details	Potential Contaminants of Concern (PCoCs)	Media Potentially Impacted
APEC 1	Eastern Portion of the property	PCA # 30 - Importation of Fill Material of Unknown Quality	Metals & Inorganics	Soil
APEC 2	South Central Portion of property	Other 1 - Ontario Spills	Petroleum Hydrocarbons (PHCs) + BTEX	Soil & Ground Water

- A Phase Two ESA would be required to investigate the APECs that have been identified on the property. A Record of Site Condition (RSC), if required, cannot be filed based on the Phase One ESA alone.

Report Title	Phase Two Environmental Site Assessment 16114 Airport Road, Caledon, Ontario
Report Date	February 8, 2017
Prepared By	Terraprobe Inc. (Report Authors- Shama M. Qureshi, P.Eng., P.Geo., QP_{RA}, Muhammad Shahid, P. Geo, QP_{ESA}, and Ahmad Sarwar, B.Sc., G.I.T.)
Prepared For	Shacca Caledon Holdings c/o Glen Schnarr & Associates Inc.

- The Phase Two Environmental Site Assessment (ESA) was completed for the Property as per the requirement of O.Reg. 153/04. The Phase Two ESA was conducted to investigate the two APECs identified the Property during the Phase One ESA.
- The investigation consisted of drilling of twenty one (21) boreholes and installation of nine (9) monitoring wells on the Property. The soil stratigraphy generally consisted of surficial layer of topsoil underlain by silty sand to sandy silt earth fill, which is underlain by native deposits of sand, sandy silt to silt and sand.
- The fill material identified during the subsurface investigation at the site was noted to be consistent and resembling the on-site native soils. As such, the fill material is considered to be weathered/reworked native soils present at the site.
- The ground water elevation contours indicated that the direction of ground water flow is towards east/southeast.
- The applicable Site Condition Standards (SCS) are the Ontario Ministry of the Environment, Conservation and Parks (MECP) Standards identified as Table 2 Standards for Residential/Parkland/Institutional Property Use in a potable ground water condition.
- The parameters analysed for soil samples included: petroleum hydrocarbons (fraction F1 to F4), BTEX compounds, metals and inorganics and pH.
- All analytical soil sample results met the MECP Table 2 Site Condition Standards (SCS) for Residential Property Use for the analysed parameters.
- The ground water samples were collected from three (3) monitoring wells and analysed for PHCs and BTEX. The results of the ground water samples met the applicable Table 2 Standards for all analysed parameters.

- Based on the findings of the Phase Two ESA, the environmental status of the Property is considered to meet the applicable MECP Table 2 SCS.

Report Title	Updated Phase One Environmental Site Assessment 16114 Airport Road, Caledon, Ontario
Report Date	December 4, 2019
Prepared By	Terraprobe Inc. (Report Authors- Muhammad Shahid, P. Geo, QP_{ESA}, and Jessie Hui Chung Wu, M. Env. Sc.)
Prepared For	Shacca Caledon Holdings c/o Glen Schnarr & Associates Inc.

- A Geophysical Survey was conducted on the Property in the vicinity of the building and identified a suspected underground storage tank (UST). Based on the geophysical survey, a potential UST anomaly was detected approximately 2 m south and 1.4 m west of southeast corner of the building.
- An excavation was conducted to remove the suspected UST on December 3, 2019. Upon excavation, the buried tank was identified to be an abandoned historical septic tank and not a fuel oil tank. The abandoned septic tank was decommissioned and removed off site. The excavation was filled and graded using soil on-site from adjacent areas.
- An off-site PCA - #28 - Gasoline and Associated Products Storage in Fixed Tanks was identified during the site reconnaissance. An above ground storage tank was observed adjacent to the southeast of the Property at neighbouring property (7 Walker Road).
- The off-site PCA cause Area of potential Environmental Concerns (APECs) on the Property that need to be investigated through a Phase Two ESA prior to filing of a Record of Site Condition (RSC).

Based on the findings of the Phase One ESA, a Phase Two ESA was recommended.

4.0 SCOPE OF THE INVESTIGATION

4.1 Overview of Site Investigation

The scope of the Phase Two ESA was determined to assess the soil and ground water quality at the Property, based on the findings of the Phase One ESA completed at the Property. The Phase Two ESA was conducted in conjunction with a geotechnical and hydrogeological investigations.

Terraprobe conducted the following work at the Property as part of the Phase Two ESAs:

2016 Investigation

- Drilling of a total of twenty one (21) boreholes on the Property. The drilling was carried out in conjunction with the geotechnical and hydrogeological investigations conducted at the Property.
- Installation of a ground water monitoring well in nine (9) boreholes to investigate the ground water condition at the Property.
- Analysed fifteen (15) selected soil samples including quality control/quality assurance (QC/QA), metals & inorganics, petroleum hydrocarbons (PHCs F1 to F4), BTEX, and pH.
- Submission of four (4) ground water samples from three (3) installed monitoring wells, including QC/QA to AGAT Laboratories for chemical analysis of PHCs (F1-F4), benzene, toluene, ethylbenzene and xylene (BTEX).
- Submission of five (5) soil samples for grain size analyses as part of geotechnical investigation.
- Surveying the monitoring wells and measuring the ground water levels for identification of the ground water flow direction.
- Reviewing the analytical results and comparing with the applicable MECP Standards.
- Summarizing the result of investigation in a report format.

2019 Investigation

- Drilling of a total of six (6) boreholes on the eastern edge of the Property and south central portion of the Property.
- Installation of six (6) ground water monitoring wells to investigate the ground water condition at the Property.
- Analysed eleven (11) selected soil samples including quality control/quality assurance (QC/QA), metals & inorganics, petroleum hydrocarbons (PHCs F1 to F4), BTEX and pH.
- Excavation and decommissioning of an abandoned septic tank located on the south side of the existing building.

4.2 Media Investigated

Sampling was conducted for soil and ground water on the subject Property (BH1 to BH22 and BH1-19 to BH6-19 for soil and MW6, MW19, MW22, BH1-19 to BH6-19 for ground water). No surface water was

present on the Property; therefore, surface water or sediment sampling was not conducted. Soil sampling was conducted during the drilling program by use of a split spoon sampler for visual observation purposes. Ground water samples were obtained from the monitoring wells using conventional sampling techniques. The seasonal variation in concentrations was not monitored, as only one set of ground water samples was collected during this investigation. However, no significant variations in concentrations are anticipated.

4.3 Phase One Conceptual Site Model

The Phase One Conceptual Site Model was developed as part of the Phase One ESA for the Property through a review of historical records and a reconnaissance of the area. The Phase One Conceptual Site Model from the Phase One ESA is provided in Appendix B and the PCA and APEC locations are provided in Figure 2.

4.4 Deviations from Sampling and Analysis Plan

No deviations from the sampling and analysis plan was made during the investigation. Sampling and Analysis Plan is provided in Appendix C.

5.0 INVESTIGATION METHOD

5.1 General

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

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

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

5.2 Drilling and Excavating

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

Borehole	BH1, BH2, BH3S, BH3D, BH4, BH5, BH6, BH7, BH8, BH9, BH11, BH12, BH13, BH15, BH16, BH17, BH18, BH19, BH20, BH21, BH22	BH1-19 to BH6-19
Monitoring Wells	BH3S, BH3D, BH6, BH13, BH15, BH18, BH19, BH20, BH22	BH1-19 to BH6-19
Date of Work	October 4 to 7 and Oct 11, 2016	October 1 and 2, 2019
Name of Contractor	DBW Drilling Ltd.	Kodiak Drilling
Equipment Used	CME 55 track mounted, split spoon sampling	Geoprobe track mounted, dual tube sampling
Decontamination Measures	Split spoons are washed between samples. New dual tube samplers are used between samples.	
Sampling Frequency	Please refer to the borehole logs in Appendix E for the sampling frequency	

The decommissioning of the abandoned septic tank was conducted by The Cannington Group on December 3, 2019. The abandoned historical septic tank was removed from the Property and the excavation was backfilled and graded using the surrounding soil on-site. The abandoned historical septic tank was not considered to be of potential contaminating activity thus no soil sampling was required.

5.3 Soil Sampling

5.3.1 Equipment Used

- Laboratory supplied sampling containers
- Nitrile gloves
- Cooler with loose ice
- Mini Rae Photo-Ionization Detector (PID)
- Eagle Portable Multi-gas detector (RKI)

5.3.2 Geological Description of Soil

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

5.4 Field Screening Measurements

Soil samples were screened in the field using portable hydrocarbon vapour testing equipment and following the procedure outlined in the *"Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario"* published by the Ontario Ministry of the Environment, Conservation and Parks (MECP).

The samples were screened using a RKI Instruments, Eagle Portable Multi-gas detector (with Methane Elimination Switch), S/N E095077, operated in the methane elimination mode. The instrument measures combustible gases in the atmosphere. The monitor has a range of 0 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 August 8, 2010.

The samples were also screened using a Mini Rae Photo-Ionization Detector. The monitor has a range of 0 parts per million (ppm) to 10,000 ppm and an accuracy of +/- 5%. The monitor was calibrated with isobutylene gas prior to field screening as per the calibration procedure outlined by RAE Systems in "*Mini Rae 2000 Portable VOC Monitor Operation and Maintenance Manual, Rev. E*" released May, 2005

Field screening measurements were used to help select samples for petroleum hydrocarbon and BTEX compounds laboratory analysis. Complete field screening readings are provided on the borehole logs in Appendix E.

5.5 Ground Water Monitoring Well Installation

Fifteen (15) groundwater monitoring wells were installed for ground water monitoring and environmental sampling. All monitoring wells were installed by DBW Drilling Ltd. and Kodiak Drilling, licensed well contractors. This was performed under the full-time supervision of a Terraprobe field technician.

The well construction materials consisted of 2" (50 mm) diameter PVC well materials (bottom caps, 3 m long well screen and appropriate lengths of riser pipe). The PVC well construction materials were received on-site in individually wrapped and sealed plastic sleeves. Filter sand was placed around the well screen to approximately 600 mm above the top of the screen. The remainder of the well was backfilled with bentonite to the ground surface. The monitoring wells were completed with an above ground stickup pipe.

Upon completion the wells were tagged and filed with the MECP. The monitoring well installation details are provided on borehole logs in Appendix E. The monitoring well locations are provided on Figure 3.

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).

Range

- pH 0.00 to 14.00 pH
- EC 0.00 to 20.00 mS/cm
- TDS 0.00 to 10.00 ppt (g/L)
- Temperature 0.0 to 60.0°C

Resolution

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

Accuracy

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

5.7 Ground Water Sampling

The monitoring wells were purged and sampled using inertia pump and tubing. Stabilization of parameters (pH, D.O., conductivity, temperature, etc.) and turbidity 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

5.8 Sediment Sampling

No sediment sampling was conducted as part of this investigation. No requirement for sediment sampling was identified as there was no surface water bodies (creeks, ponds, lakes) found on the Property.

5.9 Analytical Testing

The soil and ground water analyses were completed by AGAT Laboratories, located at 5835 Coopers Avenue in Mississauga, Ontario. AGAT Laboratories is accredited of approved for specific analyses by the following national or provincial (Ontario) agencies:

- The Canadian Association for Laboratory Accreditation (CALA)
- The Standards Council of Canada (SCC)
- Canadian Council of Ministers of the Environment (CCME)
- Ontario Ministry of the Environment, Conservation and Parks
- Ontario Ministry of Environment Drinking Water Testing License Laboratories Limited

5.10 Residue Management Procedures

Soil cuttings from the drilling were placed on the Property.

5.11 Elevation Surveying

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

5.12 Quality Assurance and Quality Control Measures

5.12.1 Containers, Labelling, Handling and Chain of Custody

Containers

The following laboratory supplied sample containers were used for all sampling conducted on the Property.

Soil Parameters	Container
Chloride, electrical conductivity	250 mL glass jar, Teflon lined lid
Cyanide (CN^-)	250 mL glass jar, Teflon lined lid
Hexavalent chromium	250 mL glass jar, Teflon lined lid
Metals (includes hydride-forming metals, SAR, HWS boron, calcium, magnesium, sodium)	250 mL glass jar, Teflon lined lid
Mercury, methyl mercury	250 mL glass jar, Teflon lined lid
pH	250 mL glass jar, Teflon lined lid
BTEX, PHCs (F1), THMs, VOCs	40–60 mL glass vial (charged with methanol preservative, pre- weighed) and glass jar (for moisture content)
PHCs (F2–F4)	120 mL glass jar, Teflon lined lid
Ground Water Parameters	**Container**
BTEX, PHCs (F1),THMs, VOCs;	40–60 mL glass vials (minimum of 2)
PHCs (F2–F4)	2 x 500 mL amber glass bottle, Teflon lined lid

Labelling

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

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

Handling

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

Chain of Custody

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

5.12.2 Equipment Cleaning Procedures

All non-dedicated sampling and monitoring equipment must be cleaned following each use. During soil sampling a dedicated sampling device was used for each sample to prevent cross-contamination. During ground water sampling any part of the interface meter which came into contact with the ground water was cleaned between monitoring wells.

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

5.12.3 Field Quality Control Measures

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

5.12.4 Deviations in the Quality Assurance and Quality Control Measures

No deviations from the quality assurance and quality control measures plan occurred.

6.0 REVIEW AND EVALUATION

6.1 Geology

The detailed soil profiles encountered in each borehole are provided on the attached borehole logs (Appendix E). The

6.1.1 Geological Unit Thickness (Estimate)

The geological unit thicknesses are presented in Table 1.

6.1.2 Elevations of Geological Units

The geological unit elevations are presented in Table 1.

6.1.3 Material in Geological Units

Surficial Materials

A surficial layer of topsoil was encountered at all borehole locations. The thickness of the topsoil ranged from 50 mm to 450 mm. The topsoil layer was underlain by earth fill deposits at locations of all boreholes.

Earth Fill

A layer of earth fill was encountered underneath the topsoil, and consisted of silty sand to sandy silt with trace clay, trace gravel and trace rootlets. The earth fill material extended to the depths of 0.8 m to 1.5 m (290.3 masl) below the ground surface.

Native Soils

Native soil deposits were encountered underlying the topsoil and fill material and extended to full depth of investigation (up to 13.7 m below ground surface). The native soils generally consisted of sand, sandy silt to silt and sand with trace amounts of clay and gravel. A localized lens of clayey silt with some sand and trace gravel was encountered in borehole BH13 at a depth of 3.0 m (291.9 masl) and extended to a depth of 4.6 m (290.3 masl). The native soils were dilatant, loose to very dense, brown to dark brown and moist to wet.

Bedrock

Bedrock was not encountered during the Phase Two investigation.

6.1.4 Properties of Aquifers and Aquitards

Native Soil

The native soil consisting of cohesionless deposit of sandy silt/silty sand to silt and sand layer is considered to be an aquifer. Recharge into the aquifer will be primarily through rain fall events and migration from the north adjoining properties. The water elevation taken within each of the monitoring wells indicated that the silty sand to sand layer is an aquifer.

6.1.5 Rationale for Choice of Aquifers and Aquitards Investigated

The native soils were chosen for investigation. This was chosen of investigation because:

- The likelihood of vertical migration of water from the fill material downward
- Possibility of free ground water present through recharge from larger area and up-gradient tributaries.

6.2 Ground Water Elevations and Flow Direction

6.2.1 Rationale for Monitoring Well Locations and Screen Intervals

Monitoring wells were located across the Property in order to provide full site coverage. The monitoring wells were screened within the native soil unit across the Property to allow for the collection of ground water samples within the water bearing aquifer.

6.2.2 Results of Interface Probe Measurements

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

6.2.3 Thickness of Free Flowing Product

No free flowing product was encountered on the Property.

6.2.4 Ground Water Elevations

Groundwater elevations are presented on Table 3.

6.2.5 Interpreted Direction of Ground Water Flow

Based on the October 9, 2019 readings, the interpreted direction of ground water flow is to the southeast. The inferred ground water direction is expected to be southeast towards the Lake Ontario. Ground water flow direction and ground water elevation contours are presented on Figure 4.

6.2.6 Assessment of Temporal Variability

Two ground water level measurements were collected on the Property. Additional ground water measurements will be required in order to comment on the amount of temporal variability.

6.2.7 Influence of Buried Utilities

Buried utilities such as water, gas, communication and private septic tank are currently located on the Property. As such, it is likely that buried utilities will influence the ground water flow.

6.3 Ground Water Hydraulic Gradients and Hydraulic Conductivity

6.3.1 Horizontal Hydraulic Gradients

Horizontal hydraulic gradient was estimated for the water table aquifer based on the ground water elevation contour prepared for the Property to assess the groundwater flow direction.

The horizontal hydraulic gradient is calculated using the following equation:

$$i = \Delta h/\Delta s$$

Where,

i = horizontal hydraulic gradient;

Δh (m) = groundwater elevation difference; and,

Δs (m) = separation distance.

Based on the available information, horizontal hydraulic gradient of ground water is estimated at 0.03 in an east/southeast direction.

6.3.2 Vertical Hydraulic Gradients

It is noted that vertical hydraulic gradients were not evaluated for the Property as a second water bearing unit was not encountered at the depths investigated at the Property.

6.3.3 Hydraulic Conductivity

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

- Earth Fill (Silty Sand) 10^{-5} m/s to 10^{-7} m/s
- Native Soil (Sandy Silt/Silty Sand to Sand) 10^{-4} m/s to 10^{-9} m/s

6.4 Soil Texture

The results of laboratory grain size analyses were used to determine soil texture. Grain size analysis was carried out in the Terraprobe's laboratory on five representative samples as part of geotechnical investigation and the test results are presented in Appendix F.

A summary of the Sieve and Hydrometer (grain size) Analysis is presented in the following Table:

Borehole No. Sample No.	Sampling Depth below Grade (m)	Percentage				Description (MIT System)
		Gravel	Sand	Silt	Clay	
Borehole 4 Sample 2	1.0	0	31	62	7	SANDY SILT, trace clay
Borehole 8 Sample 5	3.3	2	31	58	9	SANDY SILT, trace clay, trace gravel
Borehole 12 Sample 3	1.2	0	47	47	6	SAND AND SILT, trace clay
Borehole 15 Sample 3	1.8	0	36	54	10	SILT AND SAND, some clay
Borehole 19 Sample 4	2.5	3	7	16	4	SAND, some silt, trace clay, trace gravel

Section 42(2) of O.Reg.153/04 defines soil texture as follows:

- “coarse textured soil” means soil that contains more than 50 per cent by mass of particles that are 75 micrometres or larger in mean diameter; and,
- “medium and fine textured soil” means soil that contains 50 per cent or more by mass of particles that are smaller than 75 micrometres in mean diameter.

Based on the grain size analysis, more than 50 per cent volume of the soil across the Property is considered to be fine textured.

6.5 Soil Field Screening

There were no visual or olfactory observations that would suggest possible impact to the soil. Field screening for soil vapour did not indicate presence of significant concentration of volatile compounds. The maximum headspace reading recorded during this investigation was less than 30 ppm. The headspace readings are shown on the borehole logs in Appendix E.

6.6 Soil Quality

6.6.1 Location and Depth of Soil Samples

Soil sampling was conducted during October 4 to 11, 2016 and October 1 to 2, 2019. Based on scope of work and the field screening, a total of 27 soil samples were submitted for chemical analysis of petroleum

hydrocarbons PHCs (F1-F4), benzene, toluene, ethylbenzene, xylene (BTEX), metals, hydride-forming metals (As, Sb, Se), selected ORPs (B-HWs, CN-, Hg, Cr(VI) and pH) parameters. A summary of the soil samples and selected analyses is presented below.

No.	Sample ID	Sample Depth		Parameter Analysed (O.Reg. 153/04 as amended)
		(mbgs)*	(masl)*	
1	BH 4/SA2	0.8 – 1.2	290.5-290.1	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
2	BH 11/SA2	0.8 – 1.2	293.3-292.9	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
3	BH 12/SA2	0.8 – 1.2	293.7-293.3	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
4	BH 16/SA2 and DUP 3	0.8 – 1.2	296.9 – 296.5	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
5	BH 19/SA2	0.8 – 1.2	292.8 – 292.4	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
6	BH 20/SA2	0.8 – 1.2	293.9 – 293.5	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
7	BH 22/SA2	0.8 – 1.2	293.1 – 292.7	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
8	BH1-19/CS#1A and DUP#1	0 – 0.8	294.5 – 293.8	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
9	BH2-19/CS#1A	0 – 0.8	292.7 – 292	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
10	BH3-19/CS#1A	0 – 0.8	291.7 – 290.9	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
11	BH 16/SA4 and DUP 2	2.3 – 2.7	295.4 – 295	pH
12	BH 21/SA4	2.3 – 2.7	290.4 – 290	pH
13	BH3-19/CS#4B and DUP1	5.2 – 5.8	286.5 – 285.9	pH
14	BH5-19/CS#1B	0.8 –1.5	292.3 – 291.6	pH
15	BH6-19/CS#3A and DUP2	3 –3.8	290.5 – 289.7	pH
16	BH 6/SA3 and Dup1	1.5 – 2.0	290.3 – 289.5	PHCs (F1 to F4), BTEX
17	BH 19/SA5	3.0 – 3.5	290.6 – 290.1	PHCs (F1 to F4), BTEX
18	BH 22/SA5	3.0 – 3.5	290.9 – 290.4	PHCs (F1 to F4), BTEX
19	BH1-19/CS#3 and DUP#2	3.0 – 3.8	291.5 – 290.7	PHCs (F1 to F4), BTEX
20	BH2-19/CS#3A	3.0 – 3.8	289.7-288.9	PHCs (F1 to F4), BTEX
21	BH3-19/CS#2B	2.3 – 3.0	289.4 – 288.6	PHCs (F1 to F4), BTEX
22	BH4-19/CS#1A and DUP#1	0 – 0.8	293 – 292.3	PHCs (F1 to F4), BTEX
23	BH4-19/CS#4	3.0 – 3.8	290 – 289.2	PHCs (F1 to F4), BTEX
24	BH5-19/CS#1B	0.8 – 1.5	291.6 – 292.3	PHCs (F1 to F4), BTEX
25	BH5-19/CS#3A	3.0 – 3.8	289.3 – 290	PHCs (F1 to F4), BTEX
26	BH6-19/CS#2A	1.5 – 2.3	291.2 – 292	PHCs (F1 to F4), BTEX
27	BH6-19/CS#2B	2.3 – 3.0	290.5 – 291.2	PHCs (F1 to F4), BTEX

Note: mbgs – metre below ground surface; masl – metre above sea level

6.6.2 Comparison to Applicable Standards (Soil)

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

- Metals
- Hydride-forming Metals
  - As, Sb, Se
- Selected Other Regulated Parameters (ORPs)
  - Cr(VI), Hg, CN-, B-HWS, pH
- Petroleum Hydrocarbons (PHCs)
- Benzene, Toluene, Ethylbenzene, Xylene (BTEX)

The results of the analysis were compared to the applicable MECP site condition standard for the Property (Table 1 RPI). The chemical results indicated that all analyzed parameters in the soil samples met the Table 1 RPI standards. The laboratory certificates of analysis are provided in Appendix G, and the results of the soil chemical analysis are provided in Tables 4 to 5.

6.6.3 Contaminants of Concern (Soil)

No Contaminants of Concern (CoCs) are associated with the soil on the Property.

6.6.4 Chemical or Biological Transformations

No chemical or biological transformations are likely to occur on the Property.

6.6.5 Contamination Impact On Other Media

It is unlikely that contamination impact on other media will occur on the Property.

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

No light non-aqueous phase liquids (LNAPL) or dense non-aqueous phase liquids (DNAPL) were detected in the soil on the Property.

6.7 Ground Water Quality

6.7.1 Location and Depth of Sample Locations (Ground Water)

Ground water sampling was completed for the monitoring wells (BH6, BH19, BH22, BH1-19 to BH6-19) on the Property. Ground water samples were analysed for parameters including PHCs and BTEX. The laboratory certificates of analysis are provided in Appendix G.

Sample ID	Screen/Sample Depth		Parameter Analysed (O.Reg. 153/04 as amended)
	(mbgs)	(masl)	
BH/MW6 and DUP	3.1 – 6.1	288.5 – 285.4	PHC (F1-F4) + BTEX
BH/MW19	3.1 – 6.1	290.6 – 287.5	PHC (F1-F4) + BTEX
BH/MW22	1.5 – 4.5	292.4 – 289.3	PHC (F1-F4) + BTEX
BH1-19	2.3 – 5.3	292.2 – 289.2	PHC (F1-F4) + BTEX
BH2-19 and DUP#1	1.5 – 4.6	291.2 – 288.1	PHC (F1-F4) + BTEX
BH3-19	2.3 – 5.4	289.4 – 286.3	PHC (F1-F4) + BTEX
BH4-19	2.3 – 5.4	290.7 – 287.6	PHC (F1-F4) + BTEX
BH5-19 and DUPA	2.1 – 5.2	291 – 287.9	PHC (F1-F4) + BTEX
BH6-19	2.2 – 5.2	291.3 – 288.3	PHC (F1-F4) + BTEX

Note: mbgs – metre below ground surface; masl – metre above sea level

6.7.2 Field Filtering

No field filtering was required for ground water sampling.

6.7.3 Comparison to Applicable Standards (Ground Water)

Ground water samples were analysed for the PCoCs. PCoCs include:

- Petroleum Hydrocarbons (PHCs)
- Benzene, Toluene, Ethylbenzene, Xylene (BTEX)

The results of the analysis were compared to the applicable site condition standard for the Property (Table 1). The laboratory certificates of analysis are provided in Appendix G, and the results of the ground water chemical analysis are provided in Tables 6 and 7.

6.7.4 Contaminants of Concern (Ground Water)

No Contaminants of Concern associated with the ground water on the Property at the locations investigated.

6.7.5 Chemical or Biological Transformations

No Contaminants of Concern associated with the ground water on the Property at the locations investigated and as such no chemical or biological transformations are expected to occur.

6.7.6 Contamination Impact on Other Media

No Contaminants of Concern associated with the ground water on the Property at the locations investigated.

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

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

6.8 Sediment Quality

No sediment sampling was conducted as part of this investigation.

6.9 Quality Assurance and Quality Control Results

6.9.1 Types of Quality Control Samples Collected and Results

In general, samples were handled in accordance with the Analytical Protocol with respect to holding time, preservation method, storage requirement and sample container type. Laboratory results were compared to MECP standards for quality control under 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.

Duplicate samples were submitted at a rate of 10% for both soil and ground water samples. Overall quality of the field data from the investigation was good, and the objectives of the investigation were met.

6.9.2 Samples Not Handled in Accordance with the Analytical Methods

Holding Time

All samples met the holding times as specified in Ontario Ministry of the Environment and Climate Change (MECP) - Laboratory Services Branch *"Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act"* July 1, 2011

Preservation Method

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

Storage Requirement

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

Container Type

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

6.9.3 Subsection 47 (3) of the Regulation

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

6.9.4 Results Qualified by Laboratory

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

6.9.5 Overall Quality of Field Data

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

7.0 CONCLUSIONS

The scope of work for the Updated Phase Two ESA was developed based on the results of the previous Phase One ESA and Phase Two ESA completed at the Property by Terraprobe in 2017 and the Updated Phase One ESA completed in 2019. The subsurface investigation in 2017 consisted of drilling twenty one (21) boreholes and installation of nine (9) monitoring wells on the Property. The subsurface investigation was completed in conjunction with geotechnical and hydrogeological investigations. Additional six (6) boreholes were advanced on the Property and all the boreholes were also equipped with monitoring wells.

