

# Terraprobe

Consulting Geotechnical & Environmental Engineering  
Construction Materials Engineering, Inspection & Testing

August 29, 2022

File No. 7-22-0040-31

Rev. 1

The City of Hamilton  
Accounts Payable Section  
71 Main Street West  
Hamilton, Ontario, L8R 4Y5

Attention: Mr. Jim Collins

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## RE: SOIL QUALITY SUMMARY CENTENNIAL HEIGHTS PARK, HAMILTON, ONTARIO

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Dear Mr. Collins,

Terraprobe Inc. (Terraprobe) has been retained by the City of Hamilton to prepare a Soil Quality Summary Letter for Centennial Heights Park located at 12 Karendale Crescent, Hamilton, Ontario (*the "Park"*).

### 1.0 Project Description

The Park is currently developed as a public play area, baseball diamond and soccer field and is considered to be in Parkland Use as defined by the Ontario Ministry of the Environment, Conservation and Parks (MECP). It is understood that an approximately 655 m long pathway will be constructed around the park boundary and the associated construction/excavation area for the pathway is hereinafter referred to as '*the Project Area*'. Approximately 800 m<sup>3</sup> of excess soil will be generated during the development of the pathway. Excess soil reuse planning is required to assess the environmental suitability of the soil to be exported to potential soil receiving sites during the planned construction.

### 2.0 Fieldwork

On July 20, 2022, and August 17, 2022, a representative of Terraprobe collected twelve (12) soil samples across the Project Area. Preliminary screening in the field consisted of an olfactory investigation for odours and a visual inspection for staining on the soil samples to indicate the potential presence of contaminants. The soil samples were collected by hand dug test pits that were advanced to a depth of 0.3 meters below ground surface (mbgs) along the exterior boundary of the park at approximate locations of

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the proposed pathway. The sampling locations are presented on **Figure 1**. All samples were submitted for chemical analysis to a Canadian Association for Environmental Analytical Laboratories (CAEAL) certified laboratory (AGAT Laboratories).

In general, the manually dug test pits encountered moist, silt fill material with trace rootlets and gravel, with the exception of CH SA2 which encountered silty topsoil.

### 3.0 Applicable Guidelines

#### 3.1 Ontario Regulation 153/04 and Ontario Regulation 406/19

On December 4, 2019, the MECP implemented a regulation governing the sustainable reuse of excess soil in the province (O.Reg. 406/19 On-site and Excess Soil Management) and implemented O.Reg. 407/19, which amended O. Reg. 153/04 (Records of Site Condition). Starting January 2021 and into 2025, there will be gradual adoption of their various components to allow a transition period for the existing projects and new or planned projects.

O.Reg. 153/04 provides a series of tables which have specific Standards for the allowable concentrations of Contaminants of Potential Concern (CoPCs). Those Standards include but are not limited to:

- Table 1 Full Depth Background Site Condition Standards for Residential, Parkland, Institutional, Industrial, Commercial and Community Property Use (**MECP Table 1 RPIICC Standards**).
  - This table generally represents the most stringent quality criteria and is intended for use at sensitive sites. Sensitive sites are generally sites that are found within 30 m of an important natural feature such as a water body, environmentally-sensitive area, or other similar situations. Table 1, excluding the standards for Electrical Conductivity and Sodium Adsorption Ratio, is frequently used as the acceptance criteria for clean fill sites.
- Table 2 Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Residential, Parkland and Institutional Property Use, Coarse Grained (**MECP Table 2 RPI Standards**).
  - This table represents the soil quality standards that are acceptable for use in areas where groundwater is used for water supply purposes (i.e., water is obtained from wells) and, in some cases, in Intake Protection Zones for water supplies drawn from surface water.
- Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential, Parkland and Institutional Property Use, Coarse Grained (**MECP Table 3 RPI Standards**).
  - This table applies in areas where groundwater is not used for drinking and/or agricultural water supply. Soil failing to meet this table is generally handled as a waste.

O.Reg. 406/19 also provides a series of tables which have specific standards for the allowable concentrations of CoPCs. The Standards apply to receiving sites (or reuse sites) that accept excess soil generated at source sites (i.e., project areas). The Standards are volume based when a reuse site is receiving total soil volumes exceeding 350 m<sup>3</sup>, and include but are not limited to:

- Table 1 Full Depth Background Site Condition Standards for Residential, Parkland, Institutional, Industrial, Commercial and Community Property Use (**Table 1 RPIICC Standards**).
- Table 2.1 Full Depth Excess Soil Quality Standards in a Potable Ground Water Condition for Residential, Parkland and Institutional Property Use (**Table 2.1 RPI Standards**).
  - Table 2.1 RPI Standards represent the soil quality standards that are acceptable for use in areas where the groundwater is used for water supply purposes (i.e., water is obtained from wells).
- Table 3.1 Full Depth Excess Soil Quality Standards in a Non-Potable Ground Water Condition for Residential, Parkland and Institutional Property Use (**Table 3.1 RPI Standards**).
  - Table 3.1 RPI Standards apply in areas where groundwater is not used for drinking water supply.

### 3.2 O. Reg. 406/19 Soil Sampling and Analysis

The following minimum sampling and testing parameters are required for excess soil characterisation, as per O.Reg. 406/19:

- Metals (M);
- Metals, Hydride-Forming Parameters (H-M);
- Other Regulated Parameters (ORPs);
- Petroleum Hydrocarbons (PHC F1-F4) ;
- Benzene, Toluene, Ethylbenzene & Xylene (BTEX);
- Any *contaminant of potential concern (COPC)* identified during the Assessment of Past Uses;
- Leachate analysis for certain contaminants as outlined in subsection 2 (5) in Section B of Part I of “*Rules for Soil Management and Excess Soil Quality Standard*”; and,
- In addition, enough soil samples are required to be collected and analyzed to determine the representative pH of soil in the Project Area.

In addition, the following rules apply for the number of samples that are required to be collected when using an in-situ sampling approach, as per O.Reg. 406/19.

- A minimum of three (3) soil samples shall be analyzed if less than 600 cubic metres of soil will be excavated;
- If more than 600 cubic metres of soil will be excavated, at least one soil sample shall be analyzed for each 200 cubic metres of soil for the first 10,000 cubic metres of soil to be excavated;
- At least one soil sample shall be analyzed for each additional 450 cubic metres after the first 10,000 cubic metres of soil to be excavated; and
- At least one soil sample shall be analyzed for each additional 2,000 cubic metres after the first 40,000 cubic metres of soil to be excavated.

## 4.0 Chemical Analysis

To satisfy O.Reg. 406/19 and additional chemical parameters included to provide general soil quality based on the presence of fill material, the soil samples selected for bulk analysis from the sampling program were submitted for chemical analysis of the parameters outlined in the table below.

| Sample ID      | Sampling Date   | Depth (m) | Strata  | M&I | PHC+BTEX | PAHs |
|----------------|-----------------|-----------|---------|-----|----------|------|
| CH SA1         | July 20, 2022   | 0.2-0.3   | Fill    | ✓   | ✓        |      |
| CH SA1A        | August 17, 2022 | 0.2-0.3   | Fill    | ✓   |          | ✓    |
| CH SA2         | July 20, 2022   | 0.2-0.3   | Topsoil | ✓   | ✓        |      |
| CH SA3         | July 20, 2022   | 0.2-0.3   | Topsoil | ✓   | ✓        |      |
| CH SA4         | July 20, 2022   | 0.2-0.3   | Fill    | ✓   | ✓        |      |
| CH SA4A        | August 17, 2022 | 0.2-0.3   | Fill    | ✓   |          | ✓    |
| CH SA4B        | August 17, 2022 | 0.2-0.3   | Fill    | ✓   |          | ✓    |
| CH SA5         | July 20, 2022   | 0.2-0.3   | Fill    | ✓   | ✓        |      |
| CH SA6         | August 17, 2022 | 0.2-0.3   | Fill    | ✓   | ✓        | ✓    |
| CH SA7         | August 17, 2022 | 0.2-0.3   | Fill    | ✓   | ✓        | ✓    |
| CH SA8         | August 17, 2022 | 0.2-0.3   | Fill    | ✓   | ✓        | ✓    |
| CH SA9         | August 17, 2022 | 0.2-0.3   | Fill    | ✓   | ✓        | ✓    |
| DUP1 (CH SA2)  | July 20, 2022   | 0.2-0.3   | Fill    | ✓   | ✓        |      |
| DUP2 (CH SA4A) | August 17, 2022 | 0.2-0.3   | Fill    | ✓   |          | ✓    |

*M&I = M, H-M and ORPs.*

*PAHs -- Polycyclic Aromatic Hydrocarbons*

In addition to the bulk analysis noted above, one (1) composite sample was submitted for Toxicity Characterization Leaching Procedure (TCLP) as per O.Reg. 558/00 Schedule 4 parameters for waste classification purposes. The TCLP analysis was conducted for the following parameters.

- Benzo(a)pyrene;
- Metals & Inorganics;
- Volatile Organic Compounds (VOCs); and,
- Polychlorinated Biphenyls (PCBs) (Total PBCs only).

## 5.0 Soil Quality Results

### 5.1 Comparison to O. Reg. 153/04 Standards

The table below presents a summary of the exceedances of the O.Reg. 153/04 site condition standards that were detected in the soil samples submitted for analysis.

| Sample ID      | Depth (m) | Parameter | Table 1 RPI/ICC Standards | MECP Table 2 RPI Standards | MECP Table 3 RPI Standards | Result |
|----------------|-----------|-----------|---------------------------|----------------------------|----------------------------|--------|
| CH SA1         | 0.2-0.3   | Lead      | <b><u>120</u></b>         | <b><u>120</u></b>          | <b><u>120</u></b>          | 152    |
|                |           | Zinc      | <b><u>290</u></b>         | <b><u>340</u></b>          | <b><u>340</u></b>          | 486    |
| CH SA1A        | 0.2-0.3   | Lead      | <b><u>120</u></b>         | <b><u>120</u></b>          | <b><u>120</u></b>          | 151    |
|                |           | Zinc      | <b><u>290</u></b>         | <b><u>340</u></b>          | <b><u>340</u></b>          | 518    |
| CH SA3         | 0.2-0.3   | Lead      | <b><u>120</u></b>         | <b><u>120</u></b>          | <b><u>120</u></b>          | 163    |
|                |           | Zinc      | <b><u>290</u></b>         | <b><u>340</u></b>          | <b><u>340</u></b>          | 425    |
| CH SA4         | 0.2-0.3   | Mercury   | <b><u>0.27</u></b>        | <b><u>0.27</u></b>         | <b><u>0.27</u></b>         | 11.3   |
|                |           | Zinc      | <b><u>290</u></b>         | <b><u>340</u></b>          | <b><u>340</u></b>          | 401    |
| CH SA4A        | 0.2-0.3   | Zinc      | <b><u>290</u></b>         | <b><u>340</u></b>          | <b><u>340</u></b>          | 404    |
| CH SA4B        | 0.2-0.3   | Zinc      | <b><u>290</u></b>         | <b><u>340</u></b>          | <b><u>340</u></b>          | 390    |
| CH SA5         | 0.2-0.3   | Lead      | <b><u>120</u></b>         | <b><u>120</u></b>          | <b><u>120</u></b>          | 151    |
|                |           | Zinc      | <b><u>290</u></b>         | <b><u>340</u></b>          | <b><u>340</u></b>          | 460    |
| CH SA6         | 0.2-0.3   | Cadmium   | <b><u>1.2</u></b>         | <b><u>1.2</u></b>          | <b><u>1.2</u></b>          | 2.8    |
|                |           | Lead      | <b><u>120</u></b>         | <b><u>120</u></b>          | <b><u>120</u></b>          | 330    |
|                |           | Zinc      | <b><u>290</u></b>         | <b><u>340</u></b>          | <b><u>340</u></b>          | 920    |
| CH SA7         | 0.2-0.3   | Lead      | <b><u>120</u></b>         | <b><u>120</u></b>          | <b><u>120</u></b>          | 146    |
|                |           | Zinc      | <b><u>290</u></b>         | <b><u>340</u></b>          | <b><u>340</u></b>          | 451    |
| CH SA8         | 0.2-0.3   | Lead      | <b><u>120</u></b>         | <b><u>120</u></b>          | <b><u>120</u></b>          | 140    |
|                |           | Zinc      | <b><u>290</u></b>         | <b><u>340</u></b>          | <b><u>340</u></b>          | 472    |
| CH SA9         | 0.2-0.3   | Lead      | <b><u>120</u></b>         | <b><u>120</u></b>          | <b><u>120</u></b>          | 150    |
|                |           | Zinc      | <b><u>290</u></b>         | <b><u>340</u></b>          | <b><u>340</u></b>          | 496    |
| DUP2 (CH SA4A) | 0.2-0.3   | Lead      | <b><u>120</u></b>         | <b><u>120</u></b>          | <b><u>120</u></b>          | 128    |
|                |           | Zinc      | <b><u>290</u></b>         | <b><u>340</u></b>          | <b><u>340</u></b>          | 434    |