Based upon the results of the Updated Phase Two ESA, the following conclusions are presented:

- The general stratigraphy at the Property, as observed in the boreholes, consists of a surficial layer of topsoil underlain by silty sand to sandy silt earth fill, which in turn is underlain by native deposits of sand, sandy silt to silt and sand, which extended to the full depth of investigation.
- The depth to ground water in monitoring wells installed on the Property ranged between approximately 2.8 m to 5.6 m below grade. Based on the groundwater elevation contours, the direction of ground water flow is towards the east/southeast.
- The applicable Site Condition Standards (SCS) are the Ontario Ministry of the Environment, Conservation and Parks Standards identified as Table 1 Full Depth Background Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community land use.
- The parameters analysed for soil samples included: petroleum hydrocarbons (fraction F1 to F4), BTEX compounds, metals and inorganics and pH.
- All analytical soil sample results met the MECP Table 1 Site Condition Standards (SCS) for Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use for the analysed parameters.
- The ground water samples were collected from nine (9) monitoring wells and analysed for PHCs and BTEX. The results of the ground water samples met the applicable Table 1 Standards for all analysed parameters.

Based on the results of the Phase Two ESA, there is no soil and ground water samples with contaminants found at levels exceeding the SCS, therefore, no contaminants are found in, at or under the Property. Based on the findings of the Updated Phase Two ESA, the environmental status of the Property is considered to meet the applicable MECP Table 1 SCS. A Record of Site Condition, if required, can be filed for the Property at this time.

All wells installed during the subsurface soil and groundwater investigation are required to be decommissioned in accordance with O.Reg. 903 when they are no longer needed for ground water observation.

7.1 Signatures

The Updated Phase Two ESA has been completed under the direction and supervision of Muhammad I. Shahid, P.Geo., QP_{ESA}. 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.

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.

Muhammad I. Shahid, P.Geo., QP_{ESA}
Senior Project Manager

Jessie Hui Chung Wu, M. Env. Sc.,
Project Manager

8.0 REFERENCES

This study was conducted in accordance with the applicable Regulations, Guidelines, Policies, Standards, Protocols and Objectives administered by the Ministry of the Environment. Specific reference is made to the following:

- "*Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario,*" Ministry of the Environment of Ontario, December 1996;
- *The Ontario Water Resources Act - R.R.O. 1990, Regulation 903 - Amended to O. Reg. 128/03*, August 2003;
- *"Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act,"* April 15, 2011;
- *"Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act,"* March 2004 (amended as of July 1, 2011);
- *Ontario Regulation 153/04 (made under the Environmental Protection Act),* May 2004 (as amended by O. Reg. 511/09 and O. Reg. 179/11;
- *Environmental Protection Act*, R.S.O. 1990, Chapter E.19, as amended, September 2004;
- *Ontario Regulation 511/09 (made under the Environmental Protection Act),* July 2011 (MOE); and,
- Terraprobe Inc. *"Updated Phase One Environmental Site Assessment, 16114 Airport Road, Caledon, Ontario"*, August 30, 2019; Revised December 4, 2019.

9.0 LIMITATIONS

This report was prepared for the exclusive use of Shacca Caledon Holding c/o Glen Schnarr & Associates Inc., and is intended to provide an assessment of the environmental conditions on the Property identified as 16114 Airport Road, Caledon, 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 development of the Property. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Terraprobe accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report, including consequential financial effects on transactions or Property values, or requirements for follow-up actions and costs.

The assessment should not be considered a comprehensive audit that eliminates all risks of encountering environmental problems. The information presented in this report is based on information collected during the completion of the 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.

TABLES

TERRAPROBE INC.

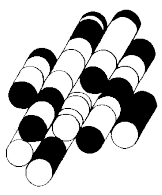


TABLE 1
Geological Units
16114 Airport Rd. Caledon
Project #1-16-0543-42.3

Borehole	BH 1			BH 2			BH 3S			BH 3D		
	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)
Top Soil	291.7	291.4	0.3	291.3	291	0.3	291.1	290.9	0.2	291.1	290.9	0.2
Native Soil (Silty Sand to Sand)	291.4	290.9	0.5	291	290.5	0.5	290.9	290.3	0.6	290.9	290.3	0.6
Native Soil (Silt)	290.9	285.1	5.8	290.5	284.7	5.8	290.3	284.5	5.8	290.3	284.5	5.8
Bedrock (weathered)	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 1
Geological Units
16114 Airport Rd. Caledon
Project #1-16-0543-42.3

Borehole	BH 4			BH 5			BH 6			BH 7		
	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)
Top Soil	291.3	291.1	0.2	291.5	291.2	0.3	291.5	291	0.5	291.9	291.6	0.3
Native Soil (Silty Sand to Sand)	291.1	290.5	0.6	291.2	290.7	0.5	291	290.7	0.3	291.6	291.1	0.5
Native Soil (Silt)	290.5	284.7	5.8	290.7	284.9	5.8	290.7	284.9	5.8	291.1	285.3	5.8
Bedrock (weathered)	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 1
Geological Units
16114 Airport Rd. Caledon
Project #1-16-0543-42.3

Borehole	BH 8			BH 9			BH 11			BH 12		
	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)
Top Soil	293.2	292.9	0.3	292.8	292.5	0.3	294.1	293.9	0.2	294.5	294.2	0.3
Native Soil (Silty Sand to Sand)	292.9	292.3	0.6	292.5	292	0.5	293.9	292.9	1	294.2	293	1.2
Native Soil (Silt)	292.3	286.5	5.8	292	286.2	5.8	292.9	289.1	3.8	293	287.9	5.1
Bedrock (weathered)	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 1
Geological Units
16114 Airport Rd. Caledon
Project #1-16-0543-42.3

Borehole	BH 13			BH 15			BH 16			BH 17		
	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)
Top Soil	294.9	294.7	0.2	293.8	293.6	0.2	297.7	297.5	0.2	295.1	294.8	0.3
Native Soil (Silty Sand to Sand)	294.7	294	0.7	293.6	293	0.6	297.5	296.9	0.6	294.8	293.6	1.2
Native Soil (Silt)	294	291.9	2.1	293	288.8	4.2	296.9	291.1	5.8	293.6	288.5	5.1
Bedrock (weathered)	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 1
Geological Units
16114 Airport Rd. Caledon
Project #1-16-0543-42.3

Borehole	BH 18			BH 19			BH 20			BH 21		
	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)
Top Soil	292.8	292.6	0.2	293.6	293.4	0.2	294.7	294.3	0.4	292.7	292.4	0.3
Native Soil (Silty Sand to Sand)	292.6	292	0.6	293.4	292.8	0.6	294.3	293.2	1.1	292.4	291.9	0.5
Native Soil (Silt)	292	286.7	5.3	292.8	286	6.8	293.2	289.7	3.5	291.9	286.1	5.8
Bedrock (weathered)	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 1
Geological Units
16114 Airport Rd. Caledon
Project #1-16-0543-42.3

Borehole	BH 22			BH1-19			BH2-19			BH3-19		
	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)
Top Soil	293.9	293.7	0.2	294.5	294.4	0.1	292.7	292.6	0.1	291.7	291.5	0.2
Native Soil (Silty Sand to Sand)	293.7	293.1	0.6	294.4	292.1	2.3	292.6	287.5	5.1	291.5	285.9	5.6
Native Soil (Silt)	293.1	288.9	4.2	292.1	288.6	3.5	287.5	286.9	0.6	-	-	-
Bedrock (weathered)	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 1
Geological Units
16114 Airport Rd. Caledon
Project #1-16-0543-42.3

Borehole	BH4-19			BH5-19			BH6-19		
	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)
Top Soil	-	-	-	-	-	-	293.5	293.3	0.2
Native Soil (Silty Sand to Sand)	293	288.4	4.6	293.1	287.3	5.8	293.3	287.4	5.9
Native Soil (Silt)	288.4	287.1	1.3	-	-	-	-	-	-
Bedrock (weathered)	-	-	-	-	-	-	-	-	-

TABLE 2
Monitoring Well Construction
16114 Airport Rd., Caledon
Project #1-16-0543-42.3

Well ID	BH/MW3D		BH/MW3S		BH/MW6		BH/MW13		BH/MW15		BH/MW18		BH/MW19		BH/MW20		BH/MW22		BH/MW1-19		BH/MW2-19		BH/MW3-19		BH/MW4-19		BH/MW5-19		BH/MW6-19	
Stick Up (m)	0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		1.04		0.00		1.26		0.79		0.90		0.86	
Ground Elev. (masl)	291.1		291.1		291.5		294.9		293.8		292.8		293.6		294.7		293.9		294.5		292.7		291.7		293		293.1		293.5	
Well Componant	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**
Concrete - Top																														
Sand - Top	0.00	291.10	0.00	291.10	0.00	291.50	0.00	294.90	0.00	293.80	0.00	292.80	0.00	293.60	0.00	294.70	0.00	293.90	0.00	294.50	0.00	292.70	0.00	291.70	0.00	293.00	0.00	293.10	0.00	293.50
Bentonitic - Top	0.30	290.80	0.30	290.80	0.30	291.20	0.30	294.60	0.30	293.50	0.30	292.50	0.30	293.30	0.30	294.40	0.30	293.60	0.30	294.20	0.30	292.40	0.30	291.40	0.30	292.70	0.30	292.80	0.30	293.20
Bentonitic - Bottom	10.06	281.04	0.61	290.49	2.74	288.76	0.91	293.99	0.91	292.89	0.91	291.89	2.44	291.16	0.91	293.79	0.91	292.99	2.06	292.44	1.22	291.48	1.83	289.87	1.83	291.17	1.83	291.27	1.83	291.67
Sand - Top	10.06	281.04	0.61	290.49	2.74	288.76	0.91	293.99	0.91	292.89	0.91	291.89	2.44	291.16	0.91	293.79	0.91	292.99	2.06	292.44	1.22	291.48	1.83	289.87	1.83	291.17	1.83	291.27	1.83	291.67
Screen - Top	10.67	280.43	1.07	290.03	3.05	288.45	1.52	293.38	1.52	292.28	1.52	291.28	3.05	290.55	1.52	293.18	1.52	292.38	2.29	292.21	1.52	291.18	2.33	289.37	2.33	290.67	2.13	290.97	2.19	291.31
Screen - Bottom	13.72	277.38	4.11	286.99	6.10	285.40	4.57	290.33	4.57	289.23	4.57	288.23	6.10	287.50	4.57	290.13	4.57	289.33	5.33	289.17	4.57	288.13	5.38	286.32	5.38	287.62	5.18	287.92	5.23	288.27
Sand - Bottom	13.72	277.38	4.11	286.99	6.55	284.95	5.03	289.87	5.03	288.77	6.10	286.70	7.62	285.98	5.03	289.67	5.03	288.87	5.94	288.56	5.79	286.91	5.79	285.91	5.94	287.06	5.79	287.31	6.10	287.40

Note: N/A = Not available

TABLE 3
Ground Water Elevations
16114 Aiport Rd., Caledon
Project #1-16-0543-42.3

Well ID	BH/MW3D		BH/MW3S		BH/MW6		BH/MW13		BH/MW15		BH/MW18		BH/MW19		BH/MW20		BH/MW22		BH/MW1-19		BH/MW2-19		BH/MW3-19		BH/MW4-19		BH/MW5-19		BH/MW6-19	
Stick Up (m)	0.95		0.87		0.96		1.02		1.02		1.00		1.00		1.00		1.09		1.04		0.00		1.26		0.79		0.90		0.86	
Depth (mbgs)	12.06		4.95		6.16		5.68		5.75		5.69		6.25		5.74		5.53		6.08		4.61		6.42		5.86		5.95		6.19	
Ground Elev. (masl)	291.1		291.1		291.5		294.9		293.8		292.8		293.6		294.7		293.9		294.5		292.7		291.7		293		293.1		293.5	
Date	WL (m)	Elev. (masl)	WL (m)	Elev. (masl)	WL (m)	Elev. (masl)	WL (m)	Elev. (masl)	WL (m)	Elev. (masl)	WL (m)	Elev. (masl)	WL (m)	Elev. (masl)	WL (m)	Elev. (masl)	WL (m)	Elev. (masl)	WL (m)	Elev. (masl)	WL (m)	Elev. (masl)	WL (m)	Elev. (masl)	WL (m)	Elev. (masl)	WL (m)	Elev. (masl)	WL (m)	Elev. (masl)
2016-10-26	5.60	286.45	2.98	288.99	3.17	289.29	4.60	291.32	2.84	291.98	3.10	290.70	4.72	289.88	5.44	290.26	5.00	289.99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2019-10-09	2.59	289.46	3.30	288.67	NA	NA	4.63	291.29	2.87	291.95	NA	NA	NA	NA	5.60	290.10	5.26	289.73	4.56	290.98	2.67	290.03	4.14	288.82	4.18	289.61	4.29	289.71	4.63	289.73

NA - Not Applicable
NM - Not Measured

TABLE 4
Metals and ORPs (Soil)
16114 Aiport Rd., Caledon
Project #1-16-0543-42.3

Sample Name	Unit	Table 1	BH4/SA2/2.5'	BH11/SA2/2.5'	BH12/SA2/2.5'	BH16/SA2/2.5'	BH16/SA4/7.5'	BH19/SA2/2.5'	BH20/SA2/2.5'	BH21/SA4/7.5'	BH22/SA2/2.5'	BH1-19/CS#1A	BH2-19/CS#1A
AGAT WO#			**16T147653**	**16T147653**	**16T147653**	**16T147653**	**16T147653**	**16T147653**	**16T147653**	**16T147653**	**16T147653**	**19T526103**	**19T526103**
AGAT ID#			**7919569**	**7919573**	**7919574**	**7919575**	**7919580**	**7919576**	**7919577**	**7919579**	**7919578**	**584025**	**584027**
Date			**2016-10-05**	**2016-10-07**	**2016-10-07**	**2016-10-07**	**2016-10-07**	**2016-10-11**	**2016-10-07**	**2016-10-07**	**2016-10-11**	**2019-10-02**	**2019-10-02**
Parameter/Depth of Sample (mbgs/masl)			**0.8-1.2/290.5-290.1**	**0.8-1.2/293.3-292.9**	**0.8-1.2/293.7-293.3**	**0.8-1.2/296.9-296.5**	**2.3-2.7/295.4-295**	**0.8-1.2/292.8-292.4**	**0.8-1.2/293.9-293.5**	**2.3-2.7/290.4-290**	**0.8-1.2/293.1-292.7**	**0-0.8/294.5-293.8**	**0-0.8/292.7-292**
Antimony	µg/g	1.3	<0.8	<0.8	<0.8	<0.8	NA	<0.8	<0.8	NA	<0.8	<0.8	<0.8
Arsenic	µg/g	18	2	3	2	1	NA	<1	2	NA	2	2	1
Barium	µg/g	220	16	34	28	17	NA	6	27	NA	18	48	27
Beryllium	µg/g	2.5	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<0.5	NA	<0.5	<0.5	<0.5
Boron	µg/g	36	<5	<5	<5	<5	NA	<5	<5	NA	<5	<5	<5
Boron (Hot Water Soluble)	µg/g	NA	<0.10	0.16	0.15	<0.10	NA	<0.10	0.24	NA	<0.10	0.16	0.14
Cadmium	µg/g	1.2	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<0.5	NA	<0.5	<0.5	<0.5
Chromium	µg/g	70	7	16	10	8	NA	4	10	NA	9	11	8
Cobalt	µg/g	21	2.7	5.5	3.6	2.8	NA	1.3	3.3	NA	3.2	3.8	2.6
Copper	µg/g	92	6	12	9	6	NA	3	7	NA	7	8	7
Lead	µg/g	120	2	26	7	3	NA	1	9	NA	3	9	18
Molybdenum	µg/g	2	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<0.5	NA	<0.5	<0.5	<0.5
Nickel	µg/g	82	4.0	9.0	8	5	NA	2	7	NA	7.0	7.0	5.0
Selenium	µg/g	1.5	<0.4	<0.4	<0.4	<0.4	NA	<0.4	<0.4	NA	<0.4	<0.4	<0.4
Silver	µg/g	0.5	<0.2	<0.2	<0.2	<0.2	NA	<0.2	<0.2	NA	<0.2	<0.2	<0.2
Thallium	µg/g	1	<0.4	<0.4	<0.4	<0.4	NA	<0.4	<0.4	NA	<0.4	<0.4	<0.4
Uranium	µg/g	2.5	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<0.5	NA	<0.5	<0.5	<0.5
Vanadium	µg/g	86	13	23	17	15	NA	8	18	NA	16	20.0	16.0
Zinc	µg/g	290	13	39	29	14	NA	7	24	NA	14	30.0	22.0
Chromium VI	µg/g	0.66	<0.2	<0.2	<0.2	<0.2	NA	<0.2	<0.2	NA	<0.2	<0.2	<0.2
Cyanide	µg/g	0.051	<0.040	<0.040	<0.040	<0.040	NA	<0.040	<0.040	NA	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	<0.10	<0.10	<0.10	<0.10	NA	<0.10	<0.10	NA	<0.10	<0.10	<0.10
pH, 2:1 CaCl2 Extraction	NV	NV	7.80	7.01	7.22	7.38	7.67	7.63	7.35	7.68	7.40	7.52	7.43

Comments:
Results compared to MECP2011 Table 1 Site Condition Standards for Residential/Park/Institutional Land Use in All -Textured Soil Condition
RDL - Reported Detection Limit; G / S - Guideline / Standard
<150 Detection limit exceeded Standard
150 Sample result exceeded Standard
EC & SAR were 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.
NV- No Val * estimated elevation
NA-Not Analyzed

TABLE 4
Metals and ORPs (Soil)
16114 Aiport Rd., Caledon
Project #1-16-0543-42.3

Sample Name	Unit	Table 1	BH2-19/CS#1A	BH3-19/CS#1A	BH3-19/CS#4B	BH5-19/CS#1B	BH6-19/CS# 3A	Dup2 [BH21/SA4/7.5']	Dup3 [BH22/SA2/2.5']	DUP #1 [BH1-19/CS#1A]	DUP1 [BH3-19/CS#4B]	DUP2 [BH6-19/CS#3A]
AGAT WO#			19T528815	19T526103	19T528815	19T528822	19T528822	16T147653	16T147653	19T526103	19T528822	19T528822
AGAT ID#			604301	584029	604302	604281	604282	7919591	7919592	584031	604283	604283
Date			2019-10-02	2019-10-02	2019-10-01	2019-10-01	2019-10-01	2016-10-07	2016-10-11	2019-10-02	2019-10-01	2019-10-01
Parameter/Depth of Sample (mbgs/masl)			0-0.8/292.7-292	0-0.8/291.7-290.9	5.2-5.8/286.5-285.9	0.8-1.5/292.3-291.6	3-3.8/290.5-289.7	2.3-2.7/290.4-290	0.8-1.2/293.1-292.7	0-0.8/294.5-293.8	5.2-5.8/286.5-285.9	3-3.8/290.5-289.7
Antimony	µg/g	1.3	NA	<0.8	NA	NA	NA	NA	<0.8	<0.8	NA	NA
Arsenic	µg/g	18	NA	1	NA	NA	NA	NA	1	2	NA	NA
Barium	µg/g	220	NA	23	NA	NA	NA	NA	12	48	NA	NA
Beryllium	µg/g	2.5	NA	<0.5	NA	NA	NA	NA	<0.5	<0.5	NA	NA
Boron	µg/g	36	NA	<5	NA	NA	NA	NA	<5	<5	NA	NA
Boron (Hot Water Soluble)	µg/g	NA	NA	0.17	NA	NA	NA	NA	<0.10	0.16	NA	NA
Cadmium	µg/g	1.2	NA	<0.5	NA	NA	NA	NA	<0.5	<0.5	NA	NA
Chromium	µg/g	70	NA	9	NA	NA	NA	NA	6	11	NA	NA
Cobalt	µg/g	21	NA	3	NA	NA	NA	NA	2.3	3.7	NA	NA
Copper	µg/g	92	NA	3	NA	NA	NA	NA	6	10	NA	NA
Lead	µg/g	120	NA	4	NA	NA	NA	NA	3	10	NA	NA
Molybdenum	µg/g	2	NA	<0.5	NA	NA	NA	NA	<0.5	<0.5	NA	NA
Nickel	µg/g	82	NA	5.0	NA	NA	NA	NA	4.0	7	NA	NA
Selenium	µg/g	1.5	NA	<0.4	NA	NA	NA	NA	<0.4	<0.4	NA	NA
Silver	µg/g	0.5	NA	<0.2	NA	NA	NA	NA	<0.2	<0.2	NA	NA
Thallium	µg/g	1	NA	<0.4	NA	NA	NA	NA	<0.4	<0.4	NA	NA
Uranium	µg/g	2.5	NA	<0.5	NA	NA	NA	NA	<0.5	<0.5	NA	NA
Vanadium	µg/g	86	NA	18.0	NA	NA	NA	NA	11.0	19	NA	NA
Zinc	µg/g	290	NA	13.0	NA	NA	NA	NA	10.0	31	NA	NA
Chromium VI	µg/g	0.66	NA	<0.2	NA	NA	NA	NA	<0.2	<0.2	NA	NA
Cyanide	µg/g	0.051	NA	<0.040	NA	NA	NA	NA	<0.040	<0.040	NA	NA
Mercury	µg/g	0.27	NA	<0.10	NA	NA	NA	NA	<0.10	<0.10	NA	NA
pH, 2:1 CaCl2 Extraction	NV	NV	7.99	7.20	8.07	7.92	8	7.54	7.53	7.45	8.03	7.89

Comments:
Results compared to ME
RDL - Reported Detectio
< *150* Detection lin
150 Sample resul
EC & SAR were determir
pH was determined on the
NV- No Val * estimated
NA-Not Analyzed

TABLE 5
PHCs F1 - F4 (&BTEX) (Soil)
16114 Airport Rd., Caledon
Project #1-16-0543-42.3

Sample Name	Unit	Table 1	BH6/SA3/5'	BH19/SA5/10'	BH22/SA5/10'	BH1-19/CS#3	BH2-19/CS#3A	BH3-19/CS#2B	BH 4-19/CS #1A	BH 4-19/CS #4
AGAT wo#			**16T147653**	**16T147653**	**16T147653**	**19T526103**	**19T526103**	**19T526103**	**19T526805**	**19T526805**
AGAT ID#			**7919581**	**7919583**	**7919586**	**584026**	**584028**	**584030**	**588162**	**588163**
Date			**2016-10-05**	**2016-10-11**	**2016-10-11**	**2019-10-02**	**2019-10-02**	**2019-10-02**	**2019-10-01**	**2019-10-01**
Parameter/Depth of Sample (masl)			**1.5-2/290.3-289.5**	**3-3.5/290.6-290.1**	**3-3.5/290.9-290.4**	**3-3.8/291.5-290.7**	**3-3.8/289.7-288.9**	**2.3-3/289.4-288.6**	**0-0.8/293-292.3**	**3-3.8/290-289.2**
Benzene	µg/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	0.2	<0.08	<0.08	<0.08	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene Mixture	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g	25	<5	<5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	<50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%	NV	14.0	10.2	13.5	17.6	15.6	20.2	6.6	7.6
Terphenyl	%	NV	84	84	82	113	100	104	108	100

Comments:
Results compared to MECP2011 Table 1 Site Condition Standards for Residential/Park/Institutional Land Use in All -Textured Soil Condition
RDL - Reported Detection Limit; G / S - Guideline / Standard
<150 Detection limit exceeded Standard
150 Sample result exceeded Standard
Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Total C6 - C50 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.
NV- No Value
NA-Not Analyzed

BH 5-19/CS #1B	BH 5-19/CS #3A	BH 6-19/CS #2A	BH 6-19/CS #2B	Dup1 [BH6/SA3/5']	DUP #2 [BH1-19/CS#3]	DUP #1 [BH 4-19/CS #1A]
19T526805	19T526805	19T526805	19T526805	16T147653	19T526103	19T526805
588164	588165	588166	588167	7919588	584032	588168
2019-10-01	2019-10-01	2019-10-01	2019-10-01	2016-10-05	2019-10-02	2019-10-01
0.8-1.5/291.6-292.3	3-3.8/289.3-290	1.5-2.3/291.2-292	2.3-3/290.5-291.2	1.5-2/292-291.5	3-3.8/289.7-288.9	0-0.8/293-292.3
<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
<0.05	<0.05	<0.05	<0.05	<0.08	<0.05	<0.05
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<5	<5	<5	<5	<5	<5	<5
<5	<5	<5	<5	<5	<5	<5
<10	<10	<10	<10	<10	<10	<10
<50	<50	<50	<50	<50	<50	<50
<50	<50	<50	<50	<50	<50	<50
NA	NA	NA	NA	NA	NA	NA
1.6	8.1	2.3	12.5	14.9	17.0	7.6
101	96	100	75	74	74	88

TABLE 6
VOCs (Ground Water)
16114 Airport Rd. Caledon
Project #1-16-0543-42.3

Sample Name	Unit	Table 1	MW6	MW19	MW22	BH 1-19	BH 2-19	BH 3-19	BH 4-19	BH 5-19	BH 6-19	DUP [MW6]	DUP #1 [BH2-19]	DUP A [BH5-19]
AGAT WO#			**16T152848**	**16T152848**	**16T152848**	**19T528817**	**19T528817**	**19T528817**	**19T528820**	**19T528820**	**19T528820**	**16T152848**	**19T528817**	**19T528820**
AGAT ID#			**7957084**	**7957108**	**7957113**	**604338**	**604339**	**604340**	**604317**	**604320**	**604321**	**7957123**	**604341**	**604322**
Date			**2016-10-26**	**2016-10-26**	**2016-10-26**	**2019-10-09**	**2019-10-09**	**2019-10-09**	**2019-10-09**	**2019-10-09**	**2019-10-09**	**2016-10-26**	**2019-10-09**	**2019-10-09**
Parameter/Depth of Sample (masl)			**285-288**	**288-291**	**289-292**	**289-292**	**288-291**	**286-289**	**288-291**	**288-291**	**288-291**	**285-288**	**288-291**	**288-291**
Benzene	µg/L	0.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Xylene Mixture	µg/L	72	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Comments:
Results compared to MECP 2011 Table 1 Site Condition Standards for All Land Use
RDL - Reported Detection Limit; G / S - Guideline / Standard
<150 Detection limit exceeded Standard
150 Sample result exceeded Standard
The sample was analysed 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.
NV- No Value
NA-Not Analyzed

TABLE 7
PHCs F1 - F4 (-BTEX) (Groundwater)
16114 Airport Rd. Caledon
Project #1-16-0543-42.3