Note: Exceedances of the Site Condition Standards are **bolded and underlined**

## 5.2 Comparison to O. Reg. 406/19 Standards

The table below presents a summary of the exceedances of the O.Reg. 406/19 excess soil quality standards that were detected in the soil samples submitted for analysis.

| Sample ID      | Depth (m) | Parameter | Table 1 RPI/ICC Standards | Table 2.1 RPI Standards | Table 3.1 RPI Standards | Result |
|----------------|-----------|-----------|---------------------------|-------------------------|-------------------------|--------|
| CH SA1         | 0.2-0.3   | Lead      | <u>120</u>                | <u>120</u>              | <u>120</u>              | 152    |
|                |           | Zinc      | <u>290</u>                | <u>340</u>              | <u>340</u>              | 486    |
| CH SA1A        | 0.2-0.3   | Lead      | <u>120</u>                | <u>120</u>              | <u>120</u>              | 151    |
|                |           | Zinc      | <u>290</u>                | <u>340</u>              | <u>340</u>              | 518    |
| CH SA3         | 0.2-0.3   | Lead      | <u>120</u>                | <u>120</u>              | <u>120</u>              | 163    |
|                |           | Zinc      | <u>290</u>                | <u>340</u>              | <u>340</u>              | 425    |
| CH SA4         | 0.2-0.3   | Mercury   | <u>0.27</u>               | <u>0.27</u>             | <u>0.27</u>             | 11.3   |
|                |           | Zinc      | <u>290</u>                | <u>340</u>              | <u>340</u>              | 401    |
| CH SA4A        | 0.2-0.3   | Zinc      | <u>290</u>                | <u>340</u>              | <u>340</u>              | 404    |
| CH SA4B        | 0.2-0.3   | Zinc      | <u>290</u>                | <u>340</u>              | <u>340</u>              | 390    |
| CH SA5         | 0.2-0.3   | Lead      | <u>120</u>                | <u>120</u>              | <u>120</u>              | 151    |
|                |           | Zinc      | <u>290</u>                | <u>340</u>              | <u>340</u>              | 460    |
| CH SA6         | 0.2-0.3   | Cadmium   | <u>1.2</u>                | <u>1.2</u>              | <u>1.2</u>              | 2.8    |
|                |           | Lead      | <u>120</u>                | <u>120</u>              | <u>120</u>              | 330    |
|                |           | Zinc      | <u>290</u>                | <u>340</u>              | <u>340</u>              | 920    |
| CH SA7         | 0.2-0.3   | Lead      | <u>120</u>                | <u>120</u>              | <u>120</u>              | 146    |
|                |           | Zinc      | <u>290</u>                | <u>340</u>              | <u>340</u>              | 451    |
| CH SA8         | 0.2-0.3   | Lead      | <u>120</u>                | <u>120</u>              | <u>120</u>              | 140    |
|                |           | Zinc      | <u>290</u>                | <u>340</u>              | <u>340</u>              | 472    |
| CH SA9         | 0.2-0.3   | Lead      | <u>120</u>                | <u>120</u>              | <u>120</u>              | 150    |
|                |           | Zinc      | <u>290</u>                | <u>340</u>              | <u>340</u>              | 496    |
| DUP2 (CH SA4A) | 0.2-0.3   | Lead      | <u>120</u>                | <u>120</u>              | <u>120</u>              | 128    |
|                |           | Zinc      | <u>290</u>                | <u>340</u>              | <u>340</u>              | 434    |

Note: Exceedances of the Excess Soil Quality Standards are **bolded and underlined**

The attached **Tables 1, 2 and 3** present all soil quality results for the sampling program. In addition, the laboratory Certificates of Analysis (CoAs) are enclosed with this report in **Appendix A**.

### 5.3 Leachate Analysis Results (O.Reg. 558/00)

The results of TCLP chemical analysis indicates that the soil is considered **non-hazardous** and should be handled accordingly for disposal purposes. The laboratory Certificates of Analysis (CoAs) are enclosed this report in **Appendix A**.

### 6.0 Conclusions and Recommendations

Based on the results of the chemical analysis, the soil in the vicinity of sampling location CH SA2 was found to meet the MECP Table 1 RPIICC Standards for the parameters tested, however, exceedances of the Table 3.1 RPI Standards were noted at sampling locations CH SA1, CH SA1A, CH SA3, CH SA4, CH SA4A, CH SA4B, CH SA5, CH SA6, CH SA7, CH SA8 and CH SA9 for one or more of lead, zinc, cadmium, and mercury. Soil exceeding Table 3.1 RPI Standards is considered to be impacted soil (i.e., waste) and cannot be reused on the Project Area, since it also exceeds the applicable Site Condition Standards for the Property (MECP Table 3 RPI Standards).

Reuse sites will not accept soil exceeding Table 3.1 RPI Standards and, therefore, once excavated it must be disposed of at a licensed landfill or dump. The results of TCLP chemical analysis indicates that the soil is considered non-hazardous and should be handled accordingly for disposal purposes.

### 7.0 Restrictions

It should be noted that the results of the chemical analysis refer only to the soil samples collected from specific locations, and the soil chemistry may vary between and beyond the locations of the samples tested. The receiving sites accepting the fill may have a soil fill management plan with specific aesthetic, engineering property requirements and/or specific requirements for chemical analysis (additional parameters and/or frequency of sampling) that have not been assessed in this letter.

The analytical results contained in this report should not be considered a warranty with respect to the soil quality or the use of the soil for any specific purpose. This letter provides the factual results of the chemical analysis only for the specific parameters analysed. No opinion is presented regarding the earthwork/suitability of the soil for any purpose. If there is indication of soil quality variation and/or other chemical/environmental concerns, further chemical testing should be carried out as necessary. Further, it must be noted that our scope of work, as directed by the client, was only limited to collecting soil samples and review of the analytical results.

### 8.0 References

- MECP. “*Rules for Soil Management and Excess Soil Quality Standard*”, adopted by reference in O.Reg. 406/19 made under the *Environmental Protection Act*, R.S.O. 1990, c. E.19, dated November 19, 2019.
- Ontario Ministry of the Environment, Conservation and Parks (MECP). “*O. Reg. 406/19: On-site and Excess Soil Management*”, under the *Environmental Protection Act*, R.S.O. 1990, c. E.19, filed December

4, 2019.

## 9.0 Signatures

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

Yours truly,

**Terraprobe Inc.**



Katie Greenman, BSc., C.E.T.  
*Environmental Scientist*



R. Baker Wohayeb, M.A.Sc., P.Eng., QP<sub>RA</sub>  
*Principal*

Enclosures:

Figures:

Figure 1: Soil Sample Location Plan

Tables:

Table 1: Soil Quality Summary – Metals and Inorganics

Table 2: Soil Quality Summary – Petroleum Hydrocarbons

Table 3: Soil Quality Summary – Benzene, Toluene, Ethylbenzene, Xylene

Table 4: Soil Quality Summary – Polycyclic Aromatic Hydrocarbons

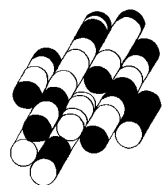
Appendices:

Appendix A: Laboratory Certificate of Analysis



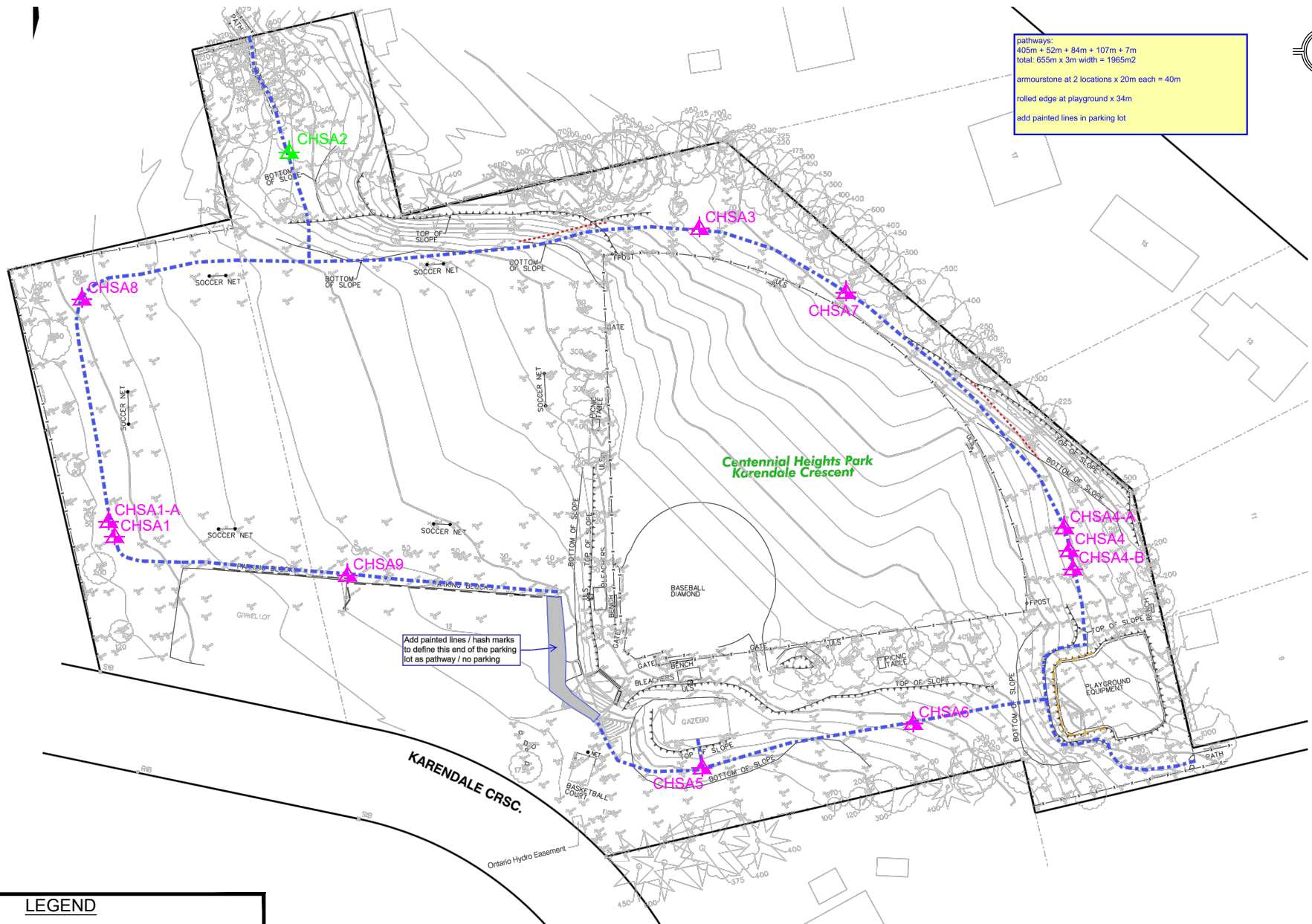
# FIGURES

**TERRAPROBE INC.**





pathways:  
 405m + 52m + 84m + 107m + 7m  
 total: 655m x 3m width = 1965m<sup>2</sup>  
 armourstone at 2 locations x 20m each = 40m  
 rolled edge at playground x 34m  
 add painted lines in parking lot



| LEGEND |  |
|--------|--|
|        | Soil Sample Location Exceeds Table 3.1 RPI |
|        | Soil Sample Location Meets Table 1 RPIICC  |

**Terraprobe**  
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|   |   |
|---|---|
| <b>Title:</b><br>SOIL SAMPLE LOCATION PLAN<br>12 Karendale Crescent, Hamilton, Ontario<br>Centennial Heights Park | <b>FIGURE :</b><br><div style="font-size: 2em; text-align: center;">1</div> |
| <b>File No.</b><br>7-22-0040-31   |   |