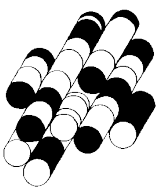
Sample Name	Unit	Table 1	MW6	MW19	MW22	BH 1-19	BH 2-19	BH 3-19	BH 4-19	BH 5-19
AGAT WO#			16T152848	16T152848	16T152848	19T528817	19T528817	19T528817	19T528820	19T528820
AGAT ID#			7957084	7957108	7957113	604338	604339	604340	604317	604320
Date			2016-10-26	2016-10-26	2016-10-26	2019-10-09	2019-10-09	2019-10-09	2019-10-09	2019-10-09
Parameter/Depth of Screens (masl)			285-288	288-291	289-292	289-292	288-291	286-289	288-291	288-291
F1 (C6 to C10)	µg/L	420	<25	<25	<25	<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	<25	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	<100	<100	<100	<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	<100	<100	<100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	NA	NA	NA	NA	NA	NA	NA	NA
Terphenyl	%	NV	108	116	98	77	82	64	107	65

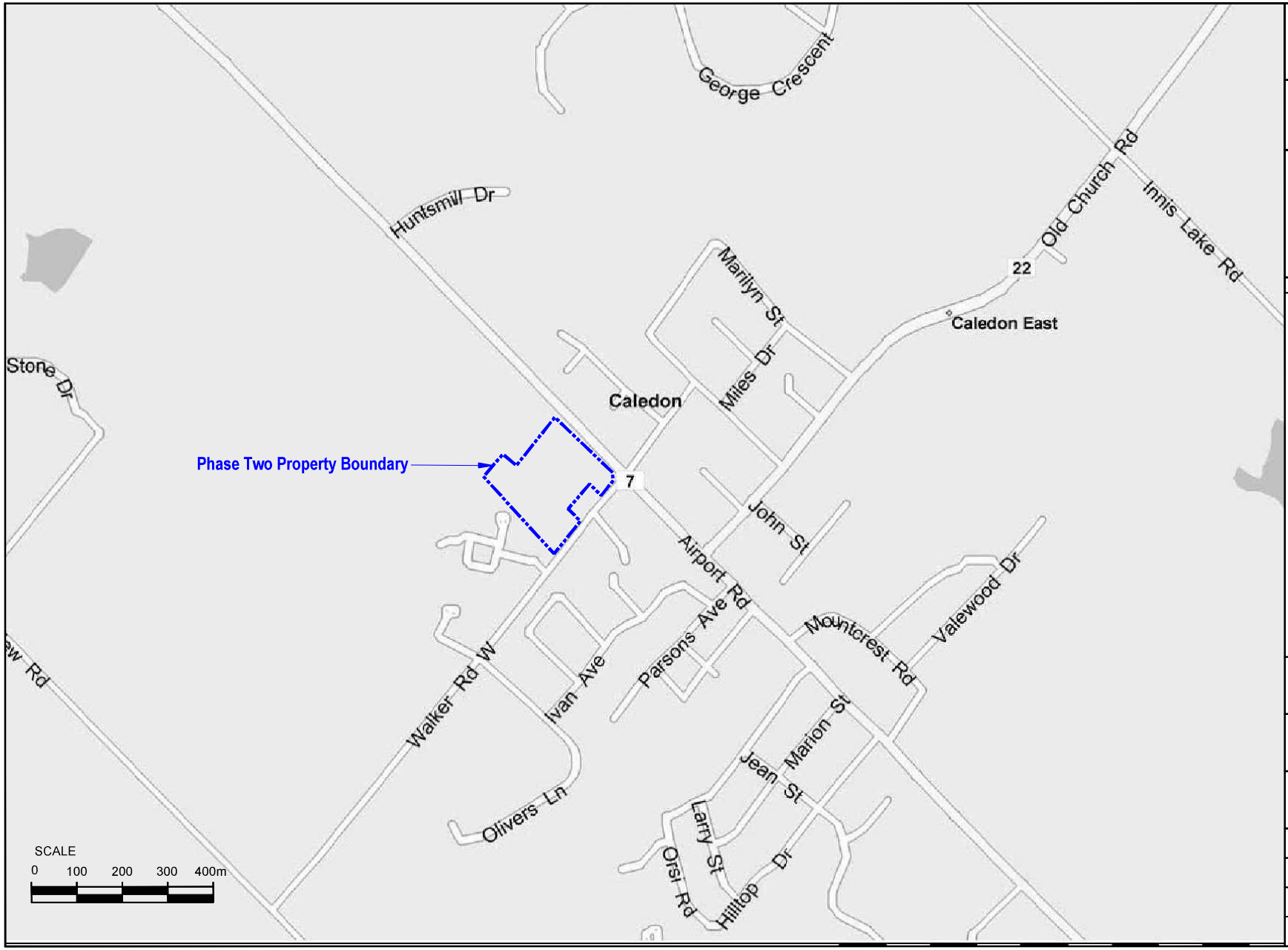
Comments:
Results compared to MECP 2011 Table 1 Site Condition Standards for Residential/Park/Institutional Land Use in a PGW Coarse-Textured Soil Condition
RDL - Reported Detection Limit; G / S - Guideline / Standard
<150 Detection limit exceeded Standard
150 Sample result exceeded Standard
Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Total C6 - C50 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.
NV- No Value
NA-Not Analyzed

BH 6-19	DUP [MW6]	DUP #1 [BH2-19]	DUP A [BH5-19]
19T528820	**16T152848**	**19T528817**	**19T528820**
604321	**7957123**	**604341**	**604322**
2019-10-09	**2016-10-26**	**2019-10-09**	**2019-10-09**
288-291	**285-288**	**288-291**	**288-291**
<25	<25	<25	<25
<25	<25	<25	<25
<100	<100	<100	<100
<100	<100	<100	<100
<100	<100	<100	<100
NA	NA	NA	NA
116	105	101	66

FIGURES

TERRAPROBE INC.





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

Reference: Microsoft Streets & Trips 2011

Notes:

Legend:
Phase Two Property Boundary

Project Title: Updated Phase Two Environmental Site Assessment

Site Location: 16114 Airport Road, Caledon, Ontario

Figure Title: SITE LOCATION PLAN

Designed By: JW	*File No.:* 1-16-0543-42.3
Drawn By: MV	*Scale:* As Shown
Reviewed By: MS	*Figure No.:* 1
Date: December 2019	

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

Reference: Google Earth

Notes:

APEC - Areas of Potential Environmental Concern

PCA - Potentially Contaminating Activity

#00 PCA Causing APEC

#00 PCA Not Causing APEC

Legend:

	Phase Two Property Boundary
	APEC 1
	APEC 2
PCA1	#28 - Gasoline and Associated Products Storage in Fixed Tanks
PCA2	Other 1 - Ontario Spills
PCA3	Other 2 - Retail Storage Tank and O.Reg. 347 Waste Generator Summary
PCA4	Other 3 - Pesticide Register & O.Reg. 347 Waste Generator Summary

Project Title: Updated Phase Two Environmental Site Assessment

Site Location: 16114 Airport Road, Caledon, Ontario

Figure Title: PCA AND APEC LOCATIONS

Designed By: JW	*File No.:* 1-16-0543-42.3
Drawn By: MV	*Scale:* As Shown
Reviewed By: MS	*Figure No.:* 2
Date: December 2019	

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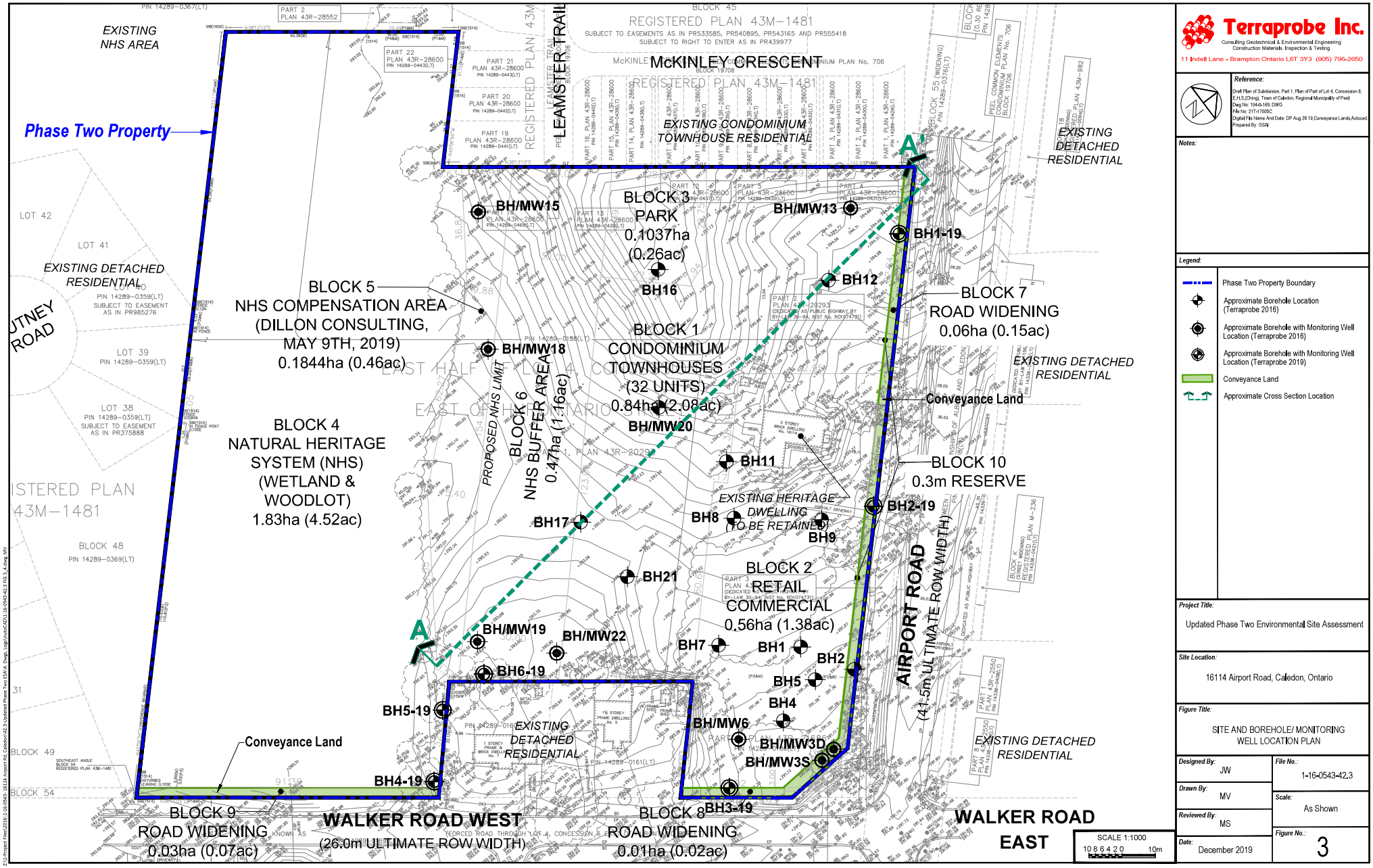


Terraprobe Inc.
Consulting Geotechnical & Environmental Engineering
Construction Materials, Inspection & Testing
11 Indell Lane – Brampton Ontario L6T 3Y3 (905) 796-2650

Reference:
Draft Plan of Subdivision, Part 1, Plan of Part of Lot 4, Concession 6, E.H.S.(Chinq), Town of Caledon, Regional Municipality of Peel
Dwg No: 1044-169. DWG
File No: 21T-17005C
Digital File Name And Date: DP Aug.28 19;Conveyance Lands; Autocad.
Prepared By: GSAI

Notes:

Legend:

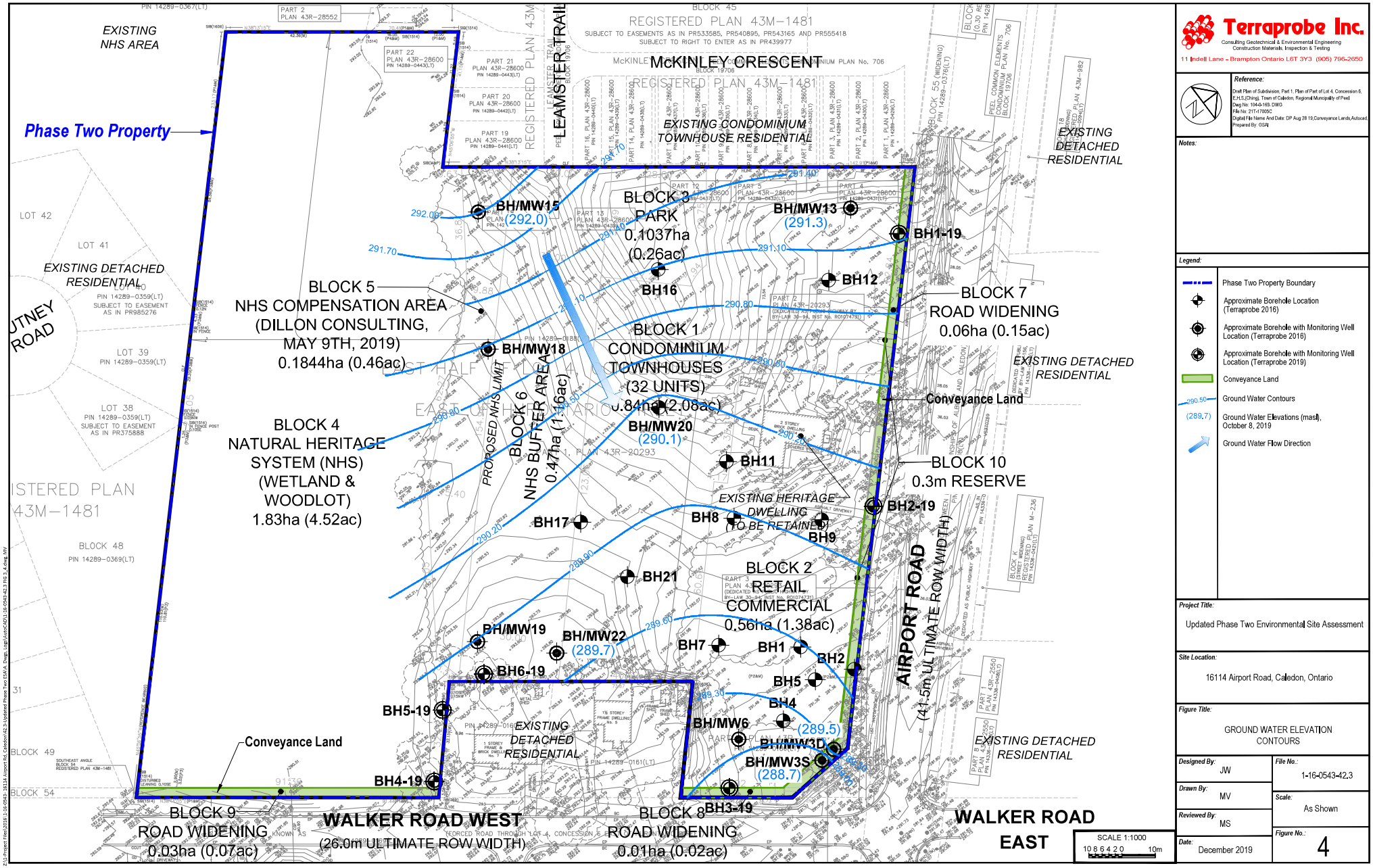
- Phase Two Property Boundary
- Approximate Borehole Location (Terraprobe 2016)
- Approximate Borehole with Monitoring Well Location (Terraprobe 2016)
- Approximate Borehole with Monitoring Well Location (Terraprobe 2019)
- Conveyance Land
- Approximate Cross Section Location

Project Title:
Updated Phase Two Environmental Site Assessment

Site Location:
16114 Airport Road, Caledon, Ontario

Figure Title:
SITE AND BOREHOLE/ MONITORING WELL LOCATION PLAN

Designed By: JW	**File No.:** 1-16-0543-42.3
Drawn By: MV	**Scale:** As Shown
Reviewed By: MS	**Figure No.:** 3
Date: December 2019	



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

Reference:
Draft Plan of Subdivision, Part 1, Plan of Part of Lot 4, Concession 6, E.H.S.(Chinq), Town of Caledon, Regional Municipality of Peel
Dwg No: 1044-169. DWG
File No: 21T-17005C
Digital File Name And Date: DP Aug.28 19;Conveyance Lands;Autocad.
Prepared By: GSAI

Notes:

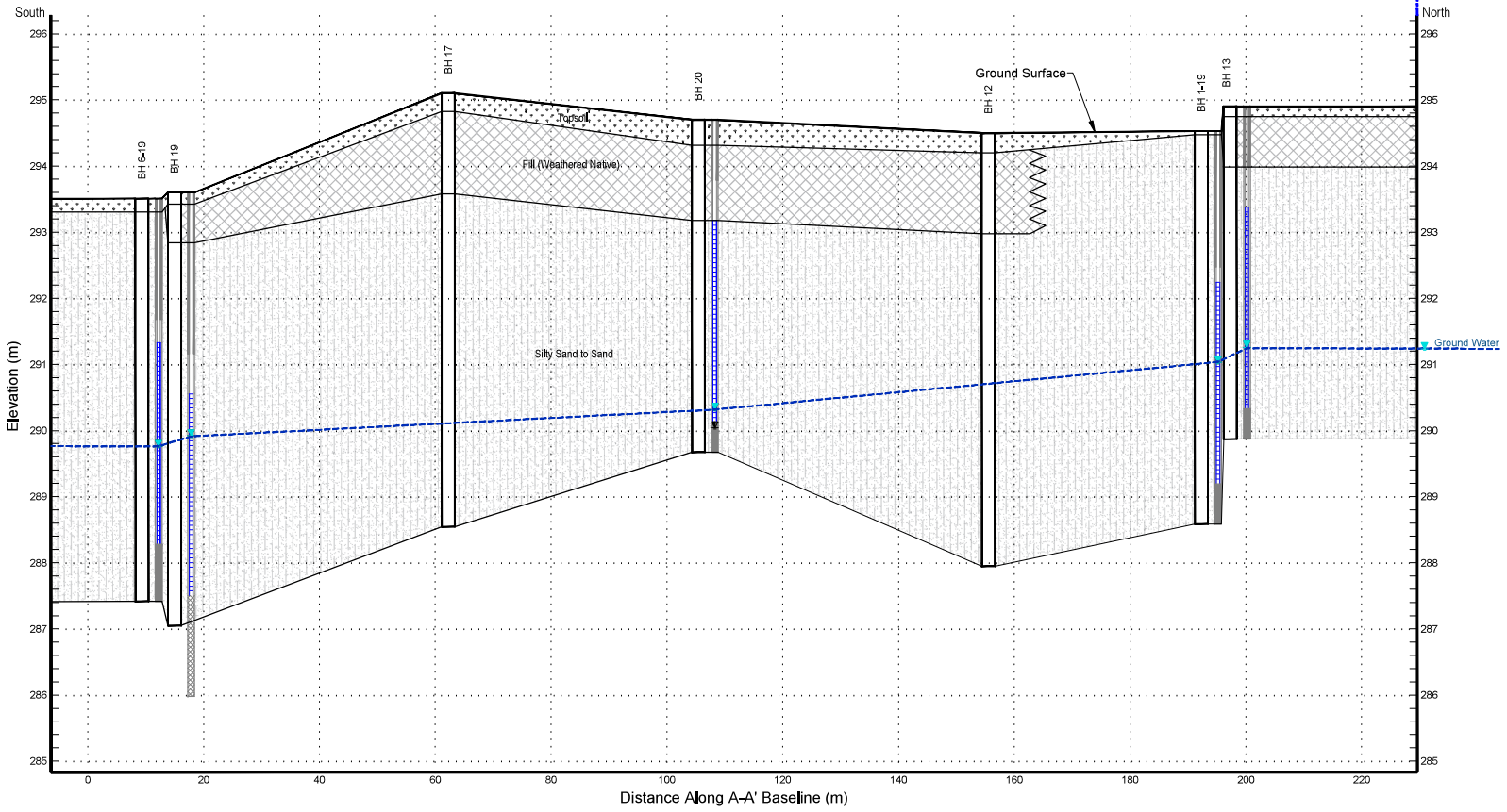
Legend:
- Phase Two Property Boundary
- Approximate Borehole Location (Terraprobe 2016)
- Approximate Borehole with Monitoring Well Location (Terraprobe 2016)
- Approximate Borehole with Monitoring Well Location (Terraprobe 2019)
- Conveyance Land
- 290.50 Ground Water Contours
- (289.7) Ground Water Elevations (masl), October 8, 2019
- Ground Water Flow Direction

Project Title: Updated Phase Two Environmental Site Assessment

Site Location: 16114 Airport Road, Caledon, Ontario

Figure Title: GROUND WATER ELEVATION CONTOURS

Designed By: JW	**File No.:** 1-16-0543-42.3
Drawn By: MV	**Scale:** As Shown
Reviewed By: MS	**Figure No.:** 4
Date: December 2019	



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

Reference:

Notes:

Legend:

- Property Boundary
- Topsoil
- Fill (Weathered Native)
- Silty Sand to Sand
- Monitoring Well Screen
- Elevation of Ground Water Table (masl), October 8, 2019

Project Title:
Updated Phase Two Environmental Site Assessment

Site Location:
16114 Airport Road, Caledon, Ontario

Figure Title:
CROSS SECTION A-A'

Designed By: JW	*File No.:* 1-16-0543-42.3
Drawn By: MV	*Scale:* As Shown
Reviewed By: MS	*Figure No.:* 5
Date: December 2019	

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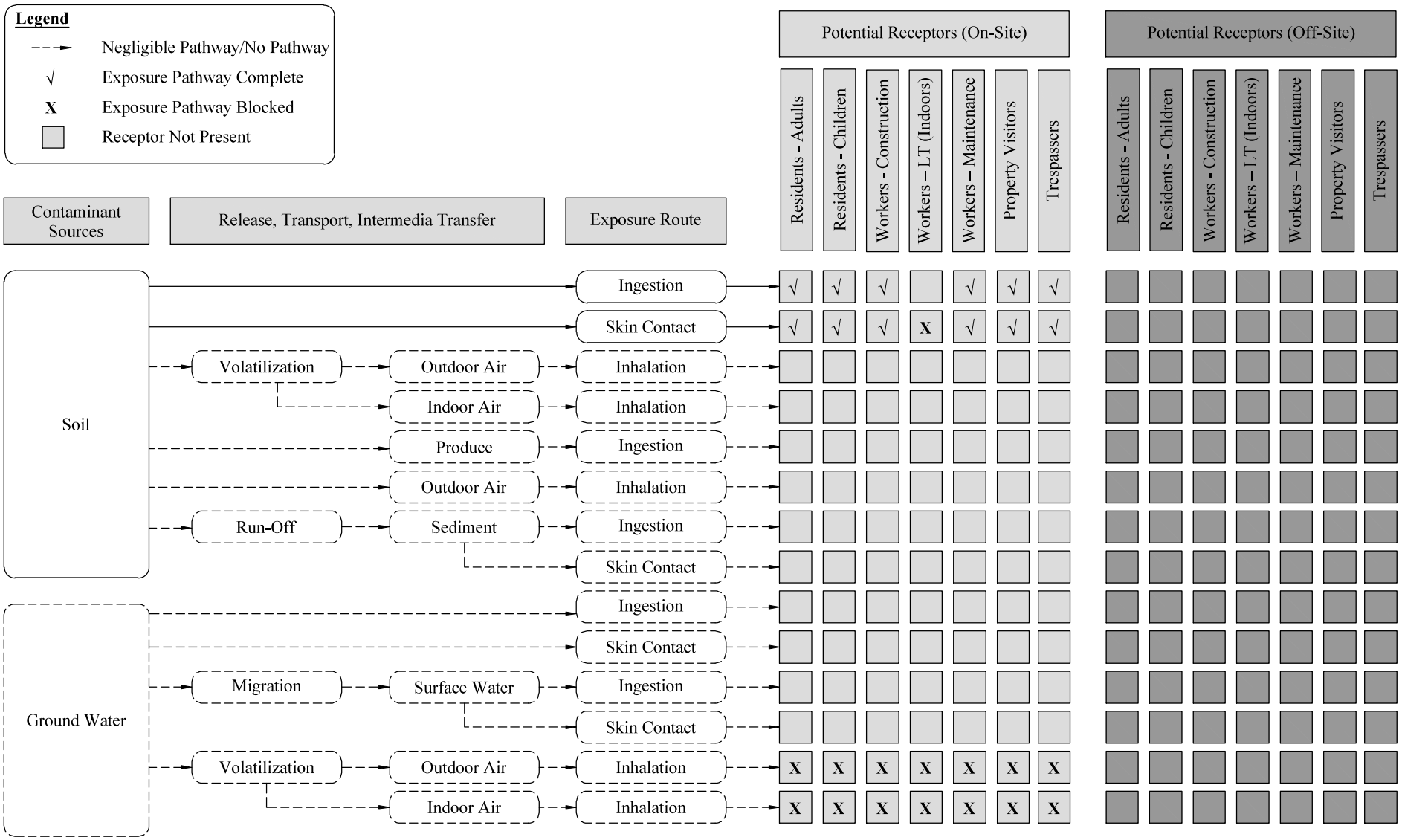
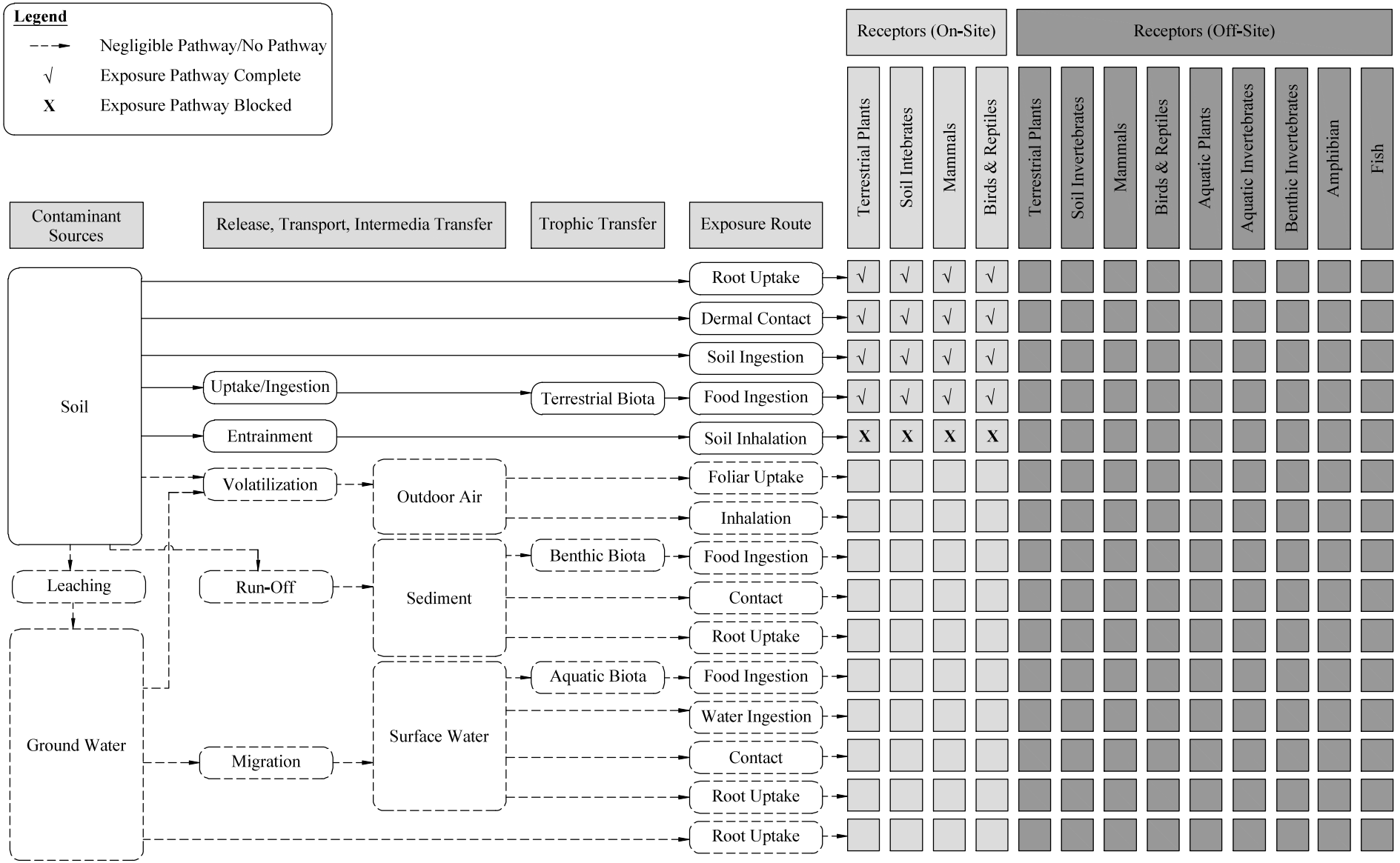


Terraprobe
11 Indell Lane, Brampton, Ontario, L6T 3Y3
Tel: (905) 796-2650 Fax: (905) 796-2250

Title: HUMAN HEALTH CONCEPTUAL SITE MODEL

File No. 1-16-0543-42.3

FIGURE NO.: 6



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

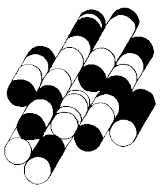
Title: ECOLOGICAL CONCEPTUAL SITE MODEL

File No. 1-16-0543-42.3

FIGURE NO.: 7

APPENDIX A

TERRAPROBE INC.



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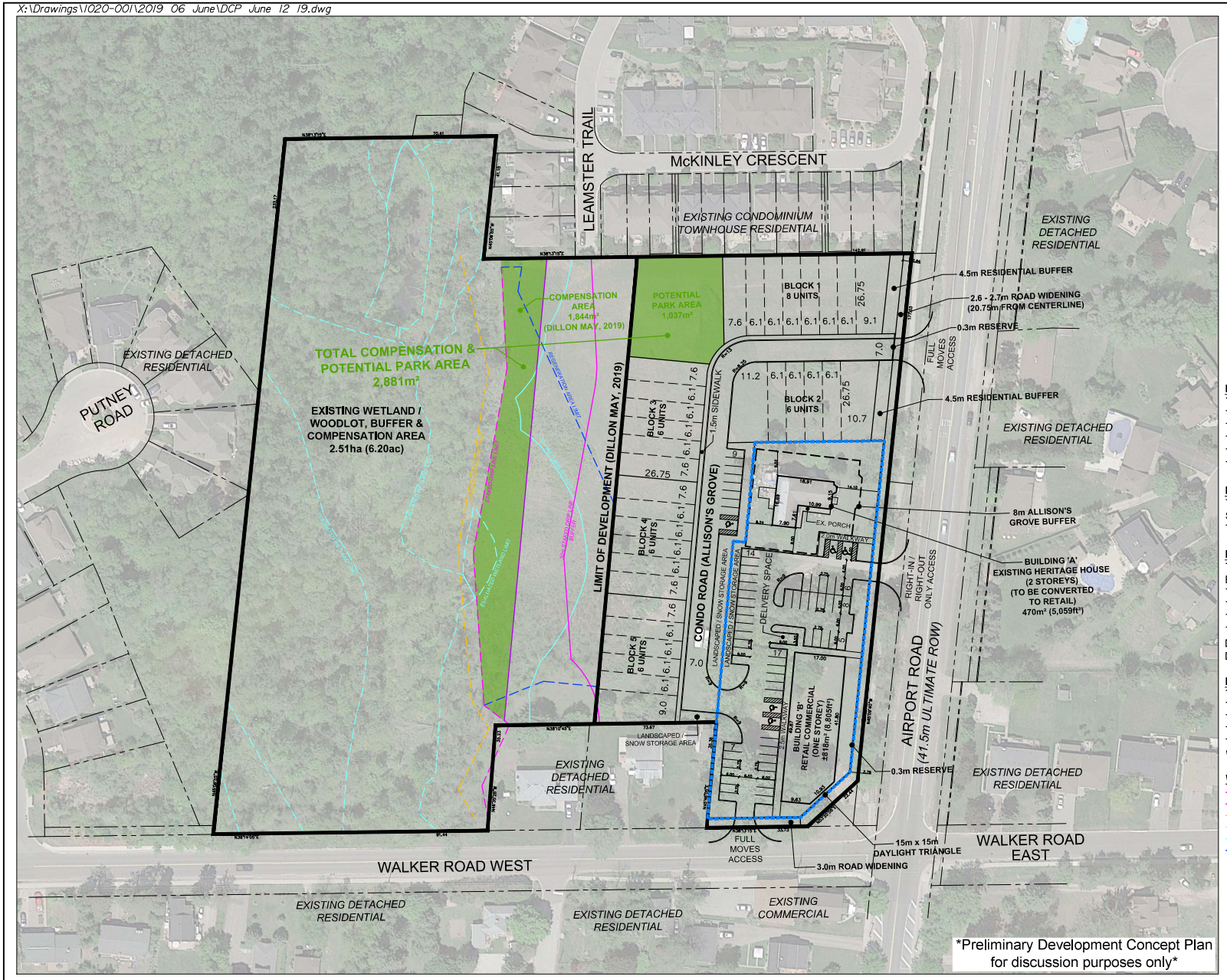
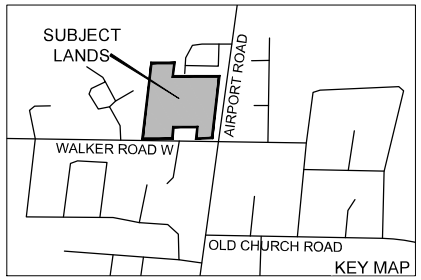




DEVELOPMENT CONCEPT PLAN
MONTEGO INVESTMENTS LIMITED

16114 AIRPORT ROAD
PART OF LOT 4,
CONCESSION 6, E.H.S.
TOWN OF CALEDON
REGION OF PEEL

Development Statistics - Total Site

Total Site Area:	**4.09ha (10.11ac)**
Total Woodlot, Buffer & Compensation Area:	2.513ha (6.20ac)
Total Potential Park:	0.103ha (0.25ac)
Total Residential Area:	0.84ha (2.07ac)
Total Commercial Area:	0.56ha (1.38ac)
Total Road Widening & Daylight Triangle:	0.07ha (0.17ac)

Development Statistics - 6.1m Condo Townhouse Residential

Total Units:	32 Units
Site Density:	32 Units / 0.84ha = 38.1UPH
Total Visitor Parking:	9 Spaces (0.28 per unit)

Development Statistics - Retail Commercial (Buildings A & B)

Total GFA: 1,288m² (13,864ft²)
Building Coverage: 18.8%
Total Parking Required: 65 Spaces *(1 space per 20m²)*
Total Parking Provided: 59 Spaces
Total Barrier Free Parking Required: 3 *(2 Type 'A' ; 1 Type 'B')*
Total Barrier Free Parking Provided: 4 *(2 Type 'A' ; 2 Type 'B')*
Delivery Spaces Required: 1
Delivery Spaces Provided: 1

Notes:

Typical Parking Space:	2.75m x 6.0m
Typical Type 'A' Barrier Free Space:	3.4m x 6.0m
Typical Type 'B' Barrier Free Space:	2.75m x 6.0m
Typical Barrier Free Aisle:	1.5m x 6.0m
Typical Delivery Space:	3.5m x 9.0m

Wetland / Woodlot constraint information provided by Dillon Consulting

Wetland / Woodlot Legend:

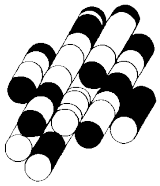
- Staked Drip Line
- Staked Drip Line 30m Buffer
- Staked Trunk Line
- Evaluated Wetland
- Evaluated Wetland 30m Buffer
- Regeneration Area Limit

Scale 1:1250
June 12, 2019

GSAI
Glen Schnarr & Associates Inc.

APPENDIX B

TERRAPROBE INC.



16114 AIRPORT ROAD, CALEDON, ONTARIO

PHASE ONE CONCEPTUAL SITE MODEL

Phase One CSM		Information Pertaining to Property
Figures of the Phase One Study Area are provided that:		
i.	Show any existing buildings and structures,	One double-storey residential building occupied the eastern portion of the Property at the time of the site inspection. A storage shed was also located on the western portion of the Property (Figure 2).
ii.	Identify and locate water bodies located in whole or in part on the Phase One Study Area	A review of topographic mapping indicates that there is no significant surface water body located within the study area.
iii.	Identify and locate any Area of Natural Significance located in whole or in part on the Phase One Study Area	Terraprobe reviewed the Ontario Ministry of Natural Resources and Forestry (MNRF) NHIC database and contacted the Toronto and Region Conservation Authority (TRCA). Based on the response from Nicholas Carscone from the TRCA, the western portion of the subject Property is classified as a Provincially Significant Wetland (PSW) by the TRCA. Based on the MNR NHIC database, an unevaluated wetland is present adjacently to the subject Property towards the south.
iv.	Locate any drinking water wells at the Phase One Property	No drinking water wells were identified on the Property during the site inspection. Five (5) monitoring wells were located on the Property.
v.	Show roads, including names, within the Phase One Study Area	The Property is bounded to the east by Airport Road and Walkers Road to the south. All roads and their corresponding names within the Study Area are presented in Figure 3.
vi.	Show use of properties adjacent to the Phase One Property	The land uses of the adjacent properties are shown in Figure 3. The surrounding properties are predominantly used for residential, commercial and institutional purposes. Conservation areas are present west and north of the subject Property.
vii.	Identify and locate area where any potentially contaminating activity has occurred, and show tanks in such areas	Potentially Contaminating Activities (PCAs) located on the Property and within the Study Area are presented on Figure 4.
viii.	Identify and locate any areas of potential environmental concern	Two (2) Areas of Potential Environmental Concern (APEC) were identified on the Property. The location of the APEC is presented on Figure 5, and the description of the APEC and potential Contaminants of Concern are described on the Table of Areas of Potential Environmental Concern.
The following is a description and assessment of:		
i.	Any areas where potentially contaminating activity on or potentially affecting the Phase One Property has occurred,	Two (2) PCA's have been identified that are either on or affecting the Phase One Property, and includes: • PCA-1: #28 Gasoline and Associated Products Storage in Fixed Tanks. An aboveground storage tank was observed on the neighboring site at 7 Walker Road West. • PCA-2: Other 1 Ontario Spills (Others). A spill of 150L of furnace oil on adjacent site to the south of the Property.
ii.	Any contaminants of potential concern,	Contaminants of Potential Concern (COPCs) identified the Property include: • PHCs • BTEX The COPCs have the potential to be present in the soil and ground water.
iii.	The potential for underground utilities, if any present, to affect contaminant distribution and transport,	The Property is serviced with underground water main, hydro, gas and bell/communication, and enters the Property from Airport Road. Storm sewer catch basins and manholes are located Walkers Road. It is likely that the underground utilities will affect contaminant distribution and transport.

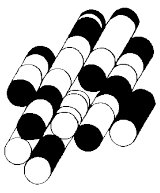
iv.	Available regional or site specific geological and hydrogeological information,	Topography • The approximate elevation of the Property is 295 masl and slopes gently to the east-southeast towards Innis Lake & Widget Lake. Hydrogeology • The nearest water body is Innis Lake and Widget Lake, which are located approximately 1.9 km southeast and 2.1 km east of the Site, respectively. The groundwater is expected to follow the local topography and flow towards the east-southeast. Geology (overburden) • The overburden on the Site is comprised of glaciofluvial ice deposits consisting of sand & gravel, with minor amounts of silt, clay and till. Geology (bedrock) • The bedrock on the Site is comprised of shale, limestone, dolostone and siltstone, part of the Queenston Formation (55a). Geology (depth to bedrock) • The depth to bedrock in the area is considered to be shallow. Based on the MECP Well Records, bedrock was encountered at approximately 24.0 m below ground surface.
v.	How any uncertainty or absence of information obtained in each of the components of the Phase One ESA could affect the validity of the model.	No uncertainty was encountered while conducting the Phase One ESA that could affect the validity of the model.

Figures:

Figure 1 – Phase One Property Location
Figure 2 – Phase One Property
Figure 3 – Phase One Study Area
Figure 4 – PCA Locations
Figure 5 – APEC Locations

APPENDIX C

TERRAPROBE INC.



Soil sampling was conducted during October 4 to 11, 2016 and October 1 to 2, 2019. Based on scope of work and the field screening, a total of 27 soil samples were submitted for chemical analysis of petroleum hydrocarbons PHCs (F1-F4), benzene, toluene, ethylbenzene, xylene (BTEX), metals, hydride-forming metals (As, Sb, Se), selected ORPs (B-HWs, CN-, Hg, Cr(VI) and pH) parameters. A summary of the soil samples and selected analyses is presented below.

No.	Sample ID	Sample Depth		Parameter Analysed (O.Reg. 153/04 as amended)
		(mbgs)*	(masl)*	
1	BH 4/SA2	0.8 – 1.2	290.5-290.1	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
2	BH 11/SA2	0.8 – 1.2	293.3-292.9	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
3	BH 12/SA2	0.8 – 1.2	293.7-293.3	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
4	BH 16/SA2 and DUP 3	0.8 – 1.2	296.9 – 296.5	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
5	BH 19/SA2	0.8 – 1.2	292.8 – 292.4	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
6	BH 20/SA2	0.8 – 1.2	293.9 – 293.5	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
7	BH 22/SA2	0.8 – 1.2	293.1 – 292.7	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
8	BH1-19/CS#1A and DUP#1	0 – 0.8	294.5 – 293.8	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
9	BH2-19/CS#1A	0 – 0.8	292.7 – 292	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
10	BH3-19/CS#1A	0 – 0.8	291.7 – 290.9	Metals, As, Sb, Se, B-HWS, CN-, Hg, Cr(VI), pH
11	BH 16/SA4 and DUP 2	2.3 – 2.7	295.4 – 295	pH
12	BH 21/SA4	2.3 – 2.7	290.4 – 290	pH
13	BH3-19/CS#4B and DUP1	5.2 – 5.8	286.5 – 285.9	pH
14	BH5-19/CS#1B	0.8 –1.5	292.3 – 291.6	pH
15	BH6-19/CS#3A and DUP2	3 –3.8	290.5 – 289.7	pH
16	BH 6/SA3 and Dup1	1.5 – 2.0	290.3 – 289.5	PHCs (F1 to F4), BTEX
17	BH 19/SA5	3.0 – 3.5	290.6 – 290.1	PHCs (F1 to F4), BTEX
18	BH 22/SA5	3.0 – 3.5	290.9 – 290.4	PHCs (F1 to F4), BTEX
19	BH1-19/CS#3 and DUP#2	3.0 – 3.8	291.5 – 290.7	PHCs (F1 to F4), BTEX
20	BH2-19/CS#3A	3.0 – 3.8	289.7-288.9	PHCs (F1 to F4), BTEX
21	BH3-19/CS#2B	2.3 – 3.0	289.4 – 288.6	PHCs (F1 to F4), BTEX
22	BH4-19/CS#1A and DUP#1	0 – 0.8	293 – 292.3	PHCs (F1 to F4), BTEX
23	BH4-19/CS#4	3.0 – 3.8	290 – 289.2	PHCs (F1 to F4), BTEX
24	BH5-19/CS#1B	0.8 – 1.5	291.6 – 292.3	PHCs (F1 to F4), BTEX
25	BH5-19/CS#3A	3.0 – 3.8	289.3 – 290	PHCs (F1 to F4), BTEX
26	BH6-19/CS#2A	1.5 – 2.3	291.2 – 292	PHCs (F1 to F4), BTEX
27	BH6-19/CS#2B	2.3 – 3.0	290.5 – 291.2	PHCs (F1 to F4), BTEX

Note: mbgs – metre below ground surface; masl – metre above sea level

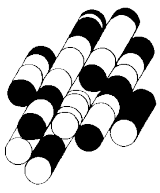
Ground water sampling was completed for the monitoring wells (BH6, BH19, BH22, BH1-19 to BH6-19) on the Property. Ground water samples were analysed for parameters including PHCs and BTEX. The laboratory certificates of analysis are provided in Appendix G.

Sample ID	Screen/Sample Depth		Parameter Analysed (O.Reg. 153/04 as amended)
	(mbgs)	(masl)	
BH/MW6 and DUP	3.1 – 6.1	288.5 – 285.4	PHC (F1-F4) + BTEX
BH/MW19	3.1 – 6.1	290.6 – 287.5	PHC (F1-F4) + BTEX
BH/MW22	1.5 – 4.5	292.4 – 289.3	PHC (F1-F4) + BTEX
BH1-19	2.3 – 5.3	292.2 – 289.2	PHC (F1-F4) + BTEX
BH2-19 and DUP#1	1.5 – 4.6	291.2 – 288.1	PHC (F1-F4) + BTEX
BH3-19	2.3 – 5.4	289.4 – 286.3	PHC (F1-F4) + BTEX
BH4-19	2.3 – 5.4	290.7 – 287.6	PHC (F1-F4) + BTEX
BH5-19 and DUPA	2.1 – 5.2	291 – 287.9	PHC (F1-F4) + BTEX
BH6-19	2.2 – 5.2	291.3 – 288.3	PHC (F1-F4) + BTEX

Note: mbgs – metre below ground surface; masl – metre above sea level

APPENDIX D

TERRAPROBE INC.



SUMMARY OF FIELD INVESTIGATION PROTOCOL

1. Drilling and Soil Sampling Procedures

Drilling and sampling of overburden materials are generally conducted using a mobile power auger. During augering operations, soil samples are recovered using a standard 50 mm diameter split-spoon sampling device. The sampler is generally advanced by a drop hammer to obtain standard penetration values (N values) for assessment of soil consistency.

In some instances, soil samples are obtained by directly pushing a sampling device into the soil using specialized drilling equipment.

Soil samples obtained from the split-spoon are examined in the field by qualified engineering staff. The soil is classified according to: grain size distribution, texture, colour, odour, moisture content, and other pertinent details. Field borehole logs are prepared and notes are made regarding visual or olfactory evidence of potential contamination of soil materials.

Following logging, all samples are placed into laboratory-cleaned 500 mL glass jars, with foil-lined lids. The samples are transported to Terraprobe's laboratory for detailed inspection by the site engineer. Where samples are collected for analysis of volatile organic compounds, they are placed into laboratory-cleaned, 50 mL glass septum jars with Teflon-lined caps. Following review by the project engineer, samples are forwarded to a CAEAL-certified laboratory for analysis.

During the drilling procedure, no lubricants are used on any of the drilling and sampling equipment in order to ensure there is no contamination with hydrocarbon-based or other lubricating materials.

If significant contamination of the soil or ground water is expected, then drill cuttings are placed into 205 L steel drums stored on thesite. The drill cuttings and water are later characterized for proper off-site disposal, where necessary.

The sample collection and preservation techniques follow the general requirements of *Table 5.2(d), Required Container Preservation Techniques and Maximum Handling Times for Water Samples*, and from *MOE Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario* (May 1996).

Chain of custody forms are filled out for all samples which are shipped to commercial laboratories. The chain of custody forms are provided by the laboratory and include the following information:

1. Terraprobe's project number
2. Sample number and locations
3. Name of party shipping the samples to the laboratory
4. Required scope of analysis
5. Date of submission
6. Date of receipt by the laboratory
7. Any special notes or items of clarification appropriate to the project

2. Test Pit Excavation and Sampling

Test pits are generally excavated using a hydraulic backhoe of appropriate size and capacity depending on test pit depth and soil consistency. The test pit operations are carried out under the full-time supervision of Terraprobe engineering staff. During excavation, the test pits are logged based on the exposed soil and ground water profile. Soil samples are generally recovered from each soil strata noted during the investigation. Depending on the depth of the test pit, samples are obtained either by a spade or shovel from the side wall, or directly from the backhoe bucket.

In all cases, operations are carried out in strict accordance with the requirements of the Occupational Health and Safety Act. Personnel are not permitted to enter unsupported test pits with depths in excess of 1.2 m below prevailing grade.

3. Equipment Clean-up

All drilling equipment is cleaned by the contractor prior to beginning each project. This includes augers, drill rods, sampling spoons, and the like.

In the event that significant contamination is expected or noted during drilling, then the drilling equipment is also cleaned between each borehole location. The cleaning is conducted using high pressure washing equipment and a phosphate detergent. A decontamination pad or cleaning area is set up well away from the general work area.

All sampling equipment used during the investigation is cleaned between collection of each sample. This includes split-spoon equipment, shovels, trowels, and any other sampling equipment. Sampling equipment is cleaned as follows:

- All sampling equipment is wiped to remove excess soil material.
- Equipment is rinsed in municipal water.
- Equipment is further rinsed with distilled water.
- In the event of significant organic contamination (such as hydrocarbons), the material is rinsed with detergent and/or methanol to remove materials.
- A final rinse with distilled water is carried out prior to utilizing the sampling equipment.

4. Soil Gas Monitoring

Soil gas monitoring is conducted to assess the potential presence of volatile organic compounds in soil materials. The monitoring is conducted by obtaining headspace measurements from soil samples. Headspace measurement is conducted by placing the tip of a photo-ionization detector or flame ionization detector through an aluminum foil cover placed over the 500 mL sample jars. Alternatively, samples may be placed into polyethylene sampling bags and vapour analysis can be conducted through the wall of the sampling bag.

When the ambient air temperature is less than 10°C, samples are generally transported to Terraprobe's laboratory and allowed to remain in sealed containers until reaching room temperature. Vapour analysis is then conducted at room temperature.

All testing equipment is calibrated each day prior to conducting soil vapour measurements. Measurements are generally taken with respect to equivalent hexane concentration (concentration of parts per million), or in relation to the lower explosive limit of hexane. Where appropriate, the results are converted to represent concentrations of other gases such as methane.

The results of vapour monitoring are generally utilized to provide guidance for the selection of samples for later chemical analysis. They may also be used in assessing the presence of volatile organic compounds for the siting of monitoring wells.

5. Monitoring Well Installation

Monitoring wells are generally constructed using new, pre-packaged 50 mm diameter Schedule 40 PVC pipe and screens. The screen length and opening are dependent on the project requirements.

All wells are constructed using threaded joints without glues or solvents.

A silica sand pack is placed around the well screen and typically to a height of approximately 500 mm above the top of the well screen. A well seal, consisting of bentonite clay or cementitious bentonite grout, is then placed to a thickness of at least 1 m above the sand zone. The remainder of the hole is then filled to surface with an appropriate grout material or drill cuttings.

A locking security cap is fitted in areas which may be subject to vandalism or tampering of the well installation.

Specialized drilling procedures and monitoring well installation procedures are used where aquifer zones may be penetrated. All drilling is conducted in accordance with the general requirements of Regulation 903 to ensure that there is no cross-contamination or cross flow between aquifer zones.

6. Ground Water Sampling and Water Level Measurement

Water level measurements are conducted using an electronic water level finder. The water level finder is cleaned with distilled water, detergent, and where appropriate, methanol, prior to insertion into each well.

Measurements of non-aqueous phase liquids are conducted using specialized monitoring equipment which detects the presence of both the water column and non-aqueous phase liquids.

All measurements in the field are taken relative to a fixed point, which is generally the top of the well casing or top of the well protective cap. These are later referenced to appropriate elevations or ground surface.

Ground water sampling is conducted following proper development of the well. Wells are generally developed using a dedicated Waterra inertial pump. The wells are developed by removing a minimum of three casing volumes of water, or by bailing to dryness. Where possible, the wells are developed until clear, sediment-free water is obtained.

Ground water samples are obtained only following well bailing and development, as noted above. Samples are obtained either from a dedicated inertial pump, or a dedicated bailer.

During sampling, measurements are made for selected parameters including pH, conductivity, and temperature.

Samples are collected directly into laboratory-supplied containers. Samples collected for analysis of metals are filtered through a 0.45 micron disposable filter to eliminate suspended solids.

Sample bottles are stored in an insulated cooler to protect from freezing, and to maintain temperatures of less than 10°C.

The sample collection and preservation techniques follow the general requirements of *Table 5.2(d), Required Container Preservation Techniques and Maximum Handling Times for Water Samples*, and from *MOE Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario* (May 1996).

Chain of custody forms are filled out for all samples which are shipped to commercial laboratories. The chain of custody forms are provided by the laboratory and include the following information:

- Terraprobe's project number
- Sample number and locations
- Name of party shipping the samples to the laboratory
- Required scope of analysis
- Date of submission
- Date of receipt by the laboratory
- Any special notes or items of clarification appropriate to the project

7. Sample Quality Assurance and Quality Control

All chemical analysis of soil and ground water samples is carried out only by CAEAL certified laboratories. These laboratories provide internal quality control checks regarding laboratory analytical procedures. This includes the use of sample spikes, surrogate samples, and duplicate analysis.

For each sampling program, one trip blank is included. The trip blank consists of deionized water that is placed in the sample containers provided by the laboratory, and is prepared by the laboratory.

Field duplicate samples are prepared at the rate of approximately one sample per ten soil or ground water samples submitted. The number of duplicate samples depends on site and project-specific requirements. Duplicate samples are provided with a fictitious sample number in order that the laboratory is not aware of the duplicate sample.

A field blank sample is obtained at the rate of approximately one sample per ten ground water samples submitted. A field blank is obtained by filling the appropriate laboratory containers with the deionized water in the field during the sampling procedure.

The results of all laboratory analysis are carefully examined and compared to the results of visual, olfactory, and soil vapour monitoring conducted in the field. Any unusual results or unexpected results are discussed carefully with the field technician and the laboratory. Where appropriate, resampling is conducted to ensure the veracity of all results.

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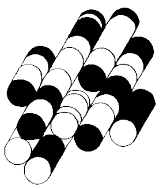
APPENDIX E

TERRAPROBE INC.



LOG OF BOREHOLE 1

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 5, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590777, N: 4858285 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value
	291.7	**GROUND SURFACE**				
0	291.4	300mm **TOPSOIL**		1A	SS	8
	0.3	**FILL**, silty sand, trace clay, trace gravel, trace rootlets, loose, dark brown, moist		1B		
	290.9					
	0.8	**SANDY SILT to SILT AND SAND**, trace gravel, trace clay, dilatant, loose to compact, brown, wet		2	SS	19
1				3	SS	21
2				4	SS	23
3				5	SS	9
4				6	SS	19
5				7	SS	17
6	285.1					
	6.6	**END OF BOREHOLE**				

Elevation Scale (m): 291, 290, 289, 288, 287, 286

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) 10, Natural Water Content (MC) 20, Liquid Limit (LL) 30

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

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

Unstabilized water level measured at 3.0 m below ground surface; borehole caved to 3.4 m below ground surface upon completion of drilling.