# TABLES

**TERRAPROBE INC.**

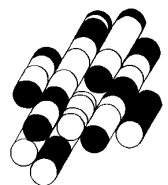


Table 1  
Soil Quality Summary  
Metals & Inorganics  
Centennial Heights Park  
7-22-0040-31

| Sample Description                    | Unit     | MECP<br>Table 1 | MECP<br>Table 3 | MECP<br>Table 3 | RDL   | Duplicate  |            |            |            | Duplicate  |            |            |            | CH SA6  | CH SA7  | CH SA8  | CH SA9  |            |            |            |
|---------------------------------------|----------|-----------------|-----------------|-----------------|-------|------------|------------|------------|------------|------------|------------|------------|------------|---------|---------|---------|---------|------------|------------|------------|
|                                       |          |                 |                 |                 |       | CH SA1     | CH SA1A    | CH SA2     | DUP1       | CH SA3     | CH SA4     | CH SA4A    | DUP2       |         |         |         |         | CH SA4B    | CH SA5     |            |
|                                       |          |                 |                 |                 |       | 2022-07-20 | 2022-08-17 | 2022-07-20 | 2022-07-20 | 2022-07-20 | 2022-07-20 | 2022-08-17 | 2022-08-17 |         |         |         |         | 2022-08-17 | 2022-07-20 | 2022-08-17 |
| Date Sampled                          |          |                 |                 |                 |       |            |            |            |            |            |            |            |            |         |         |         |         |            |            |            |
| Lab ID                                |          | RPI/ICC         | RPI             | ICC             |       | 4121873    | 4220015    | 4121874    | 4121878    | 4121875    | 4121876    | 4220089    | 4220098    | 4220090 | 4121877 | 4220091 | 4220095 | 4220096    | 4220097    |            |
| Sample Depth (mbqs)                   |          | SCS             | SCS             | SCS             |       | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3 | 0.2-0.3 | 0.2-0.3 | 0.2-0.3 | 0.2-0.3    | 0.2-0.3    |            |
| Strata                                |          |                 |                 |                 |       | Fill       | Fill       | Native     | Native     | Fill       | Fill       | Fill       | Fill       | Fill    | Fill    | Fill    | Fill    | Fill       | Fill       |            |
| Parameter                             |          |                 |                 |                 |       |            |            |            |            |            |            |            |            |         |         |         |         |            |            |            |
| Metals                                |          |                 |                 |                 |       |            |            |            |            |            |            |            |            |         |         |         |         |            |            |            |
| Barium                                | µg/g     | 220             | 390             | 670             | 2.0   | 50.5       | 46.9       | 38         | 37         | 53         | 48.6       | 52.1       | 55         | 52.6    | 44.5    | 50.6    | 46.4    | 46.8       | 45.5       |            |
| Beryllium                             | µg/g     | 2.5             | 4               | 8               | 0.4   | 0.4        | 0.5        | <0.4       | <0.4       | 0.5        | <0.4       | 0.4        | 0.5        | 0.5     | <0.4    | 0.6     | 0.7     | 0.5        | 0.5        |            |
| Boron                                 | µg/g     | 36              | 120             | 120             | 5     | 9          | 6          | 5          | <5         | 8          | 8          | <5         | <5         | <5      | 9       | 11      | 9       | <5         | 7          |            |
| Boron (Hot Water Soluble)             | µg/g     | NA              | 1.5             | 2               | 0.10  | 0.22       | 0.37       | 0.13       | <0.10      | <0.10      | 0.19       | 0.34       | 0.4        | 0.43    | 0.12    | 0.29    | 0.24    | 0.34       | 0.39       |            |
| Cadmium                               | µg/g     | 1.2             | 1.2             | 1.9             | 0.5   | 1.1        | 1.1        | 0.5        | 0.6        | 1.2        | 1.1        | 1.1        | 1.1        | 1       | 1.2     | 2.8     | 0.9     | 1          | 1.1        |            |
| Chromium                              | µg/g     | 70              | 160             | 160             | 5     | 14         | 13         | 15         | 15         | 16         | 16         | 14         | 14         | 13      | 15      | 14      | 15      | 14         | 14         |            |
| Cobalt                                | µg/g     | 21              | 22              | 80              | 0.5   | 5.8        | 5.3        | 5.9        | 5.9        | 6.9        | 6.1        | 6.1        | 6.4        | 6.1     | 5.9     | 6.4     | 7.3     | 5.7        | 5.3        |            |
| Copper                                | µg/g     | 92              | 140             | 230             | 1.0   | 16.9       | 16.8       | 10.8       | 10.7       | 14.6       | 14.9       | 14.5       | 15.2       | 15.2    | 15.1    | 14.8    | 24.8    | 15.5       | 15.2       |            |
| Lead                                  | µg/g     | 120             | 120             | 120             | 1     | 152        | 151        | 76         | 80         | 163        | 110        | 119        | 128        | 114     | 151     | 330     | 146     | 140        | 150        |            |
| Molybdenum                            | µg/g     | 2               | 6.9             | 40              | 0.5   | 0.5        | <0.5       | <0.5       | 0.5        | 0.5        | 0.6        | <0.5       | <0.5       | 0.5     | <0.5    | 0.6     | 0.5     | <0.5       | <0.5       |            |
| Nickel                                | µg/g     | 82              | 100             | 270             | 1     | 12         | 12         | 9          | 10         | 13         | 11         | 12         | 12         | 12      | 12      | 13      | 16      | 12         | 12         |            |
| Silver                                | µg/g     | 0.5             | 20              | 40              | 0.5   | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       | <0.5    | <0.5    | <0.5    | <0.5    | <0.5       | <0.5       |            |
| Thallium                              | µg/g     | 1               | 1               | 3.3             | 0.5   | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       | <0.5    | <0.5    | <0.5    | <0.5    | <0.5       | <0.5       |            |
| Uranium                               | µg/g     | 2.5             | 23              | 33              | 0.50  | 0.53       | 0.5        | <0.50      | <0.50      | <0.50      | 0.57       | 0.53       | 0.54       | 0.55    | <0.50   | <0.50   | 0.57    | 0.54       | <0.50      |            |
| Vanadium                              | µg/g     | 86              | 86              | 86              | 0.4   | 26         | 23.9       | 30.8       | 28.5       | 31         | 28.8       | 27.1       | 27.4       | 26.2    | 26.8    | 26.3    | 26.6    | 25.6       | 25.3       |            |
| Zinc                                  | µg/g     | 290             | 340             | 340             | 5     | 486        | 518        | 240        | 231        | 425        | 401        | 404        | 434        | 390     | 460     | 920     | 451     | 472        | 496        |            |
| Hydride Metals                        |          |                 |                 |                 |       |            |            |            |            |            |            |            |            |         |         |         |         |            |            |            |
| Antimony                              | µg/g     | 1.3             | 7.5             | 40              | 0.8   | <0.8       | <0.8       | <0.8       | <0.8       | <0.8       | <0.8       | <0.8       | <0.8       | <0.8    | <0.8    | <0.8    | <0.8    | <0.8       | <0.8       |            |
| Arsenic                               | µg/g     | 18              | 18              | 18              | 1     | 6          | 6          | 4          | 4          | 7          | 6          | 6          | 7          | 7       | 6       | 9       | 8       | 6          | 6          |            |
| Selenium                              | µg/g     | 1.5             | 2.4             | 5.5             | 0.8   | <0.8       | <0.8       | <0.8       | <0.8       | 0.8        | <0.8       | <0.8       | <0.8       | <0.8    | <0.8    | <0.8    | <0.8    | <0.8       | <0.8       |            |
| Other Regulated Parameters            |          |                 |                 |                 |       |            |            |            |            |            |            |            |            |         |         |         |         |            |            |            |
| Chromium, Hexavalent                  | µg/g     | 0.66            | 8               | 8               | 0.2   | <0.2       | <0.2       | <0.2       | <0.2       | <0.2       | <0.2       | <0.2       | <0.2       | <0.2    | <0.2    | <0.2    | <0.2    | <0.2       | <0.2       |            |
| Cyanide, Free                         | µg/g     | 0.051           | 0.051           | 0.051           | 0.040 | <0.040     | <0.040     | <0.040     | <0.040     | <0.040     | <0.040     | <0.040     | <0.040     | <0.040  | <0.040  | <0.040  | <0.040  | <0.040     | <0.040     |            |
| Mercury                               | µg/g     | 0.27            | 0.27            | 3.9             | 0.10  | 0.11       | <0.10      | <0.10      | <0.10      | <0.10      | 11.3       | <0.10      | <0.10      | <0.10   | 0.25    | <0.10   | <0.10   | <0.10      | <0.10      |            |
| Electrical Conductivity (2:1)         | mS/cm    | 0.57            | 0.7             | 1.4             | 0.005 | 0.166      | 0.153      | 0.108      | 0.113      | 0.132      | 0.149      | 0.14       | 0.145      | 0.133   | 0.185   | 0.129   | 0.134   | 0.14       | 0.198      |            |
| Sodium Adsorption Ratio (2:1) (Calc.) | N/A      | 2.4             | 5               | 12              | N/A   | 0.099      | 0.052      | 0.081      | 0.084      | 0.082      | 0.084      | 0.037      | 0.032      | 0.042   | 0.084   | 0.034   | 0.05    | 0.051      | 0.076      |            |
| pH, 2:1 CaCl2 Extraction              | pH Units |                 |                 |                 | NA    | 6.96       | 7.15       | 6.85       | 6.85       | 7          | 7.12       | 7.29       | 7.21       | 7.27    | 7.07    | 7.29    | 7.39    | 7.13       | 7.4        |            |

Comments:  
XXXXXXXXXX Sample Result Exceeds MECP Table 1 RPI/ICC SCS  
XXXXXXXXXX Sample Result Exceeds MECP Table 3 RPI SCS

Table 2  
 Soil Quality Summary  
 Petroleum Hydrocarbons  
 Centennial Heights Park  
 7-22-0040-31

| Sample Description        | Unit | MECP    |         |         | RDL | Duplicate  |            |            |            |            |            |            |            |            |            |
|---------------------------|------|---------|---------|---------|-----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                           |      | Table 1 | Table 3 | Table 3 |     | CH SA1     | CH SA2     | DUP1       | CH SA3     | CH SA4     | CH SA5     | CH SA6     | CH SA7     | CH SA8     | CH SA9     |
| Date Sampled              |      | RPI/ICC | RPI     | ICC     |     | 2022-07-20 | 2022-07-20 | 2022-07-20 | 2022-07-20 | 2022-07-20 | 2022-07-20 | 2022-08-17 | 2022-08-17 | 2022-08-17 | 2022-08-17 |
| Lab ID                    |      | SCS     | SCS     | SCS     |     | 4121873    | 4121874    | 4121878    | 4121875    | 4121876    | 4121877    | 4220091    | 4220095    | 4220096    | 4220097    |
| Sample Depth (mbgs)       |      | 0.2-0.3 | 0.2-0.3 | 0.2-0.3 |     | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    |
| Strata                    |      | Fill    | Native  | Native  |     | Fill       | Native     | Native     | Fill       | Fill       | Fill       | Fill       | Fill       | Fill       | Fill       |
| Parameter                 |      |         |         |         |     |            |            |            |            |            |            |            |            |            |            |
| F1 (C6 - C10)             | µg/g | 25      | 55      | 55      | 5   | <5         | <5         | <5         | <5         | <5         | <5         | <5         | <5         | <5         | <5         |
| F1 (C6 to C10) minus BTEX | µg/g | 25      | 55      | 55      | 5   | <5         | <5         | <5         | <5         | <5         | <5         | <5         | <5         | <5         | <5         |
| F2 (C10 to C16)           | µg/g | 10      | 98      | 230     | 10  | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        |
| F3 (C16 to C34)           | µg/g | 240     | 300     | 1700    | 50  | <50        | <50        | <50        | <50        | <50        | <50        | <50        | <50        | <50        | <50        |
| F4 (C34 to C50)           | µg/g | 120     | 2800    | 3300    | 50  | <50        | <50        | <50        | <50        | <50        | <50        | <50        | <50        | <50        | <50        |

Comments:

Sample Result Exceeds MECP Table 1 RPI/ICC SCS  
 Sample Result Exceeds MECP Table 3 RPI SCS

Table 3  
 Soil Quality Summary  
 Benzene, Toluene, Ethylbenzene, Xylene  
 Centennial Heights Park  
 7-22-0040-31

| Sample Description | Unit | MECP    | MECP    | MECP    | RDL  | Duplicate |         |         | CH SA3     | CH SA4     | CH SA5     | CH SA6     | CH SA7     | CH SA8     | CH SA9     |
|--------------------|------|---------|---------|---------|------|-----------|---------|---------|------------|------------|------------|------------|------------|------------|------------|
|                    |      | Table 1 | Table 3 | Table 3 |      | CH SA1    | CH SA2  | DUP1    | 2022-07-20 | 2022-07-20 | 2022-07-20 | 2022-07-20 | 2022-08-17 | 2022-08-17 | 2022-08-17 |
| Date Sampled       |      | RPI/ICC | RPI     | ICC     |      | 4121873   | 4121874 | 4121878 | 4121875    | 4121876    | 4121877    | 4220091    | 4220095    | 4220096    | 4220097    |
| Lab ID             |      | SCS     | SCS     | SCS     |      | 0.2-0.3   | 0.2-0.3 | 0.2-0.3 | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    |
| Sample Elevation   |      |         |         |         |      | Fill      | Native  | Native  | Fill       | Fill       | Fill       | Fill       | Fill       | Fill       | Fill       |
| Strata             |      |         |         |         |      |           |         |         |            |            |            |            |            |            |            |
| Parameter          |      |         |         |         |      |           |         |         |            |            |            |            |            |            |            |
| Benzene            | ug/g | 0.02    | 0.21    | 0.32    | 0.02 | <0.02     | <0.02   | <0.02   | <0.02      | <0.02      | <0.02      | <0.02      | <0.02      | <0.02      | <0.02      |
| Toluene            | ug/g | 0.2     | 2.3     | 68      | 0.05 | <0.05     | <0.05   | <0.05   | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Ethylbenzene       | ug/g | 0.05    | 2       | 9.5     | 0.05 | <0.05     | <0.05   | <0.05   | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| m & p-Xylene       | ug/g | NV      | NV      | NV      | 0.05 | <0.05     | <0.05   | <0.05   | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| o-Xylene           | ug/g | NV      | NV      | NV      | 0.05 | <0.05     | <0.05   | <0.05   | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Xylenes (Total)    | ug/g | 0.05    | 3.1     | 26      | 0.05 | <0.05     | <0.05   | <0.05   | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |