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 2

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 6, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590771, N: 4858293 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev / Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value	Elevation Scale (m)	Lab Data and Comments
0	291.3 **GROUND SURFACE**						291	
	291.0 / 0.3	300mm **TOPSOIL**		1A	SS	11		
		FILL, silty sand, trace clay, trace gravel, trace rootlets, compact, dark brown, moist		1B				
	290.5 / 0.8	**SAND**, trace to some silt, trace clay, trace gravel, compact, brown, wet		2	SS	26	290	
1	289.8 / 1.5	**SANDY SILT to SILT AND SAND**, trace gravel, trace clay, dilatant, compact, brown, wet		3	SS	13		spoon wet
				4	SS	16	289	
2				5	SS	10	288	▽
3								
4				6	SS	16	287	
5							286	
6	284.7 / 6.6			7	SS	15	285	

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)

Instrument Details

Unstabilized Water Level

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

END OF BOREHOLE

Unstabilized water level measured at 3.4 m below ground surface; borehole caved to 3.7 m below ground surface upon completion of drilling.

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 3D

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 4, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 2	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590796, N: 4858277 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Hollow 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	**291.1**	**GROUND SURFACE**					291					
	290.9	200mm **TOPSOIL**		1A								
	0.2	**FILL**, silty sand, trace clay, trace gravel, trace rootlets, compact, dark brown, moist		1B	SS	10						
	290.3											
1	0.8	**SAND**, trace to some silt, trace clay, trace gravel, compact, brown, wet		2	SS	20	290					
				3	SS	19						
2	288.8						289					
	2.3	**SANDY SILT to SILT AND SAND**, trace gravel, trace clay, dilatant, compact, brown, wet		4	SS	24						spoon wet
3				5	SS	15	288					
4							287					
5				6	SS	21	286					
6							285					
				7	SS	14						
	284.5											
7	6.6	Augered without sampling.					284					drilling mud/gel added
8							283					
9							282					
10												

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

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

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

Unstabilized Water Level

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

file: 1-16-0543-01 bh logs.gpj

(continued next page)

LOG OF BOREHOLE 3D

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 4, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 2 of 2	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590796, N: 4858277 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Hollow 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	Unstabilized Water Level	Lab Data and Comments
		(continued)											
11		Augered without sampling. *(continued)*					280	Dynamic Cone 10 20 30 40; Unconfined, Pocket Penetrometer, Field Vane, Lab Vane 40 80 120 160	Plastic Limit, Natural Water Content, Liquid Limit PL MC LL 10 20 30				GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL
12							279						
13	277.4 13.7						278						

END OF BOREHOLE

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

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 26, 2016	4.7	286.4

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 3S

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 4, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590796, N: 4858277 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, truck-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
0	291.1	**GROUND SURFACE**				
		Augered without sampling.		1A		
				1B	SS	10
1				2	SS	20
				3	SS	19
2				4	SS	24
3				5	SS	15
4	287.0					
	4.1	**END OF BOREHOLE**				

Elevation Scale (m): 291, 290, 289, 288, 287

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)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

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

Borehole was dry and open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 26, 2016	2.1	289.0

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 4

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 5, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590780, N: 4858262 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value
	291.3	**GROUND SURFACE**				
0	291.1	180mm **TOPSOIL**		1A	SS	7
	0.2	**FILL**, silty sand, trace clay, trace gravel, trace rootlets, loose, dark brown, moist		1B		
	290.5					
	0.8	**SANDY SILT to SILT AND SAND**, trace gravel, trace clay, dilatant, compact, brown, wet		2	SS	18
1				3	SS	17
2				4	SS	21
3				5	SS	14
4		...sand, some silt		6	SS	30
5						
6				7	SS	11
	284.7					
	6.6	**END OF BOREHOLE**				

Elevation Scale (m): 291, 290, 289, 288, 287, 286, 285

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) 10, Natural Water Content (MC) 20, Liquid Limit (LL) 30

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

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

0 31 62 7

SS2 Analysis: M&I

spoon wet

Unstabilized water level measured at 3.8 m below ground surface; borehole caved to 4.0 m below ground surface upon completion of drilling.

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 5

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 6, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590777, N: 4858280 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev / Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value	Elevation Scale (m)	Lab Data and Comments
0	291.5	**GROUND SURFACE**					291	
	291.2	300mm **TOPSOIL**		1A	SS	8		
	0.3	**FILL**, silty sand, trace clay, trace gravel, trace rootlets, loose, dark brown, moist		1B				
	290.7							
1	0.8	**SANDY SILT to SILT AND SAND**, trace clay, dilatant, compact to dense, wet		2	SS	19	290	
				3	SS	17		spoon wet
2				4	SS	36	289	
3	288.5							
	3.0	**SAND**, trace to some silt, trace clay, trace gravel, compact, brown, wet		5	SS	18	288	▽
4								
				6	SS	15	287	
5								
							286	
6	285.4							
	6.1	**SANDY SILT**, trace clay, dilatant, compact, wet		7	SS	18		
	284.9						285	
	6.6	**END OF BOREHOLE**						

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

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

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

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

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

Unstabilized water level measured at 3.7 m below ground surface; borehole caved to 4.0 m below ground surface upon completion of drilling.

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 6

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 11, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position :
Elevation Datum : Geodetic
Rig type : CME 55, track-mounted
Drilling Method : Hollow stem augers

Depth Scale (m)	Elev / Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
	291.5	**GROUND SURFACE**				
0	291.0 / 0.5	450mm **TOPSOIL**		1A	SS	7
	290.7 / 0.8	**FILL**, silty sand, trace clay, trace gravel, trace organics, loose, moist		1B		
1	290.0 / 1.5	**SANDY SILT to SILT AND SAND**, trace gravel, trace clay, dilatant, compact, brown, wet		2	SS	14
2		**SAND**, trace to some silt, trace clay, trace gravel, compact, brown, wet		3	SS	16
				4	SS	22
3				5	SS	19
4						
				6	SS	21
5						
6	285.4 / 6.1	**SANDY SILT**, trace gravel, trace clay, dilatant, compact, brown, wet		7	SS	18
	284.9 / 6.6	**END OF BOREHOLE**				

Elevation Scale (m): 291, 290, 289, 288, 287, 286, 285

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, PID: 0, PID: 20, PID: 30, PID: 20, PID: 5, PID: 0, PID: 0

Instrument Details

Unstabilized Water Level

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

SS3 Analysis: PHC

spoon wet

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 26, 2016	2.2	289.3

Unstabilized water level measured at 1.5 m below ground surface; borehole was open upon completion of drilling.

50 mm dia. monitoring well installed.

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 7

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 5, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590750, N: 4858254 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev / Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
0	291.9 **GROUND SURFACE**					
	291.6 / 0.3	300mm **TOPSOIL**		1A	SS	7
		FILL, silty sand, trace clay, trace gravel, trace rootlets, loose, dark brown, moist		1B		
	291.1 / 0.8	**SANDY SILT to SILT AND SAND**, trace gravel, trace clay, dilatant, compact to dense, brown, wet		2	SS	18
1				3	SS	23
2				4	SS	42
3				5	SS	24
4		...loose		6	SS	5
5						
6		...sand, some silt, compact		7	SS	23
	285.3 / 6.6	**END OF BOREHOLE**				

Elevation Scale (m): 291, 290, 289, 288, 287, 286

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) 10, Natural Water Content (MC) 20, Liquid Limit (LL) 30

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

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

Unstabilized water level measured at 3.9 m below ground surface; borehole caved to 4.0 m below ground surface upon completion of drilling.

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 8

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 6, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590724, N: 4858289 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value
	293.2	**GROUND SURFACE**				
0	292.9	280mm **TOPSOIL**		1A	SS	6
	0.3	**FILL**, silty sand, trace clay, trace gravel, trace organics, loose, dark brown, moist		1B		
	292.4					
1	0.8	**SAND AND GRAVEL**, trace silt, compact, brown, moist		2	SS	22
	291.7					
	1.5	**SANDY SILT to SILT AND SAND**, trace clay, trace gravel, dilatant, compact to dense, wet		3	SS	22
2				4	SS	30
3				5	SS	35
4	288.6					
	4.6	**SAND**, trace to some silt, trace clay, trace gravel, loose to compact, brown, wet		6	SS	9
5						
6				7	SS	13
	286.6					
	6.6	**END OF BOREHOLE**				

Elevation Scale (m): 293, 292, 291, 290, 289, 288, 287

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)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT)

GR SA SI CL

2 31 58 9

Unstabilized water level measured at 4.0 m below ground surface; borehole caved to 4.3 m below ground surface upon completion of drilling.

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 9

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 6, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590735, N: 4858314 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value
	292.8	**GROUND SURFACE**				
0	292.5	280mm **TOPSOIL**		1A	SS	7
	0.3	**FILL**, silty sand, trace clay, trace gravel, trace rootlets, loose, dark brown, moist		1B		
	292.0					
	0.8	**SAND**, trace to some gravel, trace to some silt, compact, brown, moist		2	SS	23
1				3	SS	26
2	290.5					
	2.3	**SANDY SILT to SILT AND SAND**, trace gravel, trace clay, dilatant, loose to compact, brown, wet		4	SS	17
3				5	SS	17
4				6	SS	9
5				7	SS	30
6	286.2					
	6.6	**END OF BOREHOLE**				

Elevation Scale (m): 292, 291, 290, 289, 288, 287

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) 10, Natural Water Content (MC) 20, Liquid Limit (LL) 30

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

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

spoon wet

Unstabilized water level measured at 3.0 m below ground surface; borehole caved to 3.4 m below ground surface upon completion of drilling.

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 11

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 7, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590705, N: 4858300 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa)	Moisture / Plasticity	Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments
0	**294.1**	**GROUND SURFACE**					294	Dynamic Cone 10 20 30 40; Unconfined / Pocket Penetrometer / Field Vane / Lab Vane 40 80 120 160	Plastic Limit / Natural Water Content / Liquid Limit PL MC LL 10 20 30			Unstabilized Water Level; GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL
	293.9 / 0.2	230mm **TOPSOIL**										
		FILL, sandy silt, trace clay, trace gravel, trace rootlets, trace organics, loose, dark brown, moist		1A	SS	9						
				1B								
1				2	SS	7	293					SS2 Analysis: M&I
	292.9 / 1.2	**SAND**, trace to some silt, trace gravel, trace clay, compact, brown, moist										
				3	SS	17						
2	291.8 / 2.3	**SANDY SILT to SILT AND SAND**, trace gravel, trace clay, dilatant, compact to dense, brown, wet		4	SS	34	292					
3				5	SS	23	291					spoon wet
												▽
4							290					
				6	SS	36						
5	289.1 / 5.0	**END OF BOREHOLE**										

Unstabilized water level measured at 4.2 m below ground surface; borehole caved to 4.3 m below ground surface upon completion of drilling.

LOG OF BOREHOLE 12

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 7, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590679, N: 4858343 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev / Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value	Elevation Scale (m)
0	294.5	**GROUND SURFACE**					294
	294.2	300mm **TOPSOIL**					
	0.3	**FILL**, sandy silt, trace clay, trace gravel, trace rootlets, trace organics, loose to compact, dark brown, damp to moist		1	SS	5	
1				2	SS	11	293
	293.0						
	1.5	**SANDY SILT to SILT AND SAND**, trace gravel, trace clay, dilatant, compact to dense, brown, moist		3	SS	17	
2		...silt layer, very moist		4	SS	30	292
3		...wet below		5	SS	23	
							291
4							
				6	SS	31	290
5							
							289
6				7	SS	41	
	287.9						288
	6.6	**END OF BOREHOLE**					

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

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

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

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

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

SS2 Analysis: M&I

0 47 47 6

spoon wet

Unstabilized water level measured at 4.8 m below ground surface; borehole caved to 4.9 m below ground surface upon completion of drilling.

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 13

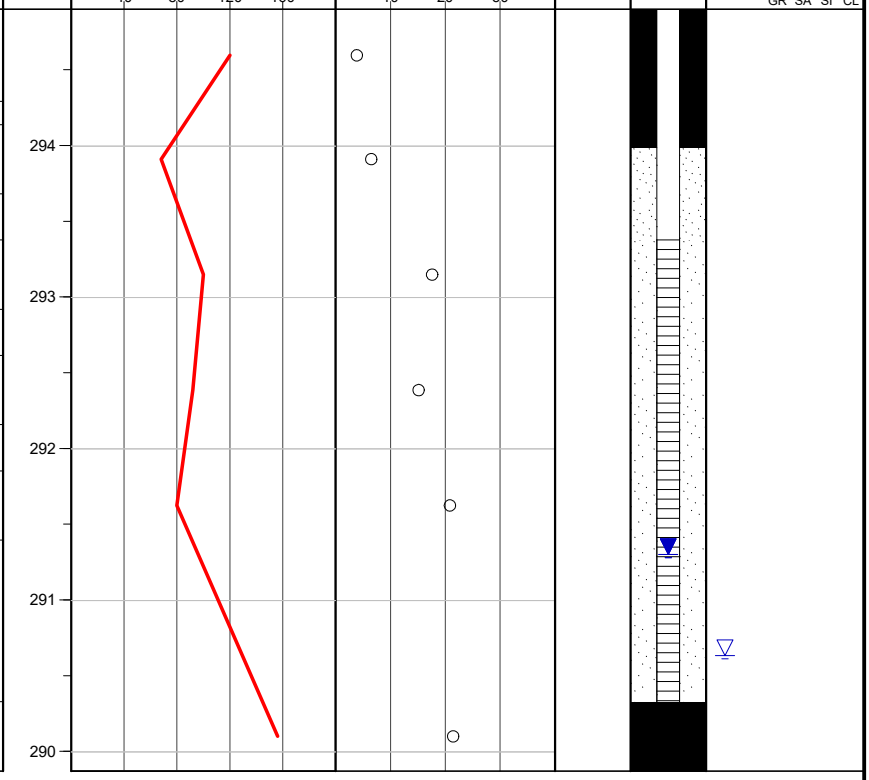
Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 11, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590668, N: 4858383 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value
	294.9	**GROUND SURFACE**				
0	294.7	150mm **TOPSOIL**				
	0.2	**FILL**, sandy silt, trace clay, trace gravel, trace rootlets, trace organics, compact, dark brown, moist		1	SS	30
	294.0					
1	0.9	**SANDY SILT to SILT AND SAND**, trace clay, dilatant, compact, wet		2	SS	17
				3	SS	25
2				4	SS	23
3	291.9					
	3.0	**CLAYEY SILT**, some sand, trace gravel, very stiff, brown, wet		5	SS	20
4	290.3					
	4.6	**SANDY SILT to SILT AND SAND**, trace clay, dilatant, dense, wet		6	SS	39
5	289.9					
	5.0	**END OF BOREHOLE**				



Unstabilized water level measured at 4.3 m below ground surface; borehole was open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 26, 2016	3.6	291.3

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 15

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 11, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590602, N: 4858281 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
	293.8	**GROUND SURFACE**				
0	293.6	200mm **TOPSOIL**		1A	SS	8
	0.2	**FILL**, sandy silt, trace clay, trace gravel, trace rootlets, trace organics, loose, dark brown, moist		1B		
	293.0					
1	0.8	**SAND**, trace to some silt, trace clay, trace gravel, compact, brown, wet		2	SS	26
	292.3					
2	1.5	**SANDY SILT to SILT AND SAND**, trace to some clay, dilatant, compact, wet		3	SS	22
				4	SS	21
3				5	SS	27
4						
5	288.8			6	SS	26
	5.0					

Elevation Scale (m): 293, 292, 291, 290, 289

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)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT)

GR SA SI CL

0 36 54 10

END OF BOREHOLE

Unstabilized water level measured at 3.4 m below ground surface; borehole caved to 3.7 m below ground surface upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 26, 2016	1.8	292.0

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 16

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 7, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590646, N: 4858315 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
0	297.7 **GROUND SURFACE**					
	297.5	180mm **TOPSOIL**		1A		
	0.2	**FILL**, sandy silt, trace gravel, trace clay, trace rootlets, trace organics, loose, dark brown, damp		1B	SS	9
	296.9					
1	0.8	**SANDY SILT**, trace gravel, trace clay, trace rootlets, compact, brown, damp		2	SS	12
	296.2					
	1.5	**SILTY SAND**, trace to some gravel, trace clay, dense to very dense, brown, moist		3	SS	41
2				4	SS	73
3				5	SS	35
4		...gravelly		6	SS	64
5						
6		...wet, silt and sand, dilatant, compact		7	SS	26
	291.1					
	6.6	**END OF BOREHOLE**				

Elevation Scale (m): 297, 296, 295, 294, 293, 292

Penetration Test Values (Blows / 0.3m)
× Dynamic Cone 10 20 30 40
Undrained Shear Strength (kPa)
○ Unconfined + Field Vane
● Pocket Penetrometer ■ Lab Vane
40 80 120 160

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

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

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

SS2 Analysis: M&I

SS4 Analysis: PH

Borehole was dry and caved to 5.8 m below ground surface upon completion of drilling.

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 17

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 7, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590695, N: 4858251 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
0	295.1	**GROUND SURFACE**				
	294.8	280mm **TOPSOIL**		1A	SS	9
	0.3	**FILL**, sandy silt, trace clay, trace gravel, trace rootlets, trace organics, loose, dark brown, damp to moist		1B		
1				2	SS	4
	293.6					
	1.5	**SAND**, some silt to silty, trace clay, trace gravel, compact to dense, brown, moist		3	SS	22
2				4	SS	26
3				5	SS	18
4		...some gravel		6	SS	36
5						
6		...wet, silt layer, grey		7	SS	15
	288.5					
	6.6	**END OF BOREHOLE**				

Elevation Scale (m): 295, 294, 293, 292, 291, 290, 289

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)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

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

spoon wet

Unstabilized water level measured at 5.1 m below ground surface; borehole caved to 5.2 m below ground surface upon completion of drilling.

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 18

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 11, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590633, N: 4858259 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
	292.8	**GROUND SURFACE**				
0	292.6	200mm **TOPSOIL**		1A	SS	5
	0.2	**FILL**, silty sand, trace clay, trace gravel, trace rootlets, loose, dark brown, moist		1B		
	292.0					
	0.8	**SANDY SILT to SILT AND SAND**, trace gravel, trace clay, dilatant, compact to very dense, brown, wet		2	SS	16
1				3	SS	22
2				4	SS	52
3				5	SS	39
4		...silt, some sand, grey, dilatant		6	SS	31
	287.8					
5	5.0	Augered without sampling				
6	286.7					
	6.1	**END OF BOREHOLE**				

Elevation Scale (m): 292, 291, 290, 289, 288, 287

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)

Instrument Details: ▽ spoon wet

Unstabilized Water Level

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

Unstabilized water level measured at 2.4 m below ground surface; borehole caved to 2.7 m below ground surface upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 26, 2016	2.1	290.7

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 19

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 11, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

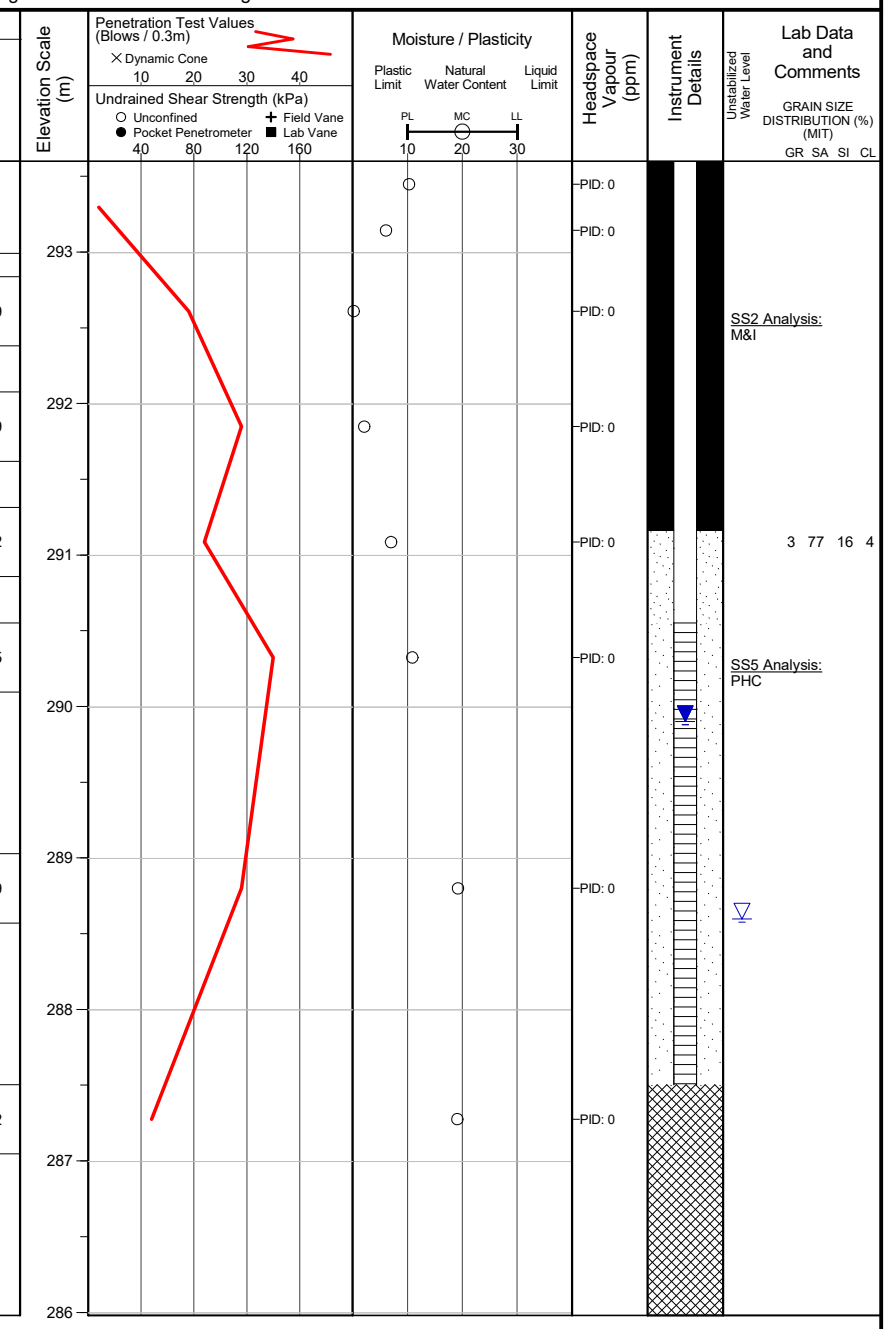
Position : E: 590700, N: 4858204 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
0	293.6	**GROUND SURFACE**				
	293.4	180mm **TOPSOIL**		1A	SS	2
	0.2	**FILL**, silty sand, trace clay, trace gravel, trace rootlets, very loose, dark brown, moist		1B		
	292.8					
1	0.8	**SAND**, trace to some silt, trace clay, trace gravel, compact, brown, damp to moist		2	SS	19
				3	SS	29
2				4	SS	22
3	290.6					
	3.0	**SANDY SILT to SILT AND SAND**, trace gravel, trace clay, dilatant, compact to dense, brown, wet		5	SS	35
4						
		...dilatant below		6	SS	29
5						
6				7	SS	12
	287.0					
	6.6	Augered without sampling.				
7	286.0					
	7.6	**END OF BOREHOLE**				

Unstabilized water level measured at 5.0 m below ground surface; borehole caved to 5.2 m below ground surface upon completion of drilling.

50 mm dia. monitoring well installed.



WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 26, 2016	3.7	289.9

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 20

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 7, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590683, N: 4858293 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
	294.7	**GROUND SURFACE**				
0	294.3	380mm **TOPSOIL**		1A	SS	11
	0.4	**FILL**, sandy silt, trace clay, trace gravel, trace rootlets, trace organics, loose to compact, dark brown, damp to moist		1B		
1				2	SS	6
	293.2					
	1.5	**SANDY SILT to SILT AND SAND**, trace gravel, trace clay, dilatant, loose to dense, brown, moist		3	SS	8
2						
				4	SS	46
3						
				5	SS	46
4	290.1					
	4.6	**SAND**, trace to some silt, trace clay, trace gravel, dense, brown, wet		6	SS	44
	289.7					
5	5.0	**END OF BOREHOLE**				

Elevation Scale (m): 294, 293, 292, 291, 290

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)

Instrument Details

Unstabilized Water Level

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

SS2 Analysis: M&I

Unstabilized water level measured at 4.5 m below ground surface; borehole was open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 26, 2016	4.4	290.3

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 21

Terraprobe

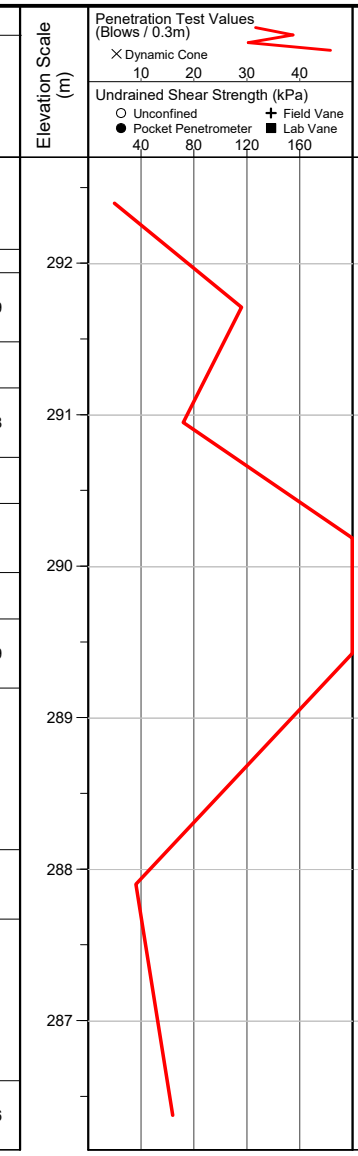
Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 7, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

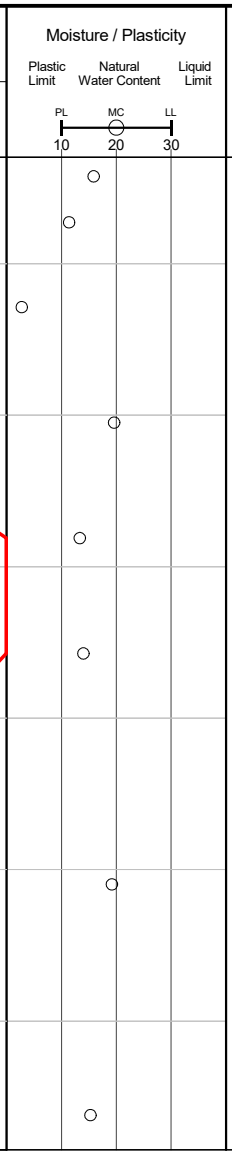
Position : E: 590711, N: 4858252 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
0	292.7	**GROUND SURFACE**				
	292.4	250mm **TOPSOIL**		1A	SS	5
	0.3	**FILL**, silty sand, trace clay, trace gravel, trace rootlets, loose, dark brown, moist		1B		
	291.9					
1	0.8	**SAND**, some silt, trace gravel, compact, brown, moist		2	SS	29
	291.2					
	1.5	**SANDY SILT to SILT AND SAND**, trace gravel, trace clay, dilatant, compact to very dense, brown, wet		3	SS	18
2				4	SS	51
3				5	SS	59
4		...silty sand, loose		6	SS	9
5						
6	286.6					
	6.1	**SAND**, trace to some silt, compact, brown, wet		7	SS	16
	286.1					
	6.6	**END OF BOREHOLE**				

Unstabilized water level measured at 3.3 m below ground surface; borehole caved to 3.4 m below ground surface upon completion of drilling.





Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT)

GR SA SI CL

SS2 Analysis: M&I

spoon wet

SS4 Analysis: PH

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 22

Terraprobe

Project No. : 1-16-0543-01	Client : Shacca Caledon Homes Inc.	Originated by : NB
Date started : October 11, 2016	Project : 16114 Airport Road	Compiled by : AS
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MMT

Position : E: 590719, N: 4858224 (UTM 17T) Elevation Datum : Geodetic

Rig type : CME 55, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
0	**293.9**	**GROUND SURFACE**				
	293.7	200mm **TOPSOIL**		1A	SS	7
	0.2	**FILL**, sandy silt, trace clay, trace gravel, trace rootlets, trace organics, dark brown, damp to moist		1B		
	293.1					
	0.8	**SAND**, trace to some silt, trace clay, trace gravel, compact, brown, moist		2	SS	13
1				3	SS	27
2				4	SS	22
3	290.9					
	3.0	**SANDY SILT to SILT AND SAND**, trace gravel, trace clay, dilatant, compact, brown, wet		5	SS	27
4		...very dense		6	SS	63
5	288.9					
	5.0	**END OF BOREHOLE**				

Elevation Scale (m): 293, 292, 291, 290, 289

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

Instrument Details: Unstabilized Water Level

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

SS2 Analysis: M&I

SS5 Analysis: PHC

Unstabilized water level measured at 4.5 m below ground surface; borehole was open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 26, 2016	3.9	290.0

file: 1-16-0543-01 bh logs.gpj

LOG OF BOREHOLE 1-19

Terraprobe

Project No. : 1-16-0543	Client : Shacca Caledon Holdings	Originated by : BR
Date started : October 2, 2019	Project : 16114 Airport Road	Compiled by : JW
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MS

Position : E: 590686, N: 4858381 (UTM 17T) Elevation Datum : Geodetic

Rig type : Geoprobe, track-mounted Drilling Method : Direct push

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	Unstabilized Water Level	Lab Data and Comments
0	294.5	**GROUND SURFACE**					294	Dynamic Cone 10 20 30 40; Unconfined / Pocket Penetrometer / Field Vane / Lab Vane 40 80 120 160	Plastic Limit / Natural Water Content / Liquid Limit PL MC LL 10 20 30	PID: 0			GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL
		50mm **TOPSOIL**											
		SILTY SAND to SAND, loose to compact, brown, moist		1A	DP								
1		...some gravel		1B	DP		293			PID: 0.1			DP1A Analysis: M&I, DUP1
2				2A	DP					PID: 0			
	292.1 2.4	**SILT**, trace sand, dense, brown, wet		2B	DP		292			PID: 0			
3				3	DP					PID: 0.1			DP3 Analysis: BTEX, PHC, DUP2
4				4	SS	30	291			PID: 0			
	289.2 5.3	**SILTY SAND**, very dense, brown, wet		5	SS	61	290						
5	288.6 5.9	**END OF BOREHOLE**					289			PID: 0			

Unstabilized water level measured at 4.6 m below ground surface; borehole caved to 5.3 m below ground surface upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 9, 2019	3.5	291.0

file: 1-16-0543 bh logs.gpj

LOG OF BOREHOLE 2-19

Terraprobe

Project No. : 1-16-0543	Client : Shacca Caledon Holdings	Originated by : BR
Date started : October 2, 2019	Project : 16114 Airport Road	Compiled by : JW
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MS

Position : E: 590746, N: 4858324 (UTM 17T) Elevation Datum : Geodetic

Rig type : Geoprobe, track-mounted Drilling Method : Direct push

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	Unstabilized Water Level	Lab Data and Comments
0	292.7	**GROUND SURFACE**					292	Dynamic Cone 10 20 30 40; Unconfined, Pocket Penetrometer, Field Vane, Lab Vane 40 80 120 160	Plastic Limit, Natural Water Content, Liquid Limit; PL MC LL 10 20 30	PID: 0.1			DP1A Analysis: M&I, .pH
		100mm **TOPSOIL**											
		SILTY SAND to SAND, some gravel, compact, brown, moist		1A	DP								
1				1B	DP					PID: 0			
		...trace gravel		2A	DP		291			PID: 0.1			
2													
		...wet		2B	DP		290			PID: 0			
3													
				3A	DP					PID: 0.1			DP3A Analysis: BTEX, PHC
4		...dense		3B	DP		289			PID: 0.1			
				4A	DP								
5	287.5						288			PID: 0			
	5.2	**SILT**, trace sand, dense, brown, wet		4B	DP					PID: 0.1			
	286.9						287						
	5.8	**END OF BOREHOLE**											

Unstabilized water level measured at 4.0 m below ground surface; borehole caved to 4.6 m below ground surface upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 9, 2019	2.7	290.1

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

file: 1-16-0543 bh logs.gpj

LOG OF BOREHOLE 3-19

Terraprobe

Project No. : 1-16-0543	Client : Shacca Caledon Holdings	Originated by : BR
Date started : October 1, 2019	Project : 16114 Airport Road	Compiled by : JW
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MS

Position : E: 590785, N: 4858237 (UTM 17T) Elevation Datum : Geodetic

Rig type : Geoprobe, track-mounted Drilling Method : Direct push

Depth Scale (m)	Elev / Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa)	Moisture / Plasticity	Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments
0	291.7	**GROUND SURFACE**					291			PID: 0		
	291.5 / 0.2	220mm **TOPSOIL**										
		SILTY SAND to SAND, some silt, loose to compact, brown, moist		1A	DP							DP1A Analysis: M&I
1				1B	DP					PID: 0		
							290					
2				2A	DP					PID: 0.1		
		...wet		2B	DP		289			PID: 0.1		DP2B Analysis: BTEX, PHC
3												
		...dense		3A	DP					PID: 0.1		
							288					
4				3B	DP					PID: 0		
							287					
				4A	DP					PID: 0		
5												
				4B	DP					PID: 0		DP4B Analysis: .pH, DUP1
	285.9 / 5.8	**END OF BOREHOLE**					286					

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

Unstabilized water level measured at 4.9 m below ground surface; borehole caved to 5.3 m below ground surface upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 9, 2019	2.9	288.8

file: 1-16-0543 bh logs.gpj

LOG OF BOREHOLE 4-19

Terraprobe

Project No. : 1-16-0543	Client : Shacca Caledon Holdings	Originated by : BR
Date started : October 1, 2019	Project : 16114 Airport Road	Compiled by : JW
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MS

Position : E: 590727, N: 4858171 (UTM 17T) Elevation Datum : Geodetic

Rig type : Geoprobe, track-mounted Drilling Method : Direct push

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	Unstabilized Water Level	Lab Data and Comments
0	293.0	**GROUND SURFACE**					293	Dynamic Cone 10 20 30 40; Unconfined / Pocket Penetrometer / Field Vane / Lab Vane 40 80 120 160	Plastic Limit / Natural Water Content / Liquid Limit; PL MC LL 10 20 30				GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL
		SILTY SAND to SAND, compact, brown, moist		1A	DP					PID: 4.1			DP1A Analysis: BTEX, PHC, DUP1
1				1B	DP		292			PID: 1.6			
2				2	DP		291			PID: 1.1			
				3	DP					PID: 0.4			
3		...trace gravel, dense, wet		4	DP		290			PID: 0.4		▽	DP4 Analysis: BTEX, PHC
4		...layer of gravel		5	DP		289			PID: 0.1			
	288.4 4.6	**SILT**, some sand, dense, grey, wet		6	DP					PID: 0.1			
5				7	SS		288			PID: 0.1			
	287.1 5.9												

END OF BOREHOLE

Unstabilized water level measured at 3.4 m below ground surface; borehole caved to 5.4 m below ground surface upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 9, 2019	3.4	289.6

file: 1-16-0543 bh logs.gpj

LOG OF BOREHOLE 5-19

Terraprobe

Project No. : 1-16-0543	Client : Shacca Caledon Holdings	Originated by : BR
Date started : October 1, 2019	Project : 16114 Airport Road	Compiled by : JW
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MS

Position : E: 590715, N: 4858185 (UTM 17T) Elevation Datum : Geodetic

Rig type : Geoprobe, track-mounted Drilling Method : Direct push

Depth Scale (m)	Elev / Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa)	Moisture / Plasticity	Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments
0	293.1 GROUND SURFACE	**SILTY SAND to SAND**, compact, brown, moist		1A	DP		293			PID: 0.7		DP1A Analysis: M&I
1				1B	DP		292			PID: 1.3		DP1B Analysis: BTEX, PHC, .pH
2				2A	DP		291			PID: 0.8		
				2B	DP					PID: 0.9		
3		...trace gravel		3A	DP		290			PID: 1		DP3A Analysis: BTEX, PHC
4		...gravelly, wet, dense, greyish brown		3B	DP		289			PID: 0.4		
5		...compact		4A	DP		288			PID: 0.3		
				4B	DP					PID: 0.1		
	287.3 5.8	**END OF BOREHOLE**										

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

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

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

Unstabilized Water Level

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

Unstabilized water level measured at 3.8 m below ground surface; borehole caved to 5.2 m below ground surface upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 9, 2019	3.4	289.7

file: 1-16-0543 bh logs.gpj

LOG OF BOREHOLE 6-19

Terraprobe

Project No. : 1-16-0543	Client : Shacca Caledon Holdings	Originated by : BR
Date started : October 1, 2019	Project : 16114 Airport Road	Compiled by : JW
Sheet No. : 1 of 1	Location : Caledon, Ontario	Checked by : MS

Position : E: 590713, N: 4858200 (UTM 17T) Elevation Datum : Geodetic

Rig type : Geoprobe, track-mounted Drilling Method : Direct push

Depth Scale (m)	Elev / Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa)	Moisture / Plasticity	Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments
0	**293.5**	**GROUND SURFACE**										
	293.3 / 0.2	200mm **TOPSOIL**										
		SILTY SAND to SAND, loose, brown, moist		1A	DP		293			PID: 0.4		
1		...compact		1B	DP					PID: 0.4		
				2A	DP		292			PID: 1.3		DP2A Analysis: BTEX, PHC
2		...wet		2B	DP		291			PID: 0.4		DP2B Analysis: BTEX, PHC
3		...dense		3A	DP		290			PID: 0.2		DP3A Analysis: .pH, DUP2
4		...gravelly		3B	DP		289			PID: 0.3		
5		...compact		4A	DP					PID: 0		
				4B	DP		288			PID: 0.1		
6	287.4 / 6.1											

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

END OF BOREHOLE

Unstabilized water level measured at 3.0 m below ground surface; borehole caved to 5.2 m below ground surface upon completion of drilling.

50 mm dia. monitoring well installed.

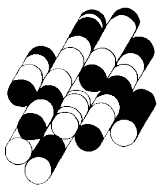
WATER LEVEL READINGS

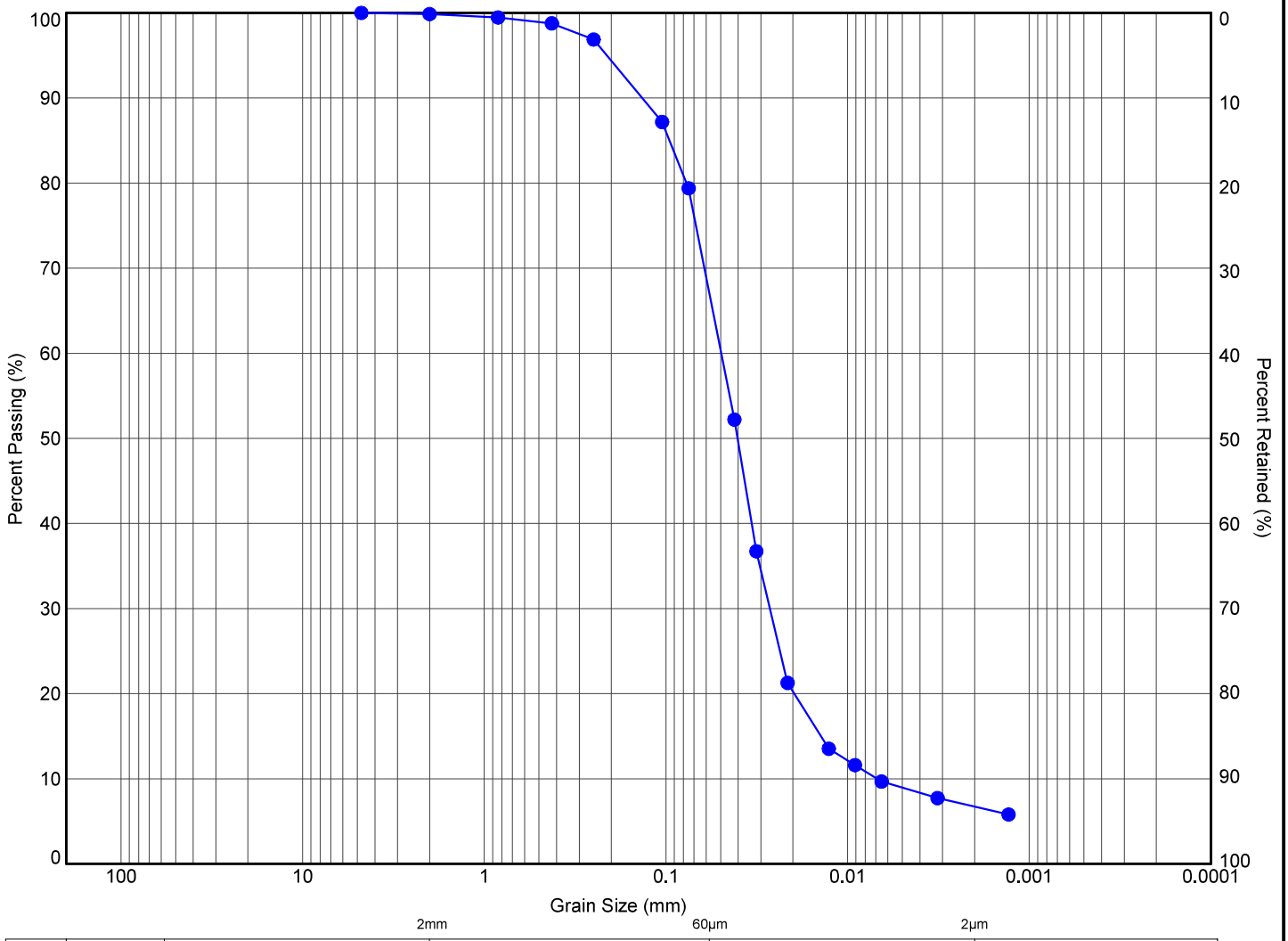
Date	Water Depth (m)	Elevation (m)
Oct 9, 2019	3.8	289.7

file: 1-16-0543 bh logs.gpj

APPENDIX F

TERRAPROBE INC.





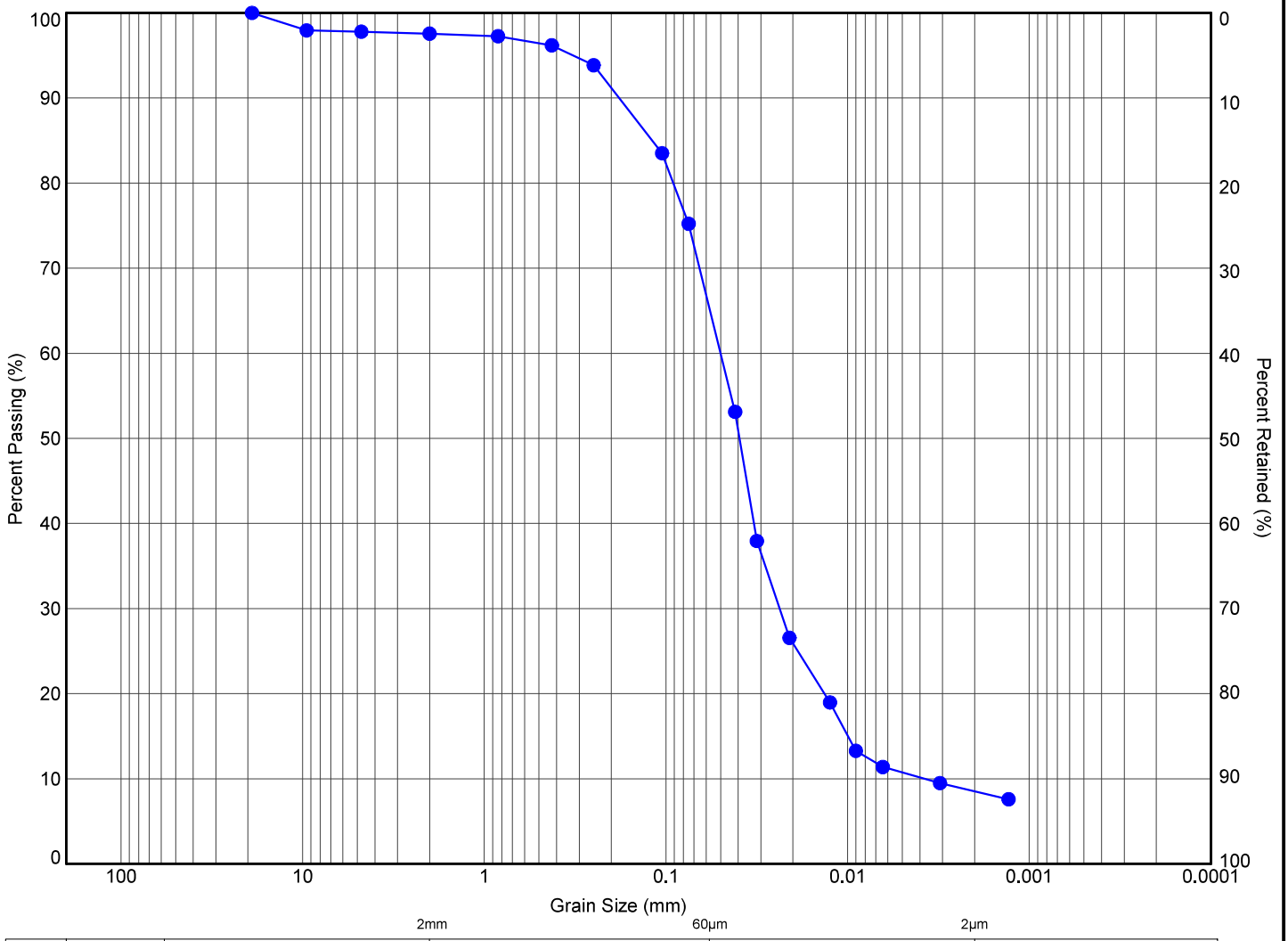
MIT SYSTEM

	Hole ID	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	*(Fines, %)*
●	4	SS2	1.0	290.3	0	31	62	7	

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

Title: **GRAIN SIZE DISTRIBUTION**
SANDY SILT, TRACE CLAY

File No.: **1-16-0543-01**



MIT SYSTEM

	Hole ID	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	*(Fines, %)*
●	**8**	SS5	3.3	289.9	2	31	58	9	

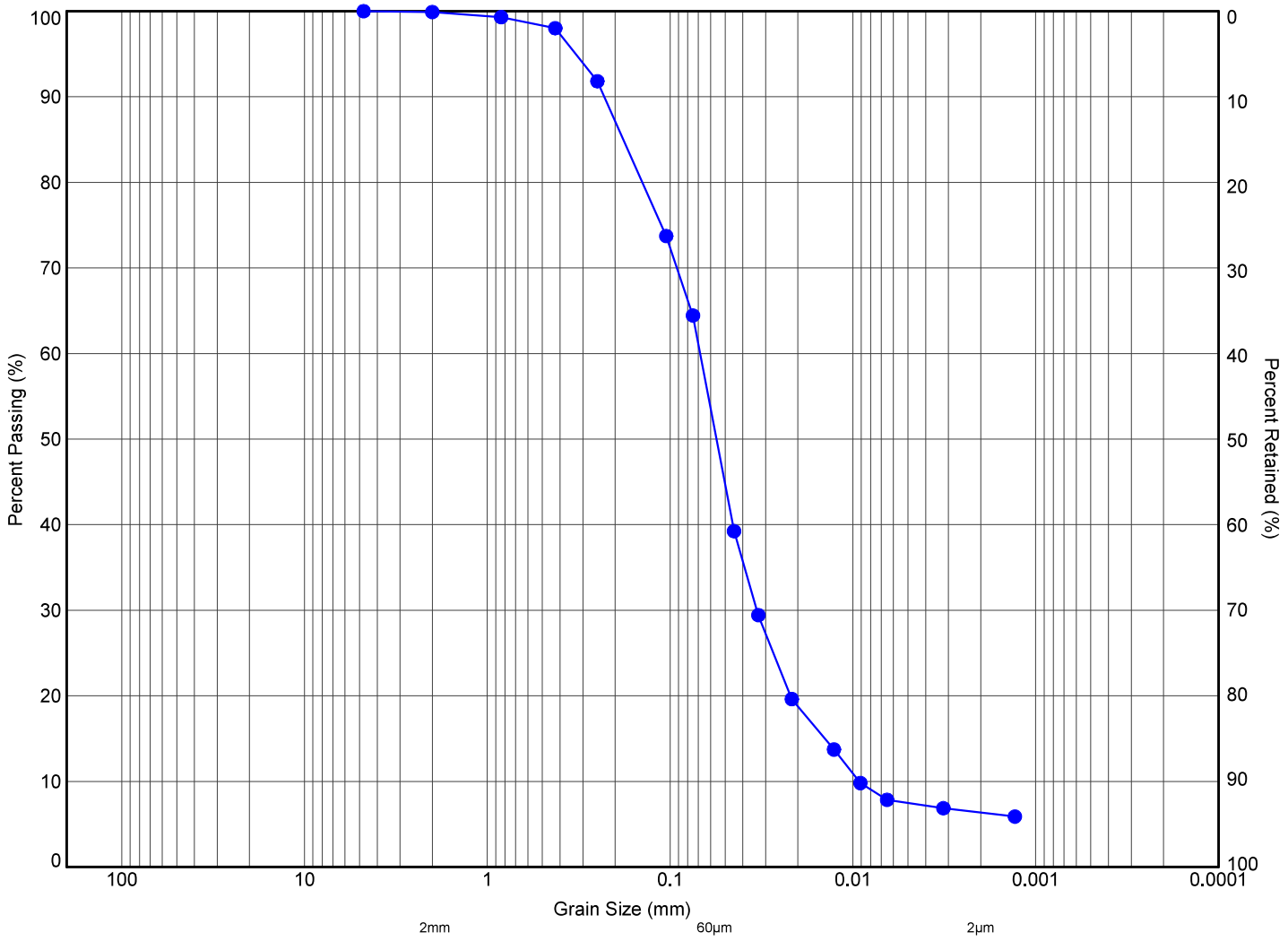
Terraprobe

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

Title:

GRAIN SIZE DISTRIBUTION
SANDY SILT, TRACE CLAY, TRACE GRAVEL

File No.: **1-16-0543-01**



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

MIT SYSTEM

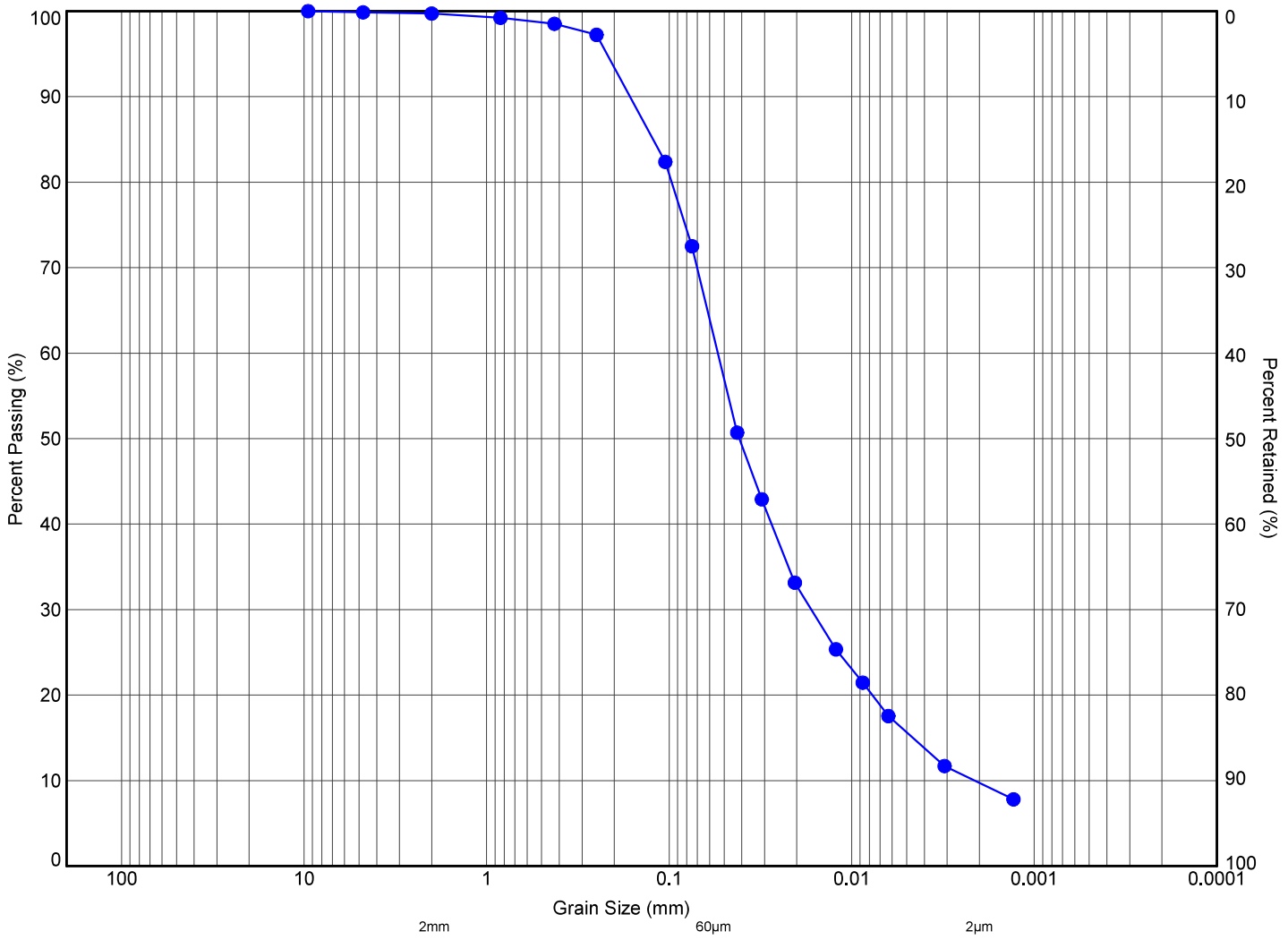
	Hole ID	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	*(Fines, %)*
●	**12**	SS3	1.8	292.7	0	47	47	6	