Comments:

Sample Result Exceeds MECP Table 1 RPI/ICC SCS  
 Sample Result Exceeds MECP Table 3 RPI SCS

Table 4  
 Soil Quality Summary  
 Polycyclic Aromatic Hydrocarbons  
 Centennial Heights Park  
 7-22-0040-31

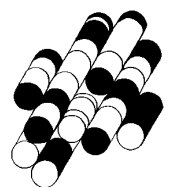
| Sample Description       | Unit | MECP    |         |         | RDL     | Duplicate  |            |            |            |            |            |            |            |
|--------------------------|------|---------|---------|---------|---------|------------|------------|------------|------------|------------|------------|------------|------------|
|                          |      | Table 1 | Table 3 | Table 3 |         | CH SA1A    | CH SA4A    | DUP2       | CH SA4B    | CH SA6     | CH SA7     | CH SA8     | CH SA9     |
|                          |      | RPI/ICC | RPI     | ICC     |         | 08/17/2022 | 08/17/2022 | 08/17/2022 | 08/17/2022 | 08/17/2022 | 08/17/2022 | 08/17/2022 | 08/17/2022 |
|                          |      | SCS     | SCS     | SCS     |         | 4220015    | 4220089    | 4220098    | 4220090    | 4220091    | 4220095    | 4220096    | 4220097    |
| Strata                   |      |         |         | 0.2-0.3 | 0.2-0.3 | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    | 0.2-0.3    |            |            |
| Parameter                |      |         |         |         | Fill    | Fill       | Fill       | Fill       | Fill       | Fill       | Fill       | Fill       |            |
| Naphthalene              | µg/g | 0.09    | 0.6     | 9.6     | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Acenaphthylene           | µg/g | 0.093   | 0.15    | 0.15    | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Acenaphthene             | µg/g | 0.072   | 7.9     | 96      | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Fluorene                 | µg/g | 0.12    | 62      | 62      | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Phenanthrene             | µg/g | 0.69    | 6.2     | 12      | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Anthracene               | µg/g | 0.16    | 0.67    | 0.67    | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Fluoranthene             | µg/g | 0.56    | 0.69    | 9.6     | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Pyrene                   | µg/g | 1       | 78      | 96      | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Benz(a)anthracene        | µg/g | 0.36    | 0.5     | 0.96    | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Chrysene                 | µg/g | 2.8     | 7       | 9.6     | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Benzo(b)fluoranthene     | µg/g | 0.47    | 0.78    | 0.96    | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Benzo(k)fluoranthene     | µg/g | 0.48    | 0.78    | 0.96    | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Benzo(k)pyrene           | µg/g | 0.3     | 0.3     | 0.3     | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Indeno(1,2,3-cd)pyrene   | µg/g | 0.46    | 0.38    | 0.76    | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Dibenz(a,h)anthracene    | µg/g | 0.1     | 0.1     | 0.1     | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Dibenz(g,h,i)perylene    | µg/g | 0.68    | 6.6     | 9.6     | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| 1 and 2 Methylanthracene | µg/g | 0.59    | 0.99    | 76      | 0.05    | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |

Comments:

Sample Result Exceeds MECP Table 1 RPI/ICC SCS  
 Sample Result Exceeds MECP Table 3 RPI SCS

# APPENDIX A

**TERRAPROBE INC.**







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

**ATTENTION TO: Teresa Weatherhead**

**PROJECT: 7-22-0040-31**

**AGAT WORK ORDER: 22H923608**

**SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician**

**TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist**

**DATE REPORTED: Jul 27, 2022**

**PAGES (INCLUDING COVER): 11**

**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.
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- 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.
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- The test results reported herewith relate only to the samples as received by the laboratory.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 22H923608

PROJECT: 7-22-0040-31

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

CLIENT NAME: TERRAPROBE INC  
SAMPLING SITE: Centennial Heights Park

ATTENTION TO: Teresa Weatherhead  
SAMPLED BY: T.S.

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

DATE RECEIVED: 2022-07-21

DATE REPORTED: 2022-07-27

| Parameter                             | Unit     | SAMPLE DESCRIPTION: |       | CH SA1     | CH SA2     | CH SA3     | CH SA4      | CH SA5     | DUP 1      |
|---------------------------------------|----------|---------------------|-------|------------|------------|------------|-------------|------------|------------|
|                                       |          | SAMPLE TYPE:        |       | Soil       | Soil       | Soil       | Soil        | Soil       | Soil       |
|                                       |          | DATE SAMPLED:       |       | 2022-07-20 | 2022-07-20 | 2022-07-20 | 2022-07-20  | 2022-07-20 | 2022-07-20 |
|                                       |          | G / S               | RDL   | 4121873    | 4121874    | 4121875    | 4121876     | 4121877    | 4121878    |
| Antimony                              | µg/g     | 1.3                 | 0.8   | <0.8       | <0.8       | <0.8       | <0.8        | <0.8       | <0.8       |
| Arsenic                               | µg/g     | 18                  | 1     | 6          | 4          | 7          | 6           | 6          | 4          |
| Barium                                | µg/g     | 220                 | 2.0   | 50.5       | 38.0       | 53.0       | 48.6        | 44.5       | 37.0       |
| Beryllium                             | µg/g     | 2.5                 | 0.4   | 0.4        | <0.4       | 0.5        | <0.4        | <0.4       | <0.4       |
| Boron                                 | µg/g     | 36                  | 5     | 9          | 5          | 8          | 8           | 9          | <5         |
| Boron (Hot Water Soluble)             | µg/g     | NA                  | 0.10  | 0.22       | 0.13       | <0.10      | 0.19        | 0.12       | <0.10      |
| Cadmium                               | µg/g     | 1.2                 | 0.5   | 1.1        | 0.5        | 1.2        | 1.1         | 1.2        | 0.6        |
| Chromium                              | µg/g     | 70                  | 5     | 14         | 15         | 16         | 16          | 15         | 15         |
| Cobalt                                | µg/g     | 21                  | 0.5   | 5.8        | 5.9        | 6.9        | 6.1         | 5.9        | 5.9        |
| Copper                                | µg/g     | 92                  | 1.0   | 16.9       | 10.8       | 14.6       | 14.9        | 15.1       | 10.7       |
| Lead                                  | µg/g     | 120                 | 1     | <b>152</b> | 76         | <b>163</b> | 110         | <b>151</b> | 80         |
| Molybdenum                            | µg/g     | 2                   | 0.5   | 0.5        | <0.5       | 0.5        | 0.6         | <0.5       | 0.5        |
| Nickel                                | µg/g     | 82                  | 1     | 12         | 9          | 13         | 11          | 12         | 10         |
| Selenium                              | µg/g     | 1.5                 | 0.8   | <0.8       | <0.8       | 0.8        | <0.8        | <0.8       | <0.8       |
| Silver                                | µg/g     | 0.5                 | 0.5   | <0.5       | <0.5       | <0.5       | <0.5        | <0.5       | <0.5       |
| Thallium                              | µg/g     | 1                   | 0.5   | <0.5       | <0.5       | <0.5       | <0.5        | <0.5       | <0.5       |
| Uranium                               | µg/g     | 2.5                 | 0.50  | 0.53       | <0.50      | <0.50      | 0.57        | <0.50      | <0.50      |
| Vanadium                              | µg/g     | 86                  | 0.4   | 26.0       | 30.8       | 31.0       | 28.8        | 26.8       | 28.5       |
| Zinc                                  | µg/g     | 290                 | 5     | <b>486</b> | 240        | <b>425</b> | <b>401</b>  | <b>460</b> | 231        |
| Chromium, Hexavalent                  | µg/g     | 0.66                | 0.2   | <0.2       | <0.2       | <0.2       | <0.2        | <0.2       | <0.2       |
| Cyanide, WAD                          | µg/g     | 0.051               | 0.040 | <0.040     | <0.040     | <0.040     | <0.040      | <0.040     | <0.040     |
| Mercury                               | µg/g     | 0.27                | 0.10  | 0.11       | <0.10      | <0.10      | <b>11.3</b> | 0.25       | <0.10      |
| Electrical Conductivity (2:1)         | mS/cm    | 0.57                | 0.005 | 0.166      | 0.108      | 0.132      | 0.149       | 0.185      | 0.113      |
| Sodium Adsorption Ratio (2:1) (Calc.) | N/A      | 2.4                 | N/A   | 0.099      | 0.081      | 0.082      | 0.084       | 0.084      | 0.084      |
| pH, 2:1 CaCl <sub>2</sub> Extraction  | pH Units |                     | NA    | 6.96       | 6.85       | 7.00       | 7.12        | 7.07       | 6.85       |

Certified By:





**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 22H923608

PROJECT: 7-22-0040-31

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

CLIENT NAME: TERRAPROBE INC  
SAMPLING SITE: Centennial Heights Park

ATTENTION TO: Teresa Weatherhead  
SAMPLED BY: T.S.

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

DATE RECEIVED: 2022-07-21

DATE REPORTED: 2022-07-27

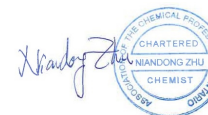
**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

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.

**4121873-4121878** EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl<sub>2</sub> extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

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CLIENT NAME: TERRAPROBE INC

SAMPLING SITE: Centennial Heights Park

ATTENTION TO: Teresa Weatherhead

SAMPLED BY: T.S.

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

DATE RECEIVED: 2022-07-21

DATE REPORTED: 2022-07-27

| Parameter                      | Unit       | SAMPLE DESCRIPTION: |      | CH SA1     | CH SA2     | CH SA3     | CH SA4     | CH SA5     | DUP 1      |
|--------------------------------|------------|---------------------|------|------------|------------|------------|------------|------------|------------|
|                                |            | SAMPLE TYPE:        |      | Soil       | Soil       | Soil       | Soil       | Soil       | Soil       |
|                                |            | DATE SAMPLED:       |      | 2022-07-20 | 2022-07-20 | 2022-07-20 | 2022-07-20 | 2022-07-20 | 2022-07-20 |
|                                |            | G / S               | RDL  | 4121873    | 4121874    | 4121875    | 4121876    | 4121877    | 4121878    |
| Benzene                        | µg/g       | 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      |
| Ethylbenzene                   | µg/g       | 0.05                | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| m & p-Xylene                   | µg/g       |                     | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| o-Xylene                       | µg/g       |                     | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| Xylenes (Total)                | µg/g       | 0.05                | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |
| F1 (C6 - C10)                  | µg/g       | 25                  | 5    | <5         | <5         | <5         | <5         | <5         | <5         |
| F1 (C6 to C10) minus BTEX      | µg/g       | 25                  | 5    | <5         | <5         | <5         | <5         | <5         | <5         |
| F2 (C10 to C16)                | µg/g       | 10                  | 10   | <10        | <10        | <10        | <10        | <10        | <10        |
| F3 (C16 to C34)                | µg/g       | 240                 | 50   | <50        | <50        | <50        | <50        | <50        | <50        |
| F4 (C34 to C50)                | µg/g       | 120                 | 50   | <50        | <50        | <50        | <50        | <50        | <50        |
| Gravimetric Heavy Hydrocarbons | µg/g       | 120                 | 50   | NA         | NA         | NA         | NA         | NA         | NA         |
| Moisture Content               | %          |                     | 0.1  | 5.2        | 5.8        | 8.4        | 4.5        | 4.6        | 4.4        |
| Surrogate                      | Unit       | Acceptable Limits   |      |            |            |            |            |            |            |
| Toluene-d8                     | % Recovery | 60-140              |      | 101        | 99         | 88         | 105        | 113        | 115        |
| Terphenyl                      | %          | 60-140              |      | 92         | 87         | 105        | 95         | 95         | 107        |

Certified By:





# Certificate of Analysis

AGAT WORK ORDER: 22H923608

PROJECT: 7-22-0040-31

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CLIENT NAME: TERRAPROBE INC

SAMPLING SITE: Centennial Heights Park

ATTENTION TO: Teresa Weatherhead

SAMPLED BY: T.S.