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

Title:

GRAIN SIZE DISTRIBUTION
SAND AND SILT, TRACE CLAY

File No.: **1-16-0543-01**



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

MIT SYSTEM

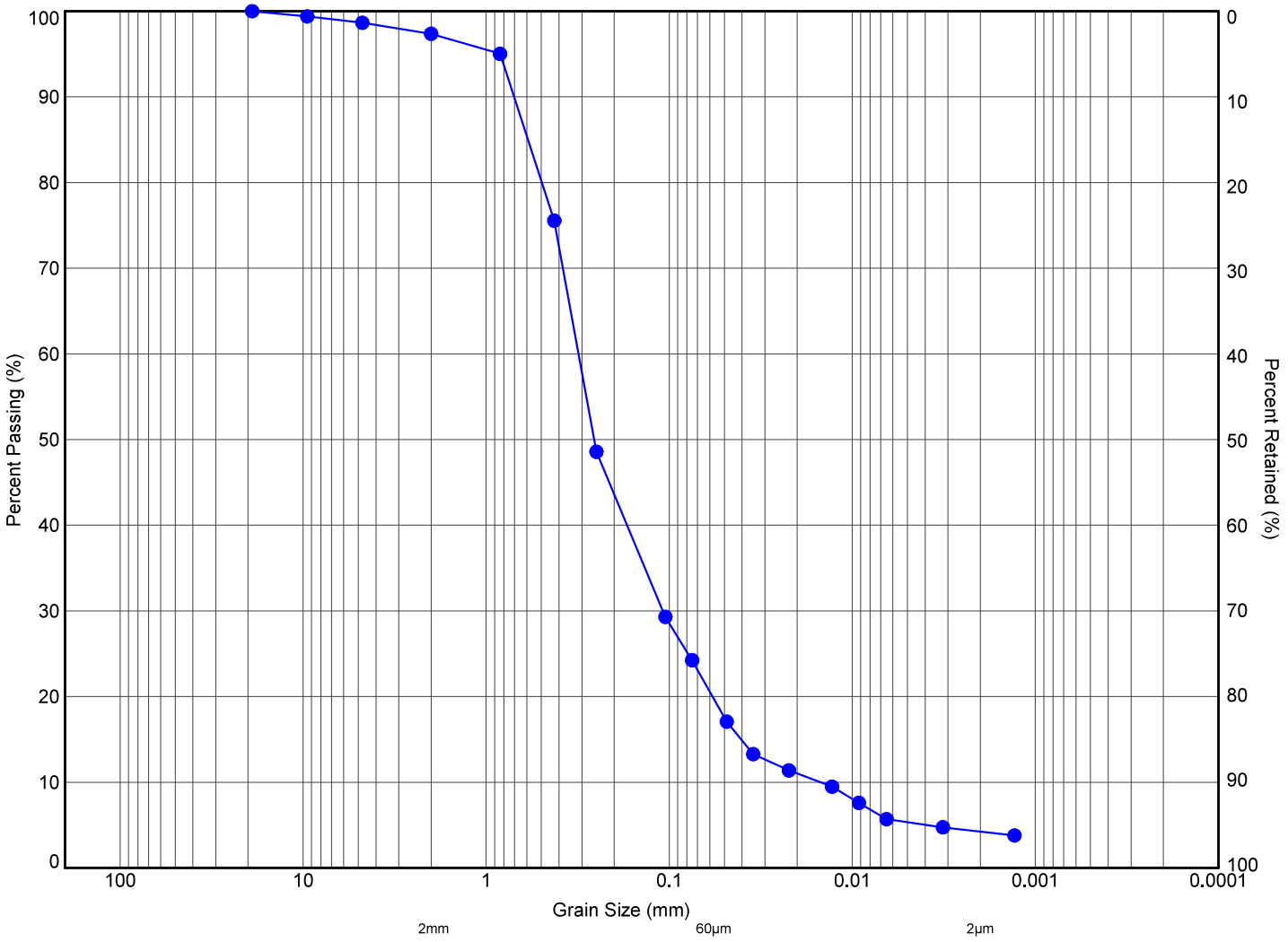
	Hole ID	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	*(Fines, %)*
●	**15**	SS3	1.8	292.0	0	36	54	10	

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

Title:

GRAIN SIZE DISTRIBUTION
SILT AND SAND, SOME CLAY

File No.: **1-16-0543-01**



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, %)*
●	**19**	SS4	2.5	291.1	3	77	16	4	

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

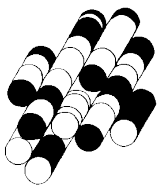
Title:

GRAIN SIZE DISTRIBUTION
SAND, SOME SILT, TRACE CLAY, TRACE GRAVEL

File No.: **1-16-0543-01**

APPENDIX G

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.
11 INDELL LANE
BRAMPTON, ON L6T3Y3
(905) 796-2650

ATTENTION TO: Muhammad Shahid

PROJECT: 1-16-0543-42

AGAT WORK ORDER: 16T147653

SOIL ANALYSIS REVIEWED BY: Mike Muneswar, BSc (Chem), Senior Inorganic Analyst

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Oct 18, 2016

PAGES (INCLUDING COVER): 7

VERSION*: 1

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

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

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: 16T147653

PROJECT: 1-16-0543-42

CLIENT NAME: TERRAPROBE INC.

ATTENTION TO: Muhammad Shahid

SAMPLING SITE:

SAMPLED BY:NB

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

DATE RECEIVED: 2016-10-12

DATE REPORTED: 2016-10-18

		SAMPLE DESCRIPTION:		BH4/SA2/2.5'	BH11/SA2/2.5'	BH12/SA2/2.5'	BH16/SA2/2.5'	BH19/SA2/2.5'	BH20/SA2/2.5'	BH22/SA2/2.5'	DUP 3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2016-10-05	2016-10-07	2016-10-07	2016-10-07	2016-10-11	2016-10-07	2016-10-11	2016-10-11
Parameter	Unit	G / S	RDL	7919569	7919573	7919574	7919575	7919576	7919577	7919578	7919592
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	2	3	2	1	<1	2	2	1
Barium	µg/g	220	2	16	34	28	17	6	27	18	12
Beryllium	µg/g	2.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	µg/g	36	5	<5	<5	<5	<5	<5	<5	<5	<5
Boron (Hot Water Soluble)	µg/g	NA	0.10	<0.10	0.16	0.15	<0.10	<0.10	0.24	<0.10	<0.10
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	2	7	16	10	8	4	10	9	6
Cobalt	µg/g	21	0.5	2.7	5.5	3.6	2.8	1.3	3.3	3.2	2.3
Copper	µg/g	92	1	6	12	9	6	3	7	7	6
Lead	µg/g	120	1	2	26	7	3	1	9	3	3
Molybdenum	µg/g	2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	µg/g	82	1	4	9	8	5	2	7	7	4
Selenium	µg/g	1.5	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Silver	µg/g	0.5	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	µg/g	1	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Uranium	µg/g	2.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vanadium	µg/g	86	1	13	23	17	15	8	18	16	11
Zinc	µg/g	290	5	13	39	29	14	7	24	14	10
Chromium VI	µg/g	0.66	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide	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	mS/cm	0.57	0.005	0.093	0.129	0.156	0.111	0.059	0.156	0.124	0.091
Sodium Adsorption Ratio	NA	2.4	NA	0.320	0.081	0.074	0.055	0.052	0.059	0.061	0.053
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.80	7.01	7.22	7.38	7.63	7.35	7.40	7.53

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T1 S RPI/ICC
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.

7919569-7919592 EC & SAR were 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.

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 16T147653

PROJECT: 1-16-0543-42

CLIENT NAME: TERRAPROBE INC.

ATTENTION TO: Muhammad Shahid

SAMPLING SITE:

SAMPLED BY:NB

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

DATE RECEIVED: 2016-10-12

DATE REPORTED: 2016-10-18

		SAMPLE DESCRIPTION:		BH21/SA4/7.5'	BH16/SA4/7.5'	DUP 2
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2016-10-07	2016-10-07	2016-10-07
Parameter	Unit	G / S	RDL	7919579	7919580	7919591
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.68	7.67	7.54

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T1 S RPI/ICC
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.

7919579-7919591 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 16T147653

PROJECT: 1-16-0543-42

CLIENT NAME: TERRAPROBE INC.

ATTENTION TO: Muhammad Shahid

SAMPLING SITE:

SAMPLED BY:NB

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

DATE RECEIVED: 2016-10-12

DATE REPORTED: 2016-10-18

		SAMPLE DESCRIPTION:		BH6/SA3/5'	BH19/SA5/10'	BH22/SA5/10'	DUP 1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2016-10-05	2016-10-11	2016-10-11	2016-10-05
Parameter	**Unit**	**G / S**	**RDL**	**7919581**	**7919583**	**7919586**	**7919588**
Benzene	µg/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	0.2	0.08	<0.08	<0.08	<0.08	<0.08
Ethylbenzene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Xylene Mixture	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g	25	5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA	NA
Moisture Content	%		0.1	14.0	10.2	13.5	14.9
Surrogate	**Unit**	**Acceptable Limits**					
Terphenyl	%	60-140		84	84	82	74

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T1 S RPI/ICC
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.

7919581-7919588 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Certified By: N Popnikolof

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Quality Assurance

CLIENT NAME: TERRAPROBE INC.

PROJECT: 1-16-0543-42

SAMPLING SITE:

AGAT WORK ORDER: 16T147653

ATTENTION TO: Muhammad Shahid

SAMPLED BY:NB

Soil Analysis

RPT Date: Oct 18, 2016			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	7919413		<0.8	<0.8	NA	< 0.8	105%	70%	130%	94%	80%	120%	94%	70%	130%
Arsenic	7919413		6	6	0.0%	< 1	109%	70%	130%	99%	80%	120%	99%	70%	130%
Barium	7919413		97	102	5.0%	< 2	99%	70%	130%	94%	80%	120%	85%	70%	130%
Beryllium	7919413		0.7	0.7	NA	< 0.5	93%	70%	130%	99%	80%	120%	107%	70%	130%
Boron	7919413		10	11	NA	< 5	76%	70%	130%	98%	80%	120%	106%	70%	130%
Boron (Hot Water Soluble)	7919397		0.30	0.29	NA	< 0.10	105%	60%	140%	97%	70%	130%	96%	60%	140%
Cadmium	7919413		<0.5	<0.5	NA	< 0.5	112%	70%	130%	100%	80%	120%	97%	70%	130%
Chromium	7919413		20	20	0.0%	< 2	96%	70%	130%	100%	80%	120%	102%	70%	130%
Cobalt	7919413		12.3	12.0	2.5%	< 0.5	98%	70%	130%	99%	80%	120%	97%	70%	130%
Copper	7919413		33	32	3.1%	< 1	98%	70%	130%	100%	80%	120%	93%	70%	130%
Lead	7919413		12	11	8.7%	< 1	106%	70%	130%	95%	80%	120%	94%	70%	130%
Molybdenum	7919413		<0.5	<0.5	NA	< 0.5	107%	70%	130%	101%	80%	120%	104%	70%	130%
Nickel	7919413		26	26	0.0%	< 1	101%	70%	130%	100%	80%	120%	100%	70%	130%
Selenium	7919413		<0.4	<0.4	NA	< 0.4	105%	70%	130%	97%	80%	120%	98%	70%	130%
Silver	7919413		<0.2	<0.2	NA	< 0.2	98%	70%	130%	104%	80%	120%	101%	70%	130%
Thallium	7919413		<0.4	<0.4	NA	< 0.4	100%	70%	130%	98%	80%	120%	99%	70%	130%
Uranium	7919413		0.7	0.7	NA	< 0.5	104%	70%	130%	97%	80%	120%	99%	70%	130%
Vanadium	7919413		26	26	0.0%	< 1	92%	70%	130%	95%	80%	120%	102%	70%	130%
Zinc	7919413		63	62	1.6%	< 5	102%	70%	130%	100%	80%	120%	100%	70%	130%
Chromium VI	7919402		<0.2	<0.2	NA	< 0.2	94%	70%	130%	101%	80%	120%	106%	70%	130%
Cyanide	7918151		<0.040	<0.040	NA	< 0.040	105%	70%	130%	107%	80%	120%	99%	70%	130%
Mercury	7919413		<0.10	<0.10	NA	< 0.10	100%	70%	130%	84%	80%	120%	84%	70%	130%
Electrical Conductivity	7924575		0.231	0.231	0.0%	< 0.005	99%	90%	110%	NA			NA		
Sodium Adsorption Ratio	7918054		9.09	9.12	0.3%	NA	NA			NA			NA		
pH, 2:1 CaCl2 Extraction	7919573	7919573	7.01	6.96	0.7%	NA	101%	80%	120%	NA			NA		

Comments: NA signifies Not Applicable.
Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Certified By:

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Quality Assurance

CLIENT NAME: TERRAPROBE INC.

AGAT WORK ORDER: 16T147653

PROJECT: 1-16-0543-42

ATTENTION TO: Muhammad Shahid

SAMPLING SITE:

SAMPLED BY:NB

Trace Organics Analysis

RPT Date: Oct 18, 2016			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	7919397		< 0.02	< 0.02	NA	< 0.02	82%	60%	130%	90%	60%	130%	85%	60%	130%
Toluene	7919397		< 0.08	< 0.08	NA	< 0.08	82%	60%	130%	92%	60%	130%	91%	60%	130%
Ethylbenzene	7919397		< 0.05	< 0.05	NA	< 0.05	80%	60%	130%	89%	60%	130%	90%	60%	130%
Xylene Mixture	7919397		< 0.05	< 0.05	NA	< 0.05	80%	60%	130%	90%	60%	130%	92%	60%	130%
F1 (C6 to C10)	7919397		< 5	< 5	NA	< 5	83%	60%	130%	96%	85%	115%	106%	70%	130%
F2 (C10 to C16)	7919413		< 10	< 10	NA	< 10	105%	60%	130%	92%	80%	120%	71%	70%	130%
F3 (C16 to C34)	7919413		< 50	< 50	NA	< 50	109%	60%	130%	89%	80%	120%	74%	70%	130%
F4 (C34 to C50)	7919413		< 50	< 50	NA	< 50	87%	60%	130%	82%	80%	120%	84%	70%	130%

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).performed with this batch.

Certified By: N Popowkoff

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Method Summary

CLIENT NAME: TERRAPROBE INC.

AGAT WORK ORDER: 16T147653

PROJECT: 1-16-0543-42

ATTENTION TO: Muhammad Shahid

SAMPLING SITE:

SAMPLED BY:NB

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Barium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Boron	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	EPA SW 846 6010C; MSA, Part 3, Ch.21	ICP/OES
Cadmium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Chromium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Cobalt	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Copper	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Lead	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Molybdenum	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Nickel	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Selenium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Silver	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Thallium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Uranium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Zinc	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Chromium VI	INOR-93-6029	SM 3500 B; MSA Part 3, Ch. 25	SPECTROPHOTOMETER
Cyanide	INOR-93-6052	MOE CN-3015 & E 3009 A;SM 4500 CN	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Electrical Conductivity	INOR-93-6036	McKeague 4.12, SM 2510 B	EC METER
Sodium Adsorption Ratio	INOR-93-6007	McKeague 4.12 & 3.26 & EPA SW-846 6010B	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6031	MSA part 3 & SM 4500-H+ B	PH METER
pH, 2:1 CaCl2 Extraction	INOR-93-6031	MSA part 3 & SM 4500-H+ B	pH METER
Trace Organics Analysis			
Benzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Toluene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Ethylbenzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Xylene Mixture	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
F1 (C6 to C10)	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
F2 (C10 to C16)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
F3 (C16 to C34)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
F4 (C34 to C50)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009		GC/FID

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CLIENT NAME: TERRAPROBE INC.
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(905) 796-2650

ATTENTION TO: Jessie Wu

PROJECT: 1-16-0543-42.2

AGAT WORK ORDER: 19T526805

TRACE ORGANICS REVIEWED BY: Navdeep Kaur Kansera, Senior Lab Technician

DATE REPORTED: Oct 09, 2019

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

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

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Certificate of Analysis

AGAT WORK ORDER: 19T526805

PROJECT: 1-16-0543-42.2

CLIENT NAME: TERRAPROBE INC.

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2019-10-04

DATE REPORTED: 2019-10-09

		SAMPLE DESCRIPTION:		BH 4-19/CS #1A	BH 4-19/CS #4	BH 5-19/CS #1B	BH 5-19/CS #3A	BH 6-19/CS #2A	BH 6-19/CS #2B	Dup #1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2019-10-01	2019-10-01	2019-10-01	2019-10-01	2019-10-01	2019-10-01	2019-10-01
Parameter	Unit	G / S	RDL	588162	588163	588164	588165	588166	588167	588168
Benzene	µg/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene Mixture	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g	25	5	<5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	6.6	7.6	1.6	8.1	2.3	12.5	7.6
Surrogate	Unit	Acceptable Limits								
Terphenyl	%	60-140		108	100	101	96	100	75	88

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.

588162-588168 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
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 with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Navdeep Kansera

AGAT Laboratories

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Quality Assurance

CLIENT NAME: TERRAPROBE INC.

AGAT WORK ORDER: 19T526805

PROJECT: 1-16-0543-42.2

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 09, 2019			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	588168	588168	< 0.02	< 0.02	NA	< 0.02	101%	60%	130%	75%	60%	130%	75%	60%	130%
Toluene	588168	588168	< 0.05	< 0.05	NA	< 0.05	96%	60%	130%	81%	60%	130%	76%	60%	130%
Ethylbenzene	588168	588168	< 0.05	< 0.05	NA	< 0.05	99%	60%	130%	90%	60%	130%	74%	60%	130%
Xylene Mixture	588168	588168	< 0.05	< 0.05	NA	< 0.05	107%	60%	130%	97%	60%	130%	88%	60%	130%
F1 (C6 to C10)	588168	588168	< 5	< 5	NA	< 5	75%	60%	130%	96%	85%	115%	95%	70%	130%
F2 (C10 to C16)	580697		< 10	< 10	NA	< 10	83%	60%	130%	90%	80%	120%	74%	70%	130%
F3 (C16 to C34)	580697		< 50	< 50	NA	< 50	85%	60%	130%	97%	80%	120%	80%	70%	130%
F4 (C34 to C50)	580697		< 50	< 50	NA	< 50	95%	60%	130%	107%	80%	120%	98%	70%	130%

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: Navdeep Kansera

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: 19T526805

PROJECT: 1-16-0543-42.2

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5009	EPA SW-846 5035 & 8260D	P&T GC/MS
Toluene	VOL-91-5009	EPA SW-846 5035 & 8260D	P&T GC/MS
Ethylbenzene	VOL-91-5009	EPA SW-846 5035 & 8260D	P&T GC/MS
Xylene Mixture	VOL-91-5009	EPA SW-846 5035 & 8260D	P&T GC/MS
F1 (C6 to C10)	VOL-91-5009	CCME Tier 1 Method	P&T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	CCME Tier 1 Method	P&T GC/FID
F2 (C10 to C16)	VOL-91-5009	CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009		GC/FID

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 #: 19T526805
Cooler Quantity: Bag
Arrival Temperatures: 4.8 | 4.5 | 4.7 / 3.5 | 3.3 | 3
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes:

Report Information:
Company: Terraprobe Inc.
Contact: Jessie Wu
Address: Brampton ON.
Phone: Fax:
Reports to be sent to:
1. Email: jwu@terraprobe.ca.
2. Email:

Project Information:
Project: 1-16-0543-42.2
Site Location: 16114 Airport Rd.
Sampled By: B. Racher
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

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

Regulatory Requirements:
☐ No Regulatory Requirement
(Please check all applicable boxes)

☑ Regulation 153/04
Table 1 (Indicate One)
☐ Ind/Com
☑ Res/Park
☐ Agriculture
Soil Texture (Check One)
☑ Coarse
☐ Fine

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

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

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

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

Turnaround Time (TAT) Required:
Regular TAT ☑ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply):
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CPM

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	O. Reg 153: Metals and Inorganics	All Metals ☐ 153 Metals (excl. Hydrides)	Hydride Metals ☐ 153 Metals (incl. Hydrides)	ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ EC ☐ FOC ☐ Hg ☐ pH ☐ SAR	Full Metals Scan	Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2	Volatiles: ☐ VOC ☑ BTEX ☐ THM	PHCs F1 - F4	ABNs	PAHs	PCBs: ☐ Total ☐ Aroclors	Organochlorine Pesticides	TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Sewer Use							Potentially Hazardous or High Concentration (Y/N)
BH 4/CS#1A	OCT 1/19		2	S										X	X													
BH 4/CS#4	↓		↓	↓										X	X													
BH 5/CS #1B														X	X													
BH 5/CS #3A														X	X													
BH 6/CS #2A														X	X													
BH 6/CS #2B														X	X													
DUP #1	↓		↓	↓										X	X													

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Bob Racher R Racher.	Oct 2/19	1400 hrs		Oct 4/19	7:54
	Oct 4/19	3:31			

Page 1 of 1
No: T 094810

Document ID: DIV-78-1511.016

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

Date Issued: May 23, 2019

AGAT Laboratories

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

CLIENT NAME: TERRAPROBE INC.
11 INDELL LANE
BRAMPTON, ON L6T3Y3
(905) 796-2650

ATTENTION TO: Jessie Wu

PROJECT: 1-16-0543-42.2

AGAT WORK ORDER: 19T528822

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

DATE REPORTED: Oct 16, 2019

PAGES (INCLUDING COVER): 5

VERSION*: 2

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

*NOTES

VERSION 2:Revised report issued October 17, 2019.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 19T528822

PROJECT: 1-16-0543-42.2

CLIENT NAME: TERRAPROBE INC.

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2019-10-09

DATE REPORTED: 2019-10-16

				SAMPLE DESCRIPTION:	BH5-19 CS1B	BH6-19 CS# 3A	DUP2
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2019-10-01	2019-10-01	2019-10-01
Parameter	Unit	G / S	RDL		604281	604282	604283
pH, 2:1 CaCl2 Extraction	pH Units		NA		7.92	8.00	7.89

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

604281-604283 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Divine Basily

AGAT Laboratories

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

Quality Assurance

CLIENT NAME: TERRAPROBE INC.

AGAT WORK ORDER: 19T528822

PROJECT: 1-16-0543-42.2

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

Soil Analysis

RPT Date: Oct 16, 2019			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - ORPs (Soil)															
pH, 2:1 CaCl2 Extraction	608229		11.4	11.4	0.3%	NA	100%	90%	110%						

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

Certified By: Nivine Basily

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

Method Summary

CLIENT NAME: TERRAPROBE INC.

AGAT WORK ORDER: 19T528822

PROJECT: 1-16-0543-42.2

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
pH, 2:1 CaCl2 Extraction	INOR-93-6031	MSA part 3 & SM 4500-H+ B	pH METER

AGAT Laboratories

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

Chain of Custody Record

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

Laboratory Use Only
Work Order #: 19T528892 (2)

Cooler Quantity:
Arrival Temperatures: 6.3 | 6.1 | 5.9
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: ice

Report Information:
Company: Terraprobe
Contact: Jessie Wu
Address: 11 Indell Lane, Brampton
Phone: 905-796-2650
Reports to be sent to:
1. Email: jwu@terraprobe.ca
2. Email:

Regulatory Requirements: ☐ No Regulatory Requirement
(Please check all applicable boxes)

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

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

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

Turnaround Time (TAT) Required:
Regular TAT ☑ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply): ___
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CPM

Project Information:
Project: Terraprobe 1-16-0543-42.2
Site Location:
Sampled By:
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:
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 (Y/N)	O. Reg 153: Metals and Inorganics (☐ All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals ☐ 153 Metals (Incl. Hydrides))	O. Reg 153: ORPs: ☐ B-HWS ☐ Cl⁻ ☐ CN ☐ Cr^{6+} ☐ EC ☐ FOC ☐ Hg ☐ pH ☐ SAR	Full Metals Scan	Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_2+NO_3	Volatiles: ☐ VOC ☐ BTEX ☐ THM	PHCs F1 - F4	ABNs	PAHs	PCBs: ☐ Total ☐ Aroclors	Organochlorine Pesticides	TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Sewer Use						Potentially Hazardous or High Concentration (Y/N)
BH5 CS1B	OCT 7/19		1	SOIL																Ph only					
BH6 CS#3A	↓		↓	↓																↓					
Dup2																				↓					

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Bob Rocher R.Rocher	OCT 9/19	16:45	Simi	19/10/	4:45

Page 1 of 1

N°: T 089824

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.
11 INDELL LANE
BRAMPTON, ON L6T3Y3
(905) 796-2650

ATTENTION TO: Jessie Wu

PROJECT: 1-16-0543-42.1

AGAT WORK ORDER: 19T528815

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

DATE REPORTED: Oct 16, 2019

PAGES (INCLUDING COVER): 5

VERSION*: 2

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

*NOTES

VERSION 2:Revised report issued October 17, 2019.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 19T528815

PROJECT: 1-16-0543-42.1

CLIENT NAME: TERRAPROBE INC.

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2019-10-09

DATE REPORTED: 2019-10-16

SAMPLE DESCRIPTION:				BH2-19 CS#1A	BH3-19 CS4B	DUP 1
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2019-10-02	2019-10-01	2019-10-01
Parameter	Unit	G / S	RDL	604301	604302	604303
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.99	8.07	8.03

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

604301-604303 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Divine Basily

AGAT Laboratories

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

Quality Assurance

CLIENT NAME: TERRAPROBE INC.