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

DATE RECEIVED: 2022-07-21

DATE REPORTED: 2022-07-27

**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.

**4121873-4121878** 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 calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified 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:



**Exceedance Summary**

AGAT WORK ORDER: 22H923608

PROJECT: 7-22-0040-31

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
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CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Teresa Weatherhead

| SAMPLEID | SAMPLE TITLE | GUIDELINE       | ANALYSIS PACKAGE                              | PARAMETER | UNIT | GUIDEVALUE | RESULT |
|----------|--------------|-----------------|---|-----------|------|------------|--------|
| 4121873  | CH SA1       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Lead      | µg/g | 120        | 152    |
| 4121873  | CH SA1       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Zinc      | µg/g | 290        | 486    |
| 4121875  | CH SA3       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Lead      | µg/g | 120        | 163    |
| 4121875  | CH SA3       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Zinc      | µg/g | 290        | 425    |
| 4121876  | CH SA4       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Mercury   | µg/g | 0.27       | 11.3   |
| 4121876  | CH SA4       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Zinc      | µg/g | 290        | 401    |
| 4121877  | CH SA5       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Lead      | µg/g | 120        | 151    |
| 4121877  | CH SA5       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Zinc      | µg/g | 290        | 460    |

## Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H923608

PROJECT: 7-22-0040-31

ATTENTION TO: Teresa Weatherhead

SAMPLING SITE: Centennial Heights Park

SAMPLED BY: T.S.

| Soil Analysis          |       |           |           |        |     |                |              |                    |       |          |                    |       |              |                   |       |
|------------------------|-------|-----------|-----------|--------|-----|----------------|--------------|--------------------|-------|----------|--------------------|-------|--------------|-------------------|-------|
| RPT Date: Jul 27, 2022 |       |           | DUPLICATE |        |     |                | Method Blank | REFERENCE MATERIAL |       |          | METHOD BLANK SPIKE |       | MATRIX SPIKE |                   |       |
| PARAMETER              | Batch | Sample Id | Dup #1    | Dup #2 | RPD | Measured Value |              | Acceptable Limits  |       | Recovery | Acceptable Limits  |       | Recovery     | Acceptable Limits |       |
|                        |       |           |           |        |     |                |              | Lower              | Upper |          | Lower              | Upper |              | Lower             | Upper |

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

|                                       |         |         |        |        |      |         |      |     |      |      |     |      |      |     |      |
|---------------------------------------|---------|---------|--------|--------|------|---------|------|-----|------|------|-----|------|------|-----|------|
| Antimony                              | 4121896 |         | <0.8   | <0.8   | NA   | < 0.8   | 121% | 70% | 130% | 84%  | 80% | 120% | 97%  | 70% | 130% |
| Arsenic                               | 4121896 |         | 5      | 5      | 0.0% | < 1     | 124% | 70% | 130% | 98%  | 80% | 120% | 102% | 70% | 130% |
| Barium                                | 4121896 |         | 45.6   | 45.2   | 0.9% | < 2.0   | 112% | 70% | 130% | 107% | 80% | 120% | 109% | 70% | 130% |
| Beryllium                             | 4121896 |         | 0.4    | <0.4   | NA   | < 0.4   | 86%  | 70% | 130% | 91%  | 80% | 120% | 92%  | 70% | 130% |
| Boron                                 | 4121896 |         | 6      | 6      | NA   | < 5     | 92%  | 70% | 130% | 105% | 80% | 120% | 88%  | 70% | 130% |
| Boron (Hot Water Soluble)             | 4121873 | 4121873 | 0.22   | 0.26   | NA   | < 0.10  | 96%  | 60% | 140% | 95%  | 70% | 130% | 89%  | 60% | 140% |
| Cadmium                               | 4121896 |         | <0.5   | <0.5   | NA   | < 0.5   | 114% | 70% | 130% | 101% | 80% | 120% | 103% | 70% | 130% |
| Chromium                              | 4121896 |         | 18     | 17     | NA   | < 5     | 121% | 70% | 130% | 115% | 80% | 120% | 109% | 70% | 130% |
| Cobalt                                | 4121896 |         | 7.0    | 6.8    | 2.9% | < 0.5   | 122% | 70% | 130% | 110% | 80% | 120% | 113% | 70% | 130% |
| Copper                                | 4121896 |         | 28.9   | 28.3   | 2.1% | < 1.0   | 108% | 70% | 130% | 113% | 80% | 120% | 108% | 70% | 130% |
| Lead                                  | 4121896 |         | 42     | 41     | 2.4% | < 1     | 109% | 70% | 130% | 110% | 80% | 120% | 101% | 70% | 130% |
| Molybdenum                            | 4121896 |         | 0.6    | 0.6    | NA   | < 0.5   | 121% | 70% | 130% | 113% | 80% | 120% | 115% | 70% | 130% |
| Nickel                                | 4121896 |         | 15     | 15     | 0.0% | < 1     | 116% | 70% | 130% | 111% | 80% | 120% | 110% | 70% | 130% |
| Selenium                              | 4121896 |         | <0.8   | <0.8   | NA   | < 0.8   | 100% | 70% | 130% | 98%  | 80% | 120% | 102% | 70% | 130% |
| Silver                                | 4121896 |         | <0.5   | <0.5   | NA   | < 0.5   | 112% | 70% | 130% | 104% | 80% | 120% | 104% | 70% | 130% |
| Thallium                              | 4121896 |         | <0.5   | <0.5   | NA   | < 0.5   | 126% | 70% | 130% | 106% | 80% | 120% | 105% | 70% | 130% |
| Uranium                               | 4121896 |         | 0.54   | <0.50  | NA   | < 0.50  | 122% | 70% | 130% | 109% | 80% | 120% | 111% | 70% | 130% |
| Vanadium                              | 4121896 |         | 29.4   | 27.4   | 7.0% | < 0.4   | 121% | 70% | 130% | 113% | 80% | 120% | 107% | 70% | 130% |
| Zinc                                  | 4121896 |         | 141    | 128    | 9.7% | < 5     | 108% | 70% | 130% | 101% | 80% | 120% | 88%  | 70% | 130% |
| Chromium, Hexavalent                  | 4125422 |         | <0.2   | <0.2   | NA   | < 0.2   | 97%  | 70% | 130% | 90%  | 80% | 120% | 101% | 70% | 130% |
| Cyanide, WAD                          | 4131845 |         | <0.040 | <0.040 | NA   | < 0.040 | 91%  | 70% | 130% | 110% | 80% | 120% | 109% | 70% | 130% |
| Mercury                               | 4121896 |         | 0.12   | 0.10   | NA   | < 0.10  | 125% | 70% | 130% | 99%  | 80% | 120% | 96%  | 70% | 130% |
| Electrical Conductivity (2:1)         | 4121873 | 4121873 | 0.166  | 0.170  | 2.4% | 0.010   | 109% | 80% | 120% |      |     |      |      |     |      |
| Sodium Adsorption Ratio (2:1) (Calc.) | 4121873 | 4121873 | 0.099  | 0.099  | 0.0% | NA      |      |     |      |      |     |      |      |     |      |
| pH, 2:1 CaCl2 Extraction              | 4124435 |         | 8.74   | 8.96   | 2.5% | NA      | 102% | 80% | 120% |      |     |      |      |     |      |

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

Certified By: \_\_\_\_\_



## Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H923608

PROJECT: 7-22-0040-31

ATTENTION TO: Teresa Weatherhead

SAMPLING SITE: Centennial Heights Park

SAMPLED BY: T.S.

### Trace Organics Analysis

RPT Date: Jul 27, 2022

| PARAMETER                                     | Batch   | Sample Id | DUPLICATE |        |     | Method Blank | REFERENCE MATERIAL |                   |       | METHOD BLANK SPIKE |                   |       | MATRIX SPIKE |                   |       |
|---|---------|-----------|-----------|--------|-----|--------------|--------------------|-------------------|-------|--------------------|-------------------|-------|--------------|-------------------|-------|
|   |         |           | Dup #1    | Dup #2 | RPD |              | Measured Value     | Acceptable Limits |       | Recovery           | Acceptable Limits |       | Recovery     | Acceptable Limits |       |
|   |         |           |           |        |     |              |                    | Lower             | Upper |                    | Lower             | Upper |              | Lower             | Upper |
| <b>O. Reg. 153(511) - PHCs F1 - F4 (Soil)</b> |         |           |           |        |     |              |                    |                   |       |                    |                   |       |              |                   |       |
| Benzene                                       | 4136162 |           | <0.02     | <0.02  | NA  | < 0.02       | 96%                | 60%               | 140%  | 101%               | 60%               | 140%  | 81%          | 60%               | 140%  |
| Toluene                                       | 4136162 |           | <0.05     | <0.05  | NA  | < 0.05       | 110%               | 60%               | 140%  | 113%               | 60%               | 140%  | 108%         | 60%               | 140%  |
| Ethylbenzene                                  | 4136162 |           | <0.05     | <0.05  | NA  | < 0.05       | 93%                | 60%               | 140%  | 102%               | 60%               | 140%  | 103%         | 60%               | 140%  |
| m & p-Xylene                                  | 4136162 |           | <0.05     | <0.05  | NA  | < 0.05       | 107%               | 60%               | 140%  | 99%                | 60%               | 140%  | 106%         | 60%               | 140%  |
| o-Xylene                                      | 4136162 |           | <0.05     | <0.05  | NA  | < 0.05       | 101%               | 60%               | 140%  | 103%               | 60%               | 140%  | 106%         | 60%               | 140%  |
| F1 (C6 - C10)                                 | 4136162 |           | <5        | <5     | NA  | < 5          | 89%                | 60%               | 140%  | 94%                | 60%               | 140%  | 95%          | 60%               | 140%  |
| F2 (C10 to C16)                               | 4120353 |           | < 10      | < 10   | NA  | < 10         | 85%                | 60%               | 140%  | 78%                | 60%               | 140%  | 76%          | 60%               | 140%  |
| F3 (C16 to C34)                               | 4120353 |           | < 50      | < 50   | NA  | < 50         | 92%                | 60%               | 140%  | 75%                | 60%               | 140%  | 74%          | 60%               | 140%  |
| F4 (C34 to C50)                               | 4120353 |           | < 50      | < 50   | NA  | < 50         | 99%                | 60%               | 140%  | 82%                | 60%               | 140%  | 85%          | 60%               | 140%  |

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

Certified By: \_\_\_\_\_





## Method Summary

**CLIENT NAME: TERRAPROBE INC**
**AGAT WORK ORDER: 22H923608**
**PROJECT: 7-22-0040-31**
**ATTENTION TO: Teresa Weatherhead**
**SAMPLING SITE: Centennial Heights Park**
**SAMPLED BY: T.S.**

| PARAMETER                             | AGAT S.O.P   | LITERATURE REFERENCE                               | ANALYTICAL TECHNIQUE    |
|---------------------------------------|--------------|--|-------------------------|
| <b>Soil Analysis</b>                  |              |  |                         |
| Antimony                              | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Arsenic                               | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Barium                                | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Beryllium                             | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Boron                                 | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Boron (Hot Water Soluble)             | MET-93-6104  | modified from EPA 6010D and MSA PART 3, CH 21      | ICP/OES                 |
| Cadmium                               | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Chromium                              | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Cobalt                                | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Copper                                | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Lead                                  | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Molybdenum                            | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Nickel                                | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Selenium                              | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Silver                                | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Thallium                              | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Uranium                               | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Vanadium                              | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Zinc                                  | MET 93 -6103 | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Chromium, Hexavalent                  | INOR-93-6068 | modified from EPA 3060 and EPA 7196                | SPECTROPHOTOMETER       |
| Cyanide, WAD                          | INOR-93-6052 | modified from ON MOECC E3015, SM 4500-CN- I, G-387 | TECHNICON AUTO ANALYZER |
| Mercury                               | MET-93-6103  | modified from EPA 7471B and SM 3112 B              | ICP-MS                  |
| Electrical Conductivity (2:1)         | INOR-93-6075 | modified from MSA PART 3, CH 14 and SM 2510 B      | PC TITRATE              |
| Sodium Adsorption Ratio (2:1) (Calc.) | INOR-93-6007 | modified from EPA 6010D & Analytical Protocol      | ICP/OES                 |
| pH, 2:1 CaCl <sub>2</sub> Extraction  | INOR-93-6075 | modified from EPA 9045D, MCKEAGUE 3.11 E3137       | PC TITRATE              |

## Method Summary

**CLIENT NAME: TERRAPROBE INC**
**AGAT WORK ORDER: 22H923608**
**PROJECT: 7-22-0040-31**
**ATTENTION TO: Teresa Weatherhead**
**SAMPLING SITE: Centennial Heights Park**
**SAMPLED BY: T.S.**

| PARAMETER                      | AGAT S.O.P  | LITERATURE REFERENCE                   | ANALYTICAL TECHNIQUE |
|--------------------------------|-------------|--|----------------------|
| <b>Trace Organics Analysis</b> |             |  |                      |
| Benzene                        | VOL-91-5009 | modified from CCME Tier 1 Method       | (P&T)GC/MS           |
| Toluene                        | VOL-91-5009 | modified from CCME Tier 1 Method       | (P&T)GC/MS           |
| Ethylbenzene                   | VOL-91-5009 | modified from CCME Tier 1 Method       | (P&T)GC/MS           |
| m & p-Xylene                   | VOL-91-5009 | modified from CCME Tier 1 Method       | (P&T)GC/MS           |
| o-Xylene                       | VOL-91-5009 | modified from CCME Tier 1 Method       | (P&T)GC/MS           |
| Xylenes (Total)                | VOL-91-5009 | modified from CCME Tier 1 Method       | (P&T)GC/MS           |
| F1 (C6 - C10)                  | VOL-91-5009 | modified from CCME Tier 1 Method       | (P&T)GC/FID          |
| F1 (C6 to C10) minus BTEX      | VOL-91-5009 | modified from CCME Tier 1 Method       | P&T GC/FID           |
| Toluene-d8                     | VOL-91-5009 | modified from EPA SW-846 5030C & 8260D | (P&T)GC/MS           |
| F2 (C10 to C16)                | VOL-91-5009 | modified from CCME Tier 1 Method       | GC/FID               |
| F3 (C16 to C34)                | VOL-91-5009 | modified from CCME Tier 1 Method       | GC/FID               |
| F4 (C34 to C50)                | VOL-91-5009 | modified from CCME Tier 1 Method       | GC/FID               |
| Gravimetric Heavy Hydrocarbons | VOL-91-5009 | modified from CCME Tier 1 Method       | BALANCE              |
| Moisture Content               | VOL-91-5009 | modified from CCME Tier 1 Method       | BALANCE              |
| Terphenyl                      | VOL-91-5009 | modified from CCME Tier 1 Method       | 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)

### Report Information:

Company: TerraProbe Inc.  
Contact: Teresa Weatherhead  
Address: 903 Boston Street, Unit-22  
Stoney Creek, ON L8E 5P5  
Phone: 905-643-7560 Fax: 905-643-7559  
Reports to be sent to:  
1. Email: tweatherhead@terraprobe.ca  
2. Email:

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Excess Soils R406  Sewer Use  
 Sanitary  Storm

Table 1 Indicate One  
 Ind/Com  
 Res/Park  
 Agriculture

Table          Indicate One  
Region

Regulation 558  Prov. Water Quality Objectives (PWQO)  
 Other

Soil Texture (Check One)  
 Coarse  
 Fine

CCME Indicate One

### Laboratory Use Only

Work Order #: 22H923608  
Cooler Quantity: LG COOLER  
Arrival Temperatures: 7.6 | 7.8 | 8.1  
5.3 | 4.6 | 4.9  
Custody Seal Intact:  Yes  No  N/A  
Notes: BAGGED ICE

### Project Information:

Project: 7-22-0040-31  
Site Location: Centenna Heights Park  
Sampled By: T.S.  
AGAT Quote #: 546349 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

### 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

### Invoice Information:

Bill To Same: Yes  No

Company: Loxema R.  
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/<br>Special Instructions | Y / N | O. Reg 153                             |                                     |  |                   |  |      |      |     |   |                                   |  |   |               | O. Reg 558 | O. Reg 406 |  |  | Potentially Hazardous or High Concentration (Y/N) |  |  |  |
|-----------------------|--------------|--------------|-----------------|---------------|-----------------------------------|-------|--|-------------------------------------|--|-------------------|--|------|------|-----|---|-----------------------------------|--|---|---------------|------------|------------|--|--|---|--|--|--|
|                       |              |              |                 |               |                                   |       | Field Filtered - Metals, Hg, CrVI, DOC | Metals & Inorganics                 | Metals - <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB | BTEX, F1-F4, PHCs | Analyze F4G if required <input type="checkbox"/> Yes <input type="checkbox"/> No | PAHs | PCBs | VOC | Landfill Disposal Characterization TCLP: <input type="checkbox"/> MB1 <input type="checkbox"/> VOCs <input type="checkbox"/> ABNS <input type="checkbox"/> PAHs <input type="checkbox"/> PCBs | Excess Soils SPLP Rainwater Leach | SPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs | Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4 | Salt - EC/SAR |            |            |  |  |   |  |  |  |
| CH SA1                | July 20/22   | AM           | 3               | S             |                                   |       |  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/>  |                   |  |      |      |     |   |                                   |  |   |               |            |            |  |  |   |  |  |  |
| CH SA2                |              | AM           |                 |               |                                   |       | <input checked="" type="checkbox"/>    | <input checked="" type="checkbox"/> |  |                   |  |      |      |     |   |                                   |  |   |               |            |            |  |  |   |  |  |  |
| CH SA3                |              | AM           |                 |               |                                   |       | <input checked="" type="checkbox"/>    | <input checked="" type="checkbox"/> |  |                   |  |      |      |     |   |                                   |  |   |               |            |            |  |  |   |  |  |  |
| CH SA4                |              | AM           |                 |               |                                   |       | <input checked="" type="checkbox"/>    | <input checked="" type="checkbox"/> |  |                   |  |      |      |     |   |                                   |  |   |               |            |            |  |  |   |  |  |  |
| CH SA5                |              | AM           |                 |               |                                   |       | <input checked="" type="checkbox"/>    | <input checked="" type="checkbox"/> |  |                   |  |      |      |     |   |                                   |  |   |               |            |            |  |  |   |  |  |  |
| DUP 1                 |              | AM           |                 |               |                                   |       | <input checked="" type="checkbox"/>    | <input checked="" type="checkbox"/> |  |                   |  |      |      |     |   |                                   |  |   |               |            |            |  |  |   |  |  |  |
|                       |              | AM           |                 |               |                                   |       |  |                                     |  |                   |  |      |      |     |   |                                   |  |   |               |            |            |  |  |   |  |  |  |
|                       |              | AM           |                 |               |                                   |       |  |                                     |  |                   |  |      |      |     |   |                                   |  |   |               |            |            |  |  |   |  |  |  |
|                       |              | AM           |                 |               |                                   |       |  |                                     |  |                   |  |      |      |     |   |                                   |  |   |               |            |            |  |  |   |  |  |  |
|                       |              | AM           |                 |               |                                   |       |  |                                     |  |                   |  |      |      |     |   |                                   |  |   |               |            |            |  |  |   |  |  |  |
|                       |              | AM           |                 |               |                                   |       |  |                                     |  |                   |  |      |      |     |   |                                   |  |   |               |            |            |  |  |   |  |  |  |
|                       |              | AM           |                 |               |                                   |       |  |                                     |  |                   |  |      |      |     |   |                                   |  |   |               |            |            |  |  |   |  |  |  |

|  |                            |                        |  |                            |                     |
|--|----------------------------|------------------------|--|----------------------------|---------------------|
| Samples Relinquished By (Print Name and Sign):<br><u>Honey Patel</u> | Date:<br><u>July 21/22</u> | Time:<br><u>1:35pm</u> | Samples Received By (Print Name and Sign):<br><u>STMC John</u> | Date:<br><u>July 21/22</u> | Time:<br><u>2pm</u> |
| Samples Relinquished By (Print Name and Sign):<br><u>STMC John</u>   | Date:<br><u>July 21/22</u> | Time:<br><u>3pm</u>    | Samples Received By (Print Name and Sign):<br><u>A. Riccio</u> | Date:                      | Time:               |
| Samples Relinquished By (Print Name and Sign):                       | Date:                      | Time:                  | Samples Received By (Print Name and Sign):                     | Date:                      | Time:               |

22 JUL 21 4:53 PM  
Page 1 of 1  
N#: T **130449**



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

ATTENTION TO: Teresa Weatherhead

PROJECT: 7-22-0040-31

AGAT WORK ORDER: 22H934486

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Aug 24, 2022

PAGES (INCLUDING COVER): 13

VERSION\*: 1

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

\*Notes

**Disclaimer:**

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



## Certificate of Analysis

AGAT WORK ORDER: 22H934486

PROJECT: 7-22-0040-31

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

CLIENT NAME: TERRAPROBE INC

SAMPLING SITE: Centennial Heights Park

ATTENTION TO: Teresa Weatherhead

SAMPLED BY: H.P

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

DATE RECEIVED: 2022-08-18

DATE REPORTED: 2022-08-24

| Parameter                             | Unit     | SAMPLE DESCRIPTION: |       | CH SA1A    | CH SA4A    | CH SA4B    | CH SA6     | CH SA7     | CH SA8     | CH SA9     | DUP2       |            |
|---------------------------------------|----------|---------------------|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                                       |          | SAMPLE TYPE:        |       | Soil       | Soil       | Soil       | Soil       | Soil       | Soil       | Soil       | Soil       | Soil       |
|                                       |          | DATE SAMPLED:       |       | 2022-08-17 | 2022-08-17 | 2022-08-17 | 2022-08-17 | 2022-08-17 | 2022-08-17 | 2022-08-17 | 2022-08-17 | 2022-08-17 |
|                                       |          | G / S               | RDL   | 4220015    | 4220089    | 4220090    | 4220091    | 4220095    | 4220096    | 4220097    | 4220098    |            |
| 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     | 6          | 6          | 7          | 9          | 8          | 6          | 6          | 7          |            |
| Barium                                | µg/g     | 220                 | 2.0   | 46.9       | 52.1       | 52.6       | 50.6       | 46.4       | 46.8       | 45.5       | 55.0       |            |
| Beryllium                             | µg/g     | 2.5                 | 0.4   | 0.5        | 0.4        | 0.5        | 0.6        | 0.7        | 0.5        | 0.5        | 0.5        |            |
| Boron                                 | µg/g     | 36                  | 5     | 6          | <5         | <5         | 11         | 9          | <5         | 7          | <5         |            |
| Boron (Hot Water Soluble)             | µg/g     | NA                  | 0.10  | 0.37       | 0.34       | 0.43       | 0.29       | 0.24       | 0.34       | 0.39       | 0.40       |            |
| Cadmium                               | µg/g     | 1.2                 | 0.5   | 1.1        | 1.1        | 1.0        | 2.8        | 0.9        | 1.0        | 1.1        | 1.1        |            |
| Chromium                              | µg/g     | 70                  | 5     | 13         | 14         | 13         | 14         | 15         | 14         | 14         | 14         |            |
| Cobalt                                | µg/g     | 21                  | 0.5   | 5.3        | 6.1        | 6.1        | 6.4        | 7.3        | 5.7        | 5.3        | 6.4        |            |
| Copper                                | µg/g     | 92                  | 1.0   | 16.8       | 14.5       | 15.2       | 14.8       | 24.8       | 15.5       | 15.2       | 15.2       |            |
| Lead                                  | µg/g     | 120                 | 1     | 151        | 119        | 114        | 330        | 146        | 140        | 150        | 128        |            |
| Molybdenum                            | µg/g     | 2                   | 0.5   | <0.5       | <0.5       | 0.5        | 0.6        | 0.5        | <0.5       | <0.5       | <0.5       |            |
| Nickel                                | µg/g     | 82                  | 1     | 12         | 12         | 12         | 13         | 16         | 12         | 12         | 12         |            |
| Selenium                              | µg/g     | 1.5                 | 0.8   | <0.8       | <0.8       | <0.8       | <0.8       | <0.8       | <0.8       | <0.8       | <0.8       |            |
| Silver                                | µg/g     | 0.5                 | 0.5   | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       |            |
| Thallium                              | µg/g     | 1                   | 0.5   | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       | <0.5       |            |
| Uranium                               | µg/g     | 2.5                 | 0.50  | 0.50       | 0.53       | 0.55       | <0.50      | 0.57       | 0.54       | <0.50      | 0.54       |            |
| Vanadium                              | µg/g     | 86                  | 0.4   | 23.9       | 27.1       | 26.2       | 26.3       | 26.6       | 25.6       | 25.3       | 27.4       |            |
| Zinc                                  | µg/g     | 290                 | 5     | 518        | 404        | 390        | 920        | 451        | 472        | 496        | 434        |            |
| Chromium, Hexavalent                  | µg/g     | 0.66                | 0.2   | <0.2       | <0.2       | <0.2       | <0.2       | <0.2       | <0.2       | <0.2       | <0.2       |            |
| Cyanide, WAD                          | µg/g     | 0.051               | 0.040 | <0.040     | <0.040     | <0.040     | <0.040     | <0.040     | <0.040     | <0.040     | <0.040     |            |
| Mercury                               | µg/g     | 0.27                | 0.10  | <0.10      | <0.10      | <0.10      | <0.10      | <0.10      | <0.10      | <0.10      | <0.10      |            |
| Electrical Conductivity (2:1)         | mS/cm    | 0.57                | 0.005 | 0.153      | 0.140      | 0.133      | 0.129      | 0.134      | 0.140      | 0.198      | 0.145      |            |
| Sodium Adsorption Ratio (2:1) (Calc.) | N/A      | 2.4                 | N/A   | 0.052      | 0.037      | 0.042      | 0.034      | 0.050      | 0.051      | 0.076      | 0.032      |            |
| pH, 2:1 CaCl2 Extraction              | pH Units |                     | NA    | 7.15       | 7.29       | 7.27       | 7.29       | 7.39       | 7.13       | 7.40       | 7.21       |            |

Certified By:





**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 22H934486

PROJECT: 7-22-0040-31

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

CLIENT NAME: TERRAPROBE INC

SAMPLING SITE: Centennial Heights Park

ATTENTION TO: Teresa Weatherhead

SAMPLED BY: H.P

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

DATE RECEIVED: 2022-08-18

DATE REPORTED: 2022-08-24

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.