AGAT WORK ORDER: 19T528815

PROJECT: 1-16-0543-42.1

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

Soil Analysis

RPT Date: Oct 16, 2019			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - ORPs (Soil)															
pH, 2:1 CaCl2 Extraction	608229		11.4	11.4	0.3%	NA	100%	90%	110%						

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

Certified By: Divine Basily

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: 19T528815

PROJECT: 1-16-0543-42.1

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
pH, 2:1 CaCl2 Extraction	INOR-93-6031	MSA part 3 & SM 4500-H+ B	pH METER

AGAT Laboratories

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

Chain of Custody Record

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

Laboratory Use Only
Work Order #: 19T528815

Cooler Quantity:
Arrival Temperatures: 6.3 | 6.1 | 5.9
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: on ice

Report Information:
Company: Terraprobe
Contact: Jessie Wu
Address: 11 Indell Lane
Brampton
Phone: 905-796-2650 Fax:
Reports to be sent to:
1. Email: jwu@terraprobe.ca
2. Email:

Regulatory Requirements: ☐ No Regulatory Requirement
(Please check all applicable boxes)

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

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

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

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

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

Turnaround Time (TAT) Required:
Regular TAT ☑ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply):
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CPM

Project Information:
Project: 1-16-0543-42-1
Site Location:
Sampled By:
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:
Bill To Same: Yes ☒ No ☐
Company: Terraprobe
Contact: Jessie Wu
Address: 11 Indell Lane Brampton
Email: lrossi@terraprobe.ca
jwu@terraprobe.ca

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N
BH2 CS#1A	Oct 7/19		1	Soil		
BH3-CS4B	↓		↓	↓		
Dup 1	↓		↓	↓		

Field Filtered - Metals, Hg, CrVI

O. Reg 153
- Metals and Inorganics ☐ All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals ☐ 153 Metals (incl. Hydrides)
- ORPs: ☐ B-HWS ☐ Cl⁻ ☐ CN ☐ Cr^{6+} ☐ EC ☐ FOC ☐ Hg ☐ pH ☐ SAR
- Full Metals Scan
- Regulation/Custom Metals
- Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2
- Volatiles: ☐ VOC ☐ BTEX ☐ THM
- PHCs F1 - F4
- ABNs
- PAHs
- PCBs: ☐ Total ☐ Aroclors
- Organochlorine Pesticides
- TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs
- Sewer Use
- AC ✓ ✓ ✓
- Potentially Hazardous or High Concentration (Y/N)

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Bob Rachel R Rachel.	Oct 7/19	16:45	Simin	19/10/9	4:45
Samples Relinquished By (Print Name and Sign):	Date	Time	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

Page 1 of 1

N°: T 089823

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

AGAT Laboratories

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

CLIENT NAME: TERRAPROBE INC.
11 INDELL LANE
BRAMPTON, ON L6T3Y3
(905) 796-2650

ATTENTION TO: Jessie Wu

PROJECT: 1-16-0543-42.1

AGAT WORK ORDER: 19T526103

SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Supervisor

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

DATE REPORTED: Oct 08, 2019

PAGES (INCLUDING COVER): 7

VERSION*: 1

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

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

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

Certificate of Analysis

AGAT WORK ORDER: 19T526103

PROJECT: 1-16-0543-42.1

CLIENT NAME: TERRAPROBE INC.

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2019-10-03

DATE REPORTED: 2019-10-08

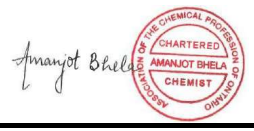
SAMPLE DESCRIPTION:				BH1-19/CS#1A	BH2-19/CS#1A	BH3-19/CS#1A	DUP #1
SAMPLE TYPE:				Soil	Soil	Soil	Soil
DATE SAMPLED:				2019-10-02	2019-10-02	2019-10-01	2019-10-02
Parameter	Unit	G / S	RDL	584025	584027	584029	584031
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	2	1	1	2
Barium	µg/g	220	2	48	27	23	48
Beryllium	µg/g	2.5	0.5	<0.5	<0.5	<0.5	<0.5
Boron	µg/g	36	5	<5	<5	<5	<5
Boron (Hot Water Soluble)	µg/g	NA	0.10	0.16	0.14	0.17	0.16
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	70	2	11	8	9	11
Cobalt	µg/g	21	0.5	3.8	2.6	3.0	3.7
Copper	µg/g	92	1	8	7	3	10
Lead	µg/g	120	1	9	18	4	10
Molybdenum	µg/g	2	0.5	<0.5	<0.5	<0.5	<0.5
Nickel	µg/g	82	1	7	5	5	7
Selenium	µg/g	1.5	0.4	<0.4	<0.4	<0.4	<0.4
Silver	µg/g	0.5	0.2	<0.2	<0.2	<0.2	<0.2
Thallium	µg/g	1	0.4	<0.4	<0.4	<0.4	<0.4
Uranium	µg/g	2.5	0.5	<0.5	<0.5	<0.5	<0.5
Vanadium	µg/g	86	1	20	16	18	19
Zinc	µg/g	290	5	30	22	13	31
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2	<0.2	<0.2
Cyanide	µg/g	0.051	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
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.52	7.43	7.20	7.45

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T1 S RPI/ICC
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.

584025-584031 pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 19T526103

PROJECT: 1-16-0543-42.1

CLIENT NAME: TERRAPROBE INC.

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2019-10-03

DATE REPORTED: 2019-10-08

		SAMPLE DESCRIPTION:		BH1-19/CS#3	BH2-19/CS#3A	BH3-19/CS#2B	DUP #2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2019-10-02	2019-10-02	2019-10-01	2019-10-02
Parameter	Unit	G / S	RDL	584026	584028	584030	584032
Benzene	µg/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	0.2	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Xylene Mixture	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g	25	5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA	NA
Moisture Content	%		0.1	17.6	15.6	20.2	17.0
Surrogate	Unit	Acceptable Limits					
Terphenyl	%	60-140		113	100	104	74

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T1 S RPI/ICC
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.

584026-584032 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
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 with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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Quality Assurance

CLIENT NAME: TERRAPROBE INC.
PROJECT: 1-16-0543-42.1
SAMPLING SITE:

AGAT WORK ORDER: 19T526103
ATTENTION TO: Jessie Wu
SAMPLED BY:

Soil Analysis

RPT Date: Oct 08, 2019			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	579757		<0.8	<0.8	NA	< 0.8	97%	70%	130%	94%	80%	120%	92%	70%	130%
Arsenic	579757		2	2	NA	< 1	104%	70%	130%	99%	80%	120%	106%	70%	130%
Barium	579757		18	18	0.0%	< 2	99%	70%	130%	97%	80%	120%	105%	70%	130%
Beryllium	579757		<0.5	<0.5	NA	< 0.5	85%	70%	130%	111%	80%	120%	114%	70%	130%
Boron	579757		5	<5	NA	< 5	71%	70%	130%	110%	80%	120%	106%	70%	130%
Boron (Hot Water Soluble)	584025	584025	0.16	0.16	NA	< 0.10	105%	60%	140%	102%	70%	130%	99%	60%	140%
Cadmium	579757		<0.5	<0.5	NA	< 0.5	106%	70%	130%	103%	80%	120%	106%	70%	130%
Chromium	579757		7	7	NA	< 2	91%	70%	130%	106%	80%	120%	107%	70%	130%
Cobalt	579757		2.5	2.5	0.0%	< 0.5	89%	70%	130%	103%	80%	120%	103%	70%	130%
Copper	579757		8	8	0.0%	< 1	87%	70%	130%	102%	80%	120%	97%	70%	130%
Lead	579757		10	10	0.0%	< 1	99%	70%	130%	98%	80%	120%	96%	70%	130%
Molybdenum	579757		<0.5	<0.5	NA	< 0.5	103%	70%	130%	104%	80%	120%	107%	70%	130%
Nickel	579757		5	6	18.2%	< 1	92%	70%	130%	104%	80%	120%	101%	70%	130%
Selenium	579757		<0.4	<0.4	NA	< 0.4	100%	70%	130%	98%	80%	120%	107%	70%	130%
Silver	579757		<0.2	<0.2	NA	< 0.2	104%	70%	130%	100%	80%	120%	96%	70%	130%
Thallium	579757		<0.4	<0.4	NA	< 0.4	89%	70%	130%	99%	80%	120%	99%	70%	130%
Uranium	579757		<0.5	<0.5	NA	< 0.5	97%	70%	130%	97%	80%	120%	102%	70%	130%
Vanadium	579757		12	12	0.0%	< 1	93%	70%	130%	103%	80%	120%	107%	70%	130%
Zinc	579757		46	45	2.2%	< 5	94%	70%	130%	100%	80%	120%	108%	70%	130%
Chromium, Hexavalent	584482		< 0.2	< 0.2	NA	< 0.2	98%	80%	120%	86%	70%	130%	75%	70%	130%
Cyanide	583091		<0.040	<0.040	NA	< 0.040	103%	70%	130%	94%	80%	120%	100%	70%	130%
Mercury	579757		<0.10	<0.10	NA	< 0.10	102%	70%	130%	105%	80%	120%	106%	70%	130%
pH, 2:1 CaCl2 Extraction	584482		7.50	7.53	0.4%	NA	100%	80%	120%	NA			NA		

Comments: NA signifies Not Applicable.
Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

Certified By:

Amanjot Bhela

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
AMANJOT BHELA
CHEMIST

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Quality Assurance

CLIENT NAME: TERRAPROBE INC.

AGAT WORK ORDER: 19T526103

PROJECT: 1-16-0543-42.1

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 08, 2019			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	587510		< 0.02	< 0.02	NA	< 0.02	98%	60%	130%	77%	60%	130%	71%	60%	130%
Toluene	587510		< 0.05	< 0.05	NA	< 0.05	92%	60%	130%	74%	60%	130%	86%	60%	130%
Ethylbenzene	587510		< 0.05	< 0.05	NA	< 0.05	95%	60%	130%	71%	60%	130%	91%	60%	130%
Xylene Mixture	587510		< 0.05	< 0.05	NA	< 0.05	104%	60%	130%	86%	60%	130%	98%	60%	130%
F1 (C6 to C10)	587510		< 5	< 5	NA	< 5	89%	60%	130%	108%	85%	115%	107%	70%	130%
F2 (C10 to C16)	569843		< 10	< 10	NA	< 10	102%	60%	130%	89%	80%	120%	77%	70%	130%
F3 (C16 to C34)	569843		< 50	< 50	NA	< 50	104%	60%	130%	104%	80%	120%	80%	70%	130%
F4 (C34 to C50)	569843		< 50	< 50	NA	< 50	110%	60%	130%	96%	80%	120%	107%	70%	130%

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

Certified By:

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Method Summary

CLIENT NAME: TERRAPROBE INC.

AGAT WORK ORDER: 19T526103

PROJECT: 1-16-0543-42.1

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Barium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Boron	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	EPA SW 846 6010C; MSA, Part 3, Ch.21	ICP/OES
Cadmium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Chromium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Cobalt	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Copper	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Lead	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Molybdenum	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Nickel	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Selenium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Silver	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Thallium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Uranium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Zinc	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Chromium, Hexavalent	INOR-93-6068	SW 846 Method 3060A; Method 7196A	SPECTROPHOTOMETER
Cyanide	INOR-93-6052	MOE CN-3015 & E 3009 A;SM 4500 CN	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
pH, 2:1 CaCl2 Extraction	INOR-93-6031	MSA part 3 & SM 4500-H+ B	PH METER
Trace Organics Analysis			
Benzene	VOL-91-5009	EPA SW-846 5035 & 8260D	P&T GC/MS
Toluene	VOL-91-5009	EPA SW-846 5035 & 8260D	P&T GC/MS
Ethylbenzene	VOL-91-5009	EPA SW-846 5035 & 8260D	P&T GC/MS
Xylene Mixture	VOL-91-5009	EPA SW-846 5035 & 8260D	P&T GC/MS
F1 (C6 to C10)	VOL-91-5009	CCME Tier 1 Method	P&T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	CCME Tier 1 Method	P&T GC/FID
F2 (C10 to C16)	VOL-91-5009	CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009		GC/FID

AGAT Laboratories

1844

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Chain of Custody Record

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

Laboratory Use Only
Work Order #: 19T526103
Cooler Quantity:
Arrival Temperatures: 6.9 | 7.1 | 7.1 / 8.7 | 6.9 | 6.9
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes:

Report Information:
Company: Terraprobe Inc.
Contact: Jessie Wu
Address: Brampton ON.
Phone: Fax:
Reports to be sent to:
1. Email: jwu@terraprobe.ca
2. Email:

Regulatory Requirements: ☐ No Regulatory Requirement
(Please check all applicable boxes)

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

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

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

Turnaround Time (TAT) Required:
Regular TAT ☐ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply): ____
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CPM

Project Information:
Project: 1-16-0543-42.1
Site Location: 16114 Airport Rd.
Sampled By: B. Racher
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

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

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y/N
✓ BH 1 / CS #1A	Oct 2/19		1	SOIL	NO EC or SAR	
✓ BH 1 / CS #3	"		2	"		
✓ BH 2 / CS #1A	"		1	"	~ " ~	
✓ BH 2 / CS #3A	"		2	"		
BH 3 / CS #1A	Oct 1/19		1	"	~ " ~	
BH 3 / CS #2B	"		2	"		
✓ DUP #1	Oct 2/19		1	"	~ " ~	
✓ DUP #2	"		2	"		

Field Filtered - Metals, Hg, CrVI

O. Reg 153
- Metals and Inorganics: ☐ All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals ☐ 153 Metals (incl. Hydrides)
- ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ Cr^{6+} ☐ EC ☐ FOC ☐ Hg ☐ pH ☐ SAR
- Full Metals Scan
- Regulation/Custom Metals
- Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2
- Volatiles: ☐ VOC ● BTEX ☐ THM
- PHCs F1 - F4
- ABNs
- PAHs
- PCBs: ☐ Total ☐ Aroclors
- Organochlorine Pesticides
- TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs
- Sewer Use
- Potentially Hazardous or High Concentration (Y/N)

Sample Identification	Metals and Inorganics	Volatiles	PHCs F1 - F4
✓ BH 1 / CS #1A	X	✓	✓
✓ BH 1 / CS #3		✓	✓
✓ BH 2 / CS #1A	X		
✓ BH 2 / CS #3A		✓	✓
BH 3 / CS #1A	X		
BH 3 / CS #2B		✓	✓
✓ DUP #1	X		
✓ DUP #2		✓	✓

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Bob Racher	Oct 2/19	1400 hrs	2019/10/03		12:30
2019/10/03		1:45			

Page 1 of 1
N°: T095377

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CLIENT NAME: TERRAPROBE INC.
11 INDELL LANE
BRAMPTON, ON L6T3Y3
(905) 796-2650

ATTENTION TO: Muhammad Shahid

PROJECT: 1-16-0543-42

AGAT WORK ORDER: 16T152848

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

DATE REPORTED: Oct 31, 2016

PAGES (INCLUDING COVER): 4

VERSION*: 1

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

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 16T152848

PROJECT: 1-16-0543-42

CLIENT NAME: TERRAPROBE INC.

ATTENTION TO: Muhammad Shahid

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2016-10-26

DATE REPORTED: 2016-10-31

		SAMPLE DESCRIPTION:		MW6	MW19	MW22	DUP
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2016-10-26	2016-10-26	2016-10-26	2016-10-26
Parameter	Unit	G / S	RDL	7957084	7957108	7957113	7957123
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10
Xylene Mixture	µg/L	72	0.20	<0.20	<0.20	<0.20	<0.20
F1 (C6-C10)	µg/L	420	25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	NA	NA	NA
Surrogate	Unit	Acceptable Limits					
Terphenyl	%	60-140		108	116	98	105

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.

7957084-7957123 The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated 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 contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Certified By:

AGAT Laboratories

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Quality Assurance

CLIENT NAME: TERRAPROBE INC.

AGAT WORK ORDER: 16T152848

PROJECT: 1-16-0543-42

ATTENTION TO: Muhammad Shahid

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 31, 2016			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (Water)															
Benzene	1513481		< 0.20	< 0.20	NA	< 0.20	107%	50%	140%	84%	60%	130%	100%	50%	140%
Toluene	1513481		< 0.20	< 0.20	NA	< 0.20	102%	50%	140%	83%	60%	130%	99%	50%	140%
Ethylbenzene	1513481		< 0.10	< 0.10	NA	< 0.10	102%	50%	140%	81%	60%	130%	101%	50%	140%
Xylene Mixture	1513481		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	80%	60%	130%	98%	50%	140%
F1 (C6-C10)	1513481		< 25	< 25	NA	< 25	99%	60%	140%	101%	60%	140%	98%	60%	140%
F2 (C10 to C16)		TW	< 100	< 100	NA	< 100	101%	60%	140%	64%	60%	140%	60%	60%	140%
F3 (C16 to C34)		TW	< 100	< 100	NA	< 100	109%	60%	140%	90%	60%	140%	81%	60%	140%
F4 (C34 to C50)		TW	< 100	< 100	NA	< 100	86%	60%	140%	104%	60%	140%	86%	60%	140%

Comments: Tap water analysis has been performed as QC sample testing for duplicate and matrix spike due to insufficient sample volume.
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).performed with this batch.

Certified By:

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Method Summary

CLIENT NAME: TERRAPROBE INC.

AGAT WORK ORDER: 16T152848

PROJECT: 1-16-0543-42

ATTENTION TO: Muhammad Shahid

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Toluene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Ethylbenzene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Xylene Mixture	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F1 (C6-C10)	VOL-91- 5010	MOE E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010		GC/FID

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http://www.agatlabs.com

CLIENT NAME: TERRAPROBE INC.
11 INDELL LANE
BRAMPTON, ON L6T3Y3
(905) 796-2650

ATTENTION TO: Jessie Wu

PROJECT: 1-16-0543-42.2

AGAT WORK ORDER: 19T528820

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

DATE REPORTED: Oct 16, 2019

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

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

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Certificate of Analysis

AGAT WORK ORDER: 19T528820

PROJECT: 1-16-0543-42.2

CLIENT NAME: TERRAPROBE INC.

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2019-10-09

DATE REPORTED: 2019-10-16

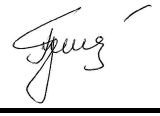
		SAMPLE DESCRIPTION:		BH 4-19	BH 5-19	BH 6-19	DUP A
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2019-10-09	2019-10-09	2019-10-09	2019-10-09
Parameter	Unit	G / S	RDL	604317	604320	604321	604322
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10
Xylene Mixture	µg/L	72	0.20	<0.20	<0.20	<0.20	<0.20
F1 (C6 - C10)	µg/L	420	25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	NA	NA	NA
Surrogate	Unit	Acceptable Limits					
Terphenyl	%	60-140		107	65	116	66

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.

604317-604322 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated 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 with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Quality Assurance

CLIENT NAME: TERRAPROBE INC.

AGAT WORK ORDER: 19T528820

PROJECT: 1-16-0543-42.2

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 16, 2019			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (Water)															
Benzene	585584		< 0.20	< 0.20	NA	< 0.20	116%	50%	140%	93%	60%	130%	82%	50%	140%
Toluene	585584		< 0.20	< 0.20	NA	< 0.20	100%	50%	140%	91%	60%	130%	92%	50%	140%
Ethylbenzene	585584		< 0.10	< 0.10	NA	< 0.10	94%	50%	140%	86%	60%	130%	90%	50%	140%
Xylene Mixture	585584		< 0.20	< 0.20	NA	< 0.20	86%	50%	140%	82%	60%	130%	84%	50%	140%
F1 (C6 - C10)	585584		< 25	< 25	NA	< 25	95%	60%	140%	89%	60%	140%	93%	60%	140%
F2 (C10 to C16)		TW	< 100	< 100	NA	< 100	106%	60%	140%	84%	60%	140%	77%	60%	140%
F3 (C16 to C34)		TW	< 100	< 100	NA	< 100	99%	60%	140%	103%	60%	140%	81%	60%	140%
F4 (C34 to C50)		TW	< 100	< 100	NA	< 100	103%	60%	140%	102%	60%	140%	112%	60%	140%

Comments: Tap water analysis has been performed as QC sample testing for duplicate and matrix spike due to insufficient sample volume.
When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By:

AGAT Laboratories

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Method Summary

CLIENT NAME: TERRAPROBE INC.

AGAT WORK ORDER: 19T528820

PROJECT: 1-16-0543-42.2

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5010	MOE PHC-E3421	P&T GC/MS
Toluene	VOL-91-5010	MOE PHC-E3421	P&T GC/MS
Ethylbenzene	VOL-91-5010	MOE PHC-E3421	P&T GC/MS
Xylene Mixture	VOL-91-5010	MOE PHC-E3421	P&T GC/MS
F1 (C6 - C10)	VOL-91- 5010	MOE PHC-E3421	P&T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	MOE PHC-E3421	P&T GC/FID
F2 (C10 to C16)	VOL-91-5010	MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	MOE PHC-E3421	GC/FID

AGAT Laboratories

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Chain of Custody Record

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

Laboratory Use Only
Work Order #: 19TS28820

Cooler Quantity:
Arrival Temperatures: 6 | 3 | 6 | 5 | 9
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes:

Report Information:
Company: Terraprobe Inc.
Contact: Jessie Wu
Address: Brampton ON.
Phone: Fax:
Reports to be sent to:
1. Email: jwu@terraprobe.ca
2. Email:

Project Information:
Project: 1-16-0543-42.2
Site Location: 16114 Airport Rd
Sampled By: B. Rocher
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: L Rossi
Address:
Email: lrossi@terraprobe.ca

Regulatory Requirements:
☐ No Regulatory Requirement
(Please check all applicable boxes)

☑ Regulation 153/04
Table 1 (Indicate One)
☐ Ind/Com
☑ Res/Park
☐ Agriculture
Soil Texture (Check One)
☑ Coarse
☐ Fine

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

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

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

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

Turnaround Time (TAT) Required:
Regular TAT ☑ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply):
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CPM

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI	O. Reg 153: Metals and Inorganics (☐ All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals ☐ 153 Metals (incl. Hydrides))	ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ Cr* ☐ EC ☐ FOC ☐ Hg ☐ pH ☐ SAR	Full Metals Scan	Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2	Volatiles: ☐ VOC ☑ BTEX ☐ THM	PHCs F1 - F4	ABNs	PAHs	PCBs: ☐ Total ☐ Aroclors	Organochlorine Pesticides	TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Sewer Use					Potentially Hazardous or High Concentration (Y/N)
BH 4-19	Oct 9/19		4	GW									✓	✓											
BH 5-19	↓		4	↓									✓	✓											
BH 6-19			4										✓	✓											
DUP A			3		1 vial broken								✓	✓											

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Rob Rocher R Rocher.	Oct 9/19	1400 hrs	Simi Z	19/10/9	1445

Page 1 of 1
No: T096028

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

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: TERRAPROBE INC.
11 INDELL LANE
BRAMPTON, ON L6T3Y3
(905) 796-2650
ATTENTION TO: Jessie Wu
PROJECT: 1-16-0543-42.1
AGAT WORK ORDER: 19T528817
TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor
DATE REPORTED: Apr 16, 2020
PAGES (INCLUDING COVER): 5
VERSION*: 1

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

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This report shall not be reproduced or distributed, in whole or in part, without the prior written consent of AGAT Laboratories.*
- *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 information contained in this document.*
- *All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 19T528817

PROJECT: 1-16-0543-42.1

CLIENT NAME: TERRAPROBE INC.

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2019-10-09

DATE REPORTED: 2020-04-16

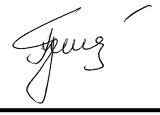
		SAMPLE DESCRIPTION:		BH 1-19	BH 2-19	BH 3-19	DUP #1
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2019-10-09	2019-10-09	2019-10-09	2019-10-09
Parameter	**Unit**	**G / S**	**RDL**	**604338**	**604339**	**604340**	**604341**
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10
Xylene Mixture	µg/L	72	0.20	<0.20	<0.20	<0.20	<0.20
F1 (C6 - C10)	µg/L	420	25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	NA	NA	NA
Surrogate	**Unit**	**Acceptable Limits**					
Terphenyl	%	60-140		77	82	64	101

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.

604338-604341 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated 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 with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: TERRAPROBE INC.

AGAT WORK ORDER: 19T528817

PROJECT: 1-16-0543-42.1

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Apr 16, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (Water)															
Benzene	585584		< 0.20	< 0.20	NA	< 0.20	116%	50%	140%	93%	60%	130%	82%	50%	140%
Toluene	585584		< 0.20	< 0.20	NA	< 0.20	100%	50%	140%	91%	60%	130%	92%	50%	140%
Ethylbenzene	585584		< 0.10	< 0.10	NA	< 0.10	94%	50%	140%	86%	60%	130%	90%	50%	140%
Xylene Mixture	585584		< 0.20	< 0.20	NA	< 0.20	86%	50%	140%	82%	60%	130%	84%	50%	140%
F1 (C6 - C10)	585584		< 25	< 25	NA	< 25	95%	60%	140%	89%	60%	140%	93%	60%	140%
F2 (C10 to C16)		TW	< 100	< 100	NA	< 100	90%	60%	140%	80%	60%	140%	82%	60%	140%
F3 (C16 to C34)		TW	< 100	< 100	NA	< 100	102%	60%	140%	110%	60%	140%	84%	60%	140%
F4 (C34 to C50)		TW	< 100	< 100	NA	< 100	108%	60%	140%	83%	60%	140%	84%	60%	140%

Comments: Tap water analysis has been performed as QC sample testing for duplicate and matrix spike due to insufficient sample volume.
When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By:

AGAT Laboratories

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

Method Summary

CLIENT NAME: TERRAPROBE INC.

AGAT WORK ORDER: 19T528817

PROJECT: 1-16-0543-42.1

ATTENTION TO: Jessie Wu

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5010	MOE PHC-E3421	P&T GC/MS
Toluene	VOL-91-5010	MOE PHC-E3421	P&T GC/MS
Ethylbenzene	VOL-91-5010	MOE PHC-E3421	P&T GC/MS
Xylene Mixture	VOL-91-5010	MOE PHC-E3421	P&T GC/MS
F1 (C6 - C10)	VOL-91- 5010	MOE PHC-E3421	P&T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	MOE PHC-E3421	P&T GC/FID
F2 (C10 to C16)	VOL-91-5010	MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	MOE PHC-E3421	GC/FID

AGAT Laboratories

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Chain of Custody Record

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

Laboratory Use Only
Work Order #: 19T528817

Cooler Quantity:
Arrival Temperatures: 6.3 | 6.1 | 5.9
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes: a.ice

Report Information:
Company: Terraprobe Inc.
Contact: Jessie Wu
Address: Brampton ON
Phone: Fax:
Reports to be sent to:
1. Email: jwu@terraprobe.ca
2. Email:

Regulatory Requirements:
☐ No Regulatory Requirement
(Please check all applicable boxes)

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

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

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

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

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

Turnaround Time (TAT) Required:
Regular TAT ☑ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply):
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CPM

Project Information:
Project: 1-16-0543-42.1
Site Location: 16114 Airport Rd.
Sampled By: B. Racher
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

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

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	O. Reg 153: Metals and Inorganics (☐ All Metals ☐ 153 Metals (excl Hydrides) ☐ Hydride Metals ☐ 153 Metals (incl. Hydrides))	O. Reg 153: ORPs (☐ B-HWS ☐ Cl ☐ CN ☐ Cr^{6+} ☐ EC ☐ FOC ☐ Hg ☐ pH ☐ SAR)	Full Metals Scan	Regulation/Custom Metals	Nutrients (☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2)	Volatiles (☐ VOC ☐ BTEX ☐ THM)	PHCs F1 - F4	ABNs	PAHs	PCBs (☐ Total ☐ Aroclors)	Organochlorine Pesticides	TCLP (☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs)	Sewer Use	Potentially Hazardous or High Concentration (Y/N)
BH 1-19	OCT 9/19		4	GW								✓	✓						
BH 2-19	↓		4	↓								✓	✓						
BH 3-19			4									✓	✓						
DUP #1			4									✓	✓						

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Bob Racher R.Racher.	OCT 9/19	1400hrs	Sina	19/10/9	4:46
Samples Relinquished By (Print Name and Sign):	Date	Time	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

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Document ID: DIV-78-1511.016

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

Date Revised: Dec. 2019