4220015-4220098 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:







## Certificate of Analysis

AGAT WORK ORDER: 22H934486

PROJECT: 7-22-0040-31

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

CLIENT NAME: TERRAPROBE INC  
SAMPLING SITE: Centennial Heights Park

ATTENTION TO: Teresa Weatherhead  
SAMPLED BY: H.P

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

DATE RECEIVED: 2022-08-18

DATE REPORTED: 2022-08-24

| Parameter                 | Unit | SAMPLE DESCRIPTION: |      | CH SA1A    | CH SA4A    | CH SA4B    | CH SA6     | CH SA7     | CH SA8     | CH SA9     | DUP2       |            |
|---------------------------|------|---------------------|------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                           |      | SAMPLE TYPE:        |      | Soil       | Soil       | Soil       | Soil       | Soil       | Soil       | Soil       | Soil       | Soil       |
|                           |      | DATE SAMPLED:       |      | 2022-08-17 | 2022-08-17 | 2022-08-17 | 2022-08-17 | 2022-08-17 | 2022-08-17 | 2022-08-17 | 2022-08-17 | 2022-08-17 |
|                           |      | G / S               | RDL  | 4220015    | 4220089    | 4220090    | 4220091    | 4220095    | 4220096    | 4220097    | 4220098    |            |
| Naphthalene               | µg/g | 0.09                | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Acenaphthylene            | µg/g | 0.093               | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Acenaphthene              | µg/g | 0.072               | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Fluorene                  | µg/g | 0.12                | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Phenanthrene              | µg/g | 0.69                | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Anthracene                | µg/g | 0.16                | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Fluoranthene              | µg/g | 0.56                | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Pyrene                    | µg/g | 1                   | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Benz(a)anthracene         | µg/g | 0.36                | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Chrysene                  | µg/g | 2.8                 | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Benzo(b)fluoranthene      | µg/g | 0.47                | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Benzo(k)fluoranthene      | µg/g | 0.48                | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Benzo(a)pyrene            | µg/g | 0.3                 | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Indeno(1,2,3-cd)pyrene    | µg/g | 0.46                | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Dibenz(a,h)anthracene     | µg/g | 0.1                 | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Benzo(g,h,i)perylene      | µg/g | 0.68                | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| 1 and 2 Methylnaphthalene | µg/g | 0.59                | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      | <0.05      |            |
| Moisture Content          | %    |                     | 0.1  | 4.0        | 3.9        | 3.7        | 4.8        | 3.0        | 4.5        | 5.7        | 3.7        |            |
| Surrogate                 | Unit | Acceptable Limits   |      |            |            |            |            |            |            |            |            |            |
| Naphthalene-d8            | %    | 50-140              |      | 110        | 100        | 90         | 70         | 75         | 75         | 100        | 90         |            |
| Acridine-d9               | %    | 50-140              |      | 85         | 65         | 70         | 60         | 70         | 75         | 75         | 70         |            |
| Terphenyl-d14             | %    | 50-140              |      | 85         | 95         | 100        | 105        | 65         | 100        | 100        | 85         |            |

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.

4220015-4220098 Results are based on the dry weight of the soil.

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

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 22H934486

PROJECT: 7-22-0040-31

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

CLIENT NAME: TERRAPROBE INC

SAMPLING SITE: Centennial Heights Park

ATTENTION TO: Teresa Weatherhead

SAMPLED BY: H.P

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

DATE RECEIVED: 2022-08-18

DATE REPORTED: 2022-08-24

| Parameter                         | Unit       | SAMPLE DESCRIPTION: |      | CH SA6     | CH SA7     | CH SA8     | CH SA9     |
|-----------------------------------|------------|---------------------|------|------------|------------|------------|------------|
|                                   |            | SAMPLE TYPE:        |      | Soil       | Soil       | Soil       | Soil       |
|                                   |            | DATE SAMPLED:       |      | 2022-08-17 | 2022-08-17 | 2022-08-17 | 2022-08-17 |
|                                   |            | G / S               | RDL  | 4220091    | 4220095    | 4220096    | 4220097    |
| 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      |
| m & p-Xylene                      | µg/g       |                     | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      |
| o-Xylene                          | µg/g       |                     | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      |
| Xylenes (Total)                   | µg/g       | 0.05                | 0.05 | <0.05      | <0.05      | <0.05      | <0.05      |
| F1 (C6 - 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        |
| F2 (C10 to C16) minus Naphthalene | µg/g       |                     | 10   | <10        | <10        | <10        | <10        |
| F3 (C16 to C34)                   | µg/g       | 240                 | 50   | <50        | <50        | <50        | <50        |
| F3 (C16 to C34) minus PAHs        | µg/g       |                     | 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  | 4.8        | 3.0        | 4.5        | 5.7        |
| Surrogate                         | Unit       | Acceptable Limits   |      |            |            |            |            |
| Toluene-d8                        | % Recovery | 60-140              |      | 77         | 84         | 88         | 98         |
| Terphenyl                         | %          | 60-140              |      | 76         | 91         | 98         | 93         |

Certified By:







## Certificate of Analysis

AGAT WORK ORDER: 22H934486

PROJECT: 7-22-0040-31

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

CLIENT NAME: TERRAPROBE INC  
SAMPLING SITE: Centennial Heights Park

ATTENTION TO: Teresa Weatherhead  
SAMPLED BY: H.P

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

DATE RECEIVED: 2022-08-18

DATE REPORTED: 2022-08-24

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.

4220091-4220097 Results are based on sample dry weight.  
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 calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



**Exceedance Summary**

AGAT WORK ORDER: 22H934486

PROJECT: 7-22-0040-31

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

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Teresa Weatherhead

| SAMPLEID | SAMPLE TITLE | GUIDELINE       | ANALYSIS PACKAGE                              | PARAMETER | UNIT | GUIDEVALUE | RESULT |
|----------|--------------|-----------------|---|-----------|------|------------|--------|
| 4220015  | CH SA1A      | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Lead      | µg/g | 120        | 151    |
| 4220015  | CH SA1A      | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Zinc      | µg/g | 290        | 518    |
| 4220089  | CH SA4A      | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Zinc      | µg/g | 290        | 404    |
| 4220090  | CH SA4B      | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Zinc      | µg/g | 290        | 390    |
| 4220091  | CH SA6       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Cadmium   | µg/g | 1.2        | 2.8    |
| 4220091  | CH SA6       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Lead      | µg/g | 120        | 330    |
| 4220091  | CH SA6       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Zinc      | µg/g | 290        | 920    |
| 4220095  | CH SA7       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Lead      | µg/g | 120        | 146    |
| 4220095  | CH SA7       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Zinc      | µg/g | 290        | 451    |
| 4220096  | CH SA8       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Lead      | µg/g | 120        | 140    |
| 4220096  | CH SA8       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Zinc      | µg/g | 290        | 472    |
| 4220097  | CH SA9       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Lead      | µg/g | 120        | 150    |
| 4220097  | CH SA9       | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Zinc      | µg/g | 290        | 496    |
| 4220098  | DUP2         | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Lead      | µg/g | 120        | 128    |
| 4220098  | DUP2         | ON T1 S RPI/ICC | O. Reg. 153(511) - Metals & Inorganics (Soil) | Zinc      | µg/g | 290        | 434    |

## Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H934486

PROJECT: 7-22-0040-31

ATTENTION TO: Teresa Weatherhead

SAMPLING SITE: Centennial Heights Park

SAMPLED BY: H.P

| Soil Analysis          |       |           |           |        |     |                |              |                    |       |          |                    |       |              |                   |       |
|------------------------|-------|-----------|-----------|--------|-----|----------------|--------------|--------------------|-------|----------|--------------------|-------|--------------|-------------------|-------|
| RPT Date: Aug 24, 2022 |       |           | DUPLICATE |        |     |                | Method Blank | REFERENCE MATERIAL |       |          | METHOD BLANK SPIKE |       | MATRIX SPIKE |                   |       |
| PARAMETER              | Batch | Sample Id | Dup #1    | Dup #2 | RPD | Measured Value |              | Acceptable Limits  |       | Recovery | Acceptable Limits  |       | Recovery     | Acceptable Limits |       |
|                        |       |           |           |        |     |                |              | Lower              | Upper |          | Lower              | Upper |              | Lower             | Upper |

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

|                                       |         |         |        |        |       |         |      |     |      |      |     |      |      |     |      |
|---------------------------------------|---------|---------|--------|--------|-------|---------|------|-----|------|------|-----|------|------|-----|------|
| Antimony                              | 4214508 |         | <0.8   | <0.8   | NA    | < 0.8   | 113% | 70% | 130% | 101% | 80% | 120% | 103% | 70% | 130% |
| Arsenic                               | 4214508 |         | 12     | 12     | 0.0%  | < 1     | 126% | 70% | 130% | 98%  | 80% | 120% | 110% | 70% | 130% |
| Barium                                | 4214508 |         | 20.6   | 22.3   | 7.9%  | < 2.0   | 113% | 70% | 130% | 103% | 80% | 120% | 104% | 70% | 130% |
| Beryllium                             | 4214508 |         | <0.4   | <0.4   | NA    | < 0.4   | 118% | 70% | 130% | 93%  | 80% | 120% | 99%  | 70% | 130% |
| Boron                                 | 4214508 |         | 13     | 12     | NA    | < 5     | 90%  | 70% | 130% | 93%  | 80% | 120% | 102% | 70% | 130% |
| Boron (Hot Water Soluble)             | 4220015 | 4220015 | 0.37   | 0.38   | NA    | < 0.10  | 102% | 60% | 140% | 120% | 70% | 130% | 108% | 60% | 140% |
| Cadmium                               | 4214508 |         | 0.6    | 0.7    | NA    | < 0.5   | 84%  | 70% | 130% | 103% | 80% | 120% | 105% | 70% | 130% |
| Chromium                              | 4214508 |         | 7      | 8      | NA    | < 5     | 118% | 70% | 130% | 104% | 80% | 120% | 120% | 70% | 130% |
| Cobalt                                | 4214508 |         | 6.1    | 6.5    | 6.3%  | < 0.5   | 125% | 70% | 130% | 104% | 80% | 120% | 121% | 70% | 130% |
| Copper                                | 4214508 |         | 11.7   | 12.2   | 4.2%  | < 1.0   | 105% | 70% | 130% | 105% | 80% | 120% | 111% | 70% | 130% |
| Lead                                  | 4214508 |         | 73     | 131    | 56.9% | < 1     | 118% | 70% | 130% | 107% | 80% | 120% | 108% | 70% | 130% |
| Molybdenum                            | 4214508 |         | 1.1    | 1.3    | NA    | < 0.5   | 123% | 70% | 130% | 110% | 80% | 120% | 126% | 70% | 130% |
| Nickel                                | 4214508 |         | 8      | 9      | 11.8% | < 1     | 124% | 70% | 130% | 104% | 80% | 120% | 117% | 70% | 130% |
| Selenium                              | 4214508 |         | <0.8   | <0.8   | NA    | < 0.8   | 111% | 70% | 130% | 104% | 80% | 120% | 107% | 70% | 130% |
| Silver                                | 4214508 |         | <0.5   | <0.5   | NA    | < 0.5   | 114% | 70% | 130% | 102% | 80% | 120% | 97%  | 70% | 130% |
| Thallium                              | 4214508 |         | <0.5   | <0.5   | NA    | < 0.5   | 123% | 70% | 130% | 104% | 80% | 120% | 102% | 70% | 130% |
| Uranium                               | 4214508 |         | 0.71   | 0.71   | NA    | < 0.50  | 128% | 70% | 130% | 108% | 80% | 120% | 114% | 70% | 130% |
| Vanadium                              | 4214508 |         | 11.4   | 11.8   | 3.4%  | < 0.4   | 122% | 70% | 130% | 106% | 80% | 120% | 123% | 70% | 130% |
| Zinc                                  | 4214508 |         | 380    | 459    | 18.8% | < 5     | 114% | 70% | 130% | 106% | 80% | 120% | 123% | 70% | 130% |
| Chromium, Hexavalent                  | 4223719 |         | <0.2   | <0.2   | NA    | < 0.2   | 97%  | 70% | 130% | 90%  | 80% | 120% | 100% | 70% | 130% |
| Cyanide, WAD                          | 4217224 |         | <0.040 | <0.040 | NA    | < 0.040 | 92%  | 70% | 130% | 107% | 80% | 120% | 108% | 70% | 130% |
| Mercury                               | 4214508 |         | <0.10  | <0.10  | NA    | < 0.10  | 123% | 70% | 130% | 105% | 80% | 120% | 109% | 70% | 130% |
| Electrical Conductivity (2:1)         | 4214508 |         | 0.992  | 1.03   | 3.8%  | < 0.005 | 95%  | 80% | 120% |      |     |      |      |     |      |
| Sodium Adsorption Ratio (2:1) (Calc.) | 4214508 |         | 6.47   | 6.52   | 0.8%  | NA      |      |     |      |      |     |      |      |     |      |
| pH, 2:1 CaCl2 Extraction              | 4223719 |         | 7.00   | 6.98   | 0.3%  | NA      | 100% | 80% | 120% |      |     |      |      |     |      |

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

Certified By: \_\_\_\_\_



## Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H934486

PROJECT: 7-22-0040-31

ATTENTION TO: Teresa Weatherhead

SAMPLING SITE: Centennial Heights Park

SAMPLED BY: H.P

### Trace Organics Analysis

| RPT Date: Aug 24, 2022                             |         |           | DUPLICATE |        |     | Method Blank | REFERENCE MATERIAL |                   |       | METHOD BLANK SPIKE |                   |       | MATRIX SPIKE |                   |       |
|--|---------|-----------|-----------|--------|-----|--------------|--------------------|-------------------|-------|--------------------|-------------------|-------|--------------|-------------------|-------|
| PARAMETER  | Batch   | Sample Id | Dup #1    | Dup #2 | RPD |              | Measured Value     | Acceptable Limits |       | Recovery           | Acceptable Limits |       | Recovery     | Acceptable Limits |       |
|  |         |           |           |        |     |              |                    | Lower             | Upper |                    | Lower             | Upper |              | Lower             | Upper |
| O. Reg. 153(511) - PAHs (Soil)                     |         |           |           |        |     |              |                    |                   |       |                    |                   |       |              |                   |       |
| Naphthalene  | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 91%                | 50%               | 140%  | 108%               | 50%               | 140%  | 108%         | 50%               | 140%  |
| Acenaphthylene                                     | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 105%               | 50%               | 140%  | 85%                | 50%               | 140%  | 95%          | 50%               | 140%  |
| Acenaphthene                                       | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 97%                | 50%               | 140%  | 98%                | 50%               | 140%  | 100%         | 50%               | 140%  |
| Fluorene   | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 99%                | 50%               | 140%  | 80%                | 50%               | 140%  | 90%          | 50%               | 140%  |
| Phenanthrene                                       | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 71%                | 50%               | 140%  | 83%                | 50%               | 140%  | 83%          | 50%               | 140%  |
| Anthracene   | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 108%               | 50%               | 140%  | 103%               | 50%               | 140%  | 100%         | 50%               | 140%  |
| Fluoranthene                                       | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 90%                | 50%               | 140%  | 78%                | 50%               | 140%  | 98%          | 50%               | 140%  |
| Pyrene   | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 88%                | 50%               | 140%  | 80%                | 50%               | 140%  | 93%          | 50%               | 140%  |
| Benz(a)anthracene                                  | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 69%                | 50%               | 140%  | 90%                | 50%               | 140%  | 93%          | 50%               | 140%  |
| Chrysene   | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 66%                | 50%               | 140%  | 88%                | 50%               | 140%  | 105%         | 50%               | 140%  |
| Benzo(b)fluoranthene                               | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 90%                | 50%               | 140%  | 103%               | 50%               | 140%  | 102%         | 50%               | 140%  |
| Benzo(k)fluoranthene                               | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 78%                | 50%               | 140%  | 103%               | 50%               | 140%  | 77%          | 50%               | 140%  |
| Benzo(a)pyrene                                     | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 100%               | 50%               | 140%  | 110%               | 50%               | 140%  | 83%          | 50%               | 140%  |
| Indeno(1,2,3-cd)pyrene                             | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 93%                | 50%               | 140%  | 100%               | 50%               | 140%  | 78%          | 50%               | 140%  |
| Dibenz(a,h)anthracene                              | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 82%                | 50%               | 140%  | 95%                | 50%               | 140%  | 93%          | 50%               | 140%  |
| Benzo(g,h,i)perylene                               | 4222685 |           | <0.05     | <0.05  | NA  | < 0.05       | 102%               | 50%               | 140%  | 105%               | 50%               | 140%  | 113%         | 50%               | 140%  |
| O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil) |         |           |           |        |     |              |                    |                   |       |                    |                   |       |              |                   |       |
| Benzene  | 4216585 |           | <0.02     | <0.02  | NA  | < 0.02       | 89%                | 60%               | 140%  | 99%                | 60%               | 140%  | 93%          | 60%               | 140%  |
| Toluene  | 4216585 |           | <0.05     | <0.05  | NA  | < 0.05       | 96%                | 60%               | 140%  | 94%                | 60%               | 140%  | 101%         | 60%               | 140%  |
| Ethylbenzene                                       | 4216585 |           | <0.05     | <0.05  | NA  | < 0.05       | 92%                | 60%               | 140%  | 94%                | 60%               | 140%  | 92%          | 60%               | 140%  |
| m & p-Xylene                                       | 4216585 |           | <0.05     | <0.05  | NA  | < 0.05       | 95%                | 60%               | 140%  | 102%               | 60%               | 140%  | 96%          | 60%               | 140%  |
| o-Xylene   | 4216585 |           | <0.05     | <0.05  | NA  | < 0.05       | 104%               | 60%               | 140%  | 92%                | 60%               | 140%  | 91%          | 60%               | 140%  |
| F1 (C6 - C10)                                      | 4216585 |           | <5        | <5     | NA  | < 5          | 97%                | 60%               | 140%  | 92%                | 60%               | 140%  | 103%         | 60%               | 140%  |
| F2 (C10 to C16)                                    | 4219189 |           | <10       | <10    | NA  | < 10         | 106%               | 60%               | 140%  | 80%                | 60%               | 140%  | 69%          | 60%               | 140%  |
| F3 (C16 to C34)                                    | 4219189 |           | <50       | <50    | NA  | < 50         | 109%               | 60%               | 140%  | 70%                | 60%               | 140%  | 70%          | 60%               | 140%  |
| F4 (C34 to C50)                                    | 4219189 |           | <50       | <50    | NA  | < 50         | 102%               | 60%               | 140%  | 82%                | 60%               | 140%  | 78%          | 60%               | 140%  |

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

Certified By: \_\_\_\_\_





## Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H934486

PROJECT: 7-22-0040-31

ATTENTION TO: Teresa Weatherhead

SAMPLING SITE: Centennial Heights Park

SAMPLED BY: H.P

| PARAMETER                             | AGAT S.O.P   | LITERATURE REFERENCE                               | ANALYTICAL TECHNIQUE    |
|---------------------------------------|--------------|--|-------------------------|
| Soil Analysis                         |              |  |                         |
| Antimony                              | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Arsenic                               | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Barium                                | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Beryllium                             | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Boron                                 | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Boron (Hot Water Soluble)             | MET-93-6104  | modified from EPA 6010D and MSA PART 3, CH 21      | ICP/OES                 |
| Cadmium                               | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Chromium                              | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Cobalt                                | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Copper                                | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Lead                                  | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Molybdenum                            | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Nickel                                | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Selenium                              | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Silver                                | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Thallium                              | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Uranium                               | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Vanadium                              | MET-93-6103  | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Zinc                                  | MET 93 -6103 | modified from EPA 3050B and EPA 6020B and ON MOECC | ICP-MS                  |
| Chromium, Hexavalent                  | INOR-93-6068 | modified from EPA 3060 and EPA 7196                | SPECTROPHOTOMETER       |
| Cyanide, WAD                          | INOR-93-6052 | modified from ON MOECC E3015, SM 4500-CN- I, G-387 | TECHNICON AUTO ANALYZER |
| Mercury                               | MET-93-6103  | modified from EPA 7471B and SM 3112 B              | ICP-MS                  |
| Electrical Conductivity (2:1)         | INOR-93-6075 | modified from MSA PART 3, CH 14 and SM 2510 B      | PC TITRATE              |
| Sodium Adsorption Ratio (2:1) (Calc.) | INOR-93-6007 | modified from EPA 6010D & Analytical Protocol      | ICP/OES                 |
| pH, 2:1 CaCl <sub>2</sub> Extraction  | INOR-93-6075 | modified from EPA 9045D, MCKEAGUE 3.11 E3137       | PC TITRATE              |

## Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H934486

PROJECT: 7-22-0040-31

ATTENTION TO: Teresa Weatherhead

SAMPLING SITE: Centennial Heights Park

SAMPLED BY: H.P

| PARAMETER                         | AGAT S.O.P  | LITERATURE REFERENCE                   | ANALYTICAL TECHNIQUE |
|-----------------------------------|-------------|--|----------------------|
| Trace Organics Analysis           |             |  |                      |
| Naphthalene                       | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Acenaphthylene                    | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Acenaphthene                      | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Fluorene                          | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Phenanthrene                      | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Anthracene                        | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Fluoranthene                      | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Pyrene                            | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Benz(a)anthracene                 | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Chrysene                          | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Benzo(b)fluoranthene              | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Benzo(k)fluoranthene              | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Benzo(a)pyrene                    | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Indeno(1,2,3-cd)pyrene            | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Dibenz(a,h)anthracene             | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Benzo(g,h,i)perylene              | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| 1 and 2 Methylnaphthalene         | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Naphthalene-d8                    | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Acridine-d9                       | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Terphenyl-d14                     | ORG-91-5106 | modified from EPA 3570 and EPA 8270E   | GC/MS                |
| Moisture Content                  | VOL-91-5009 | modified from CCME Tier 1 Method       | BALANCE              |
| Benzene                           | VOL-91-5009 | modified from CCME Tier 1 Method       | (P&T)GC/MS           |
| Toluene                           | VOL-91-5009 | modified from CCME Tier 1 Method       | (P&T)GC/MS           |
| Ethylbenzene                      | VOL-91-5009 | modified from CCME Tier 1 Method       | (P&T)GC/MS           |
| m & p-Xylene                      | VOL-91-5009 | modified from CCME Tier 1 Method       | (P&T)GC/MS           |
| o-Xylene                          | VOL-91-5009 | modified from CCME Tier 1 Method       | (P&T)GC/MS           |
| Xylenes (Total)                   | VOL-91-5009 | modified from CCME Tier 1 Method       | (P&T)GC/MS           |
| F1 (C6 - C10)                     | VOL-91-5009 | modified from CCME Tier 1 Method       | (P&T)GC/FID          |
| F1 (C6 to C10) minus BTEX         | VOL-91-5009 | modified from CCME Tier 1 Method       | P&T GC/FID           |
| Toluene-d8                        | VOL-91-5009 | modified from EPA SW-846 5030C & 8260D | (P&T)GC/MS           |
| F2 (C10 to C16)                   | VOL-91-5009 | modified from CCME Tier 1 Method       | GC/FID               |
| F2 (C10 to C16) minus Naphthalene | VOL-91-5009 | modified from CCME Tier 1 Method       | GC/FID               |
| F3 (C16 to C34)                   | VOL-91-5009 | modified from CCME Tier 1 Method       | GC/FID               |



## Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H934486

PROJECT: 7-22-0040-31

ATTENTION TO: Teresa Weatherhead

SAMPLING SITE: Centennial Heights Park

SAMPLED BY: H.P

| PARAMETER                      | AGAT S.O.P  | LITERATURE REFERENCE             | ANALYTICAL TECHNIQUE |
|--------------------------------|-------------|----------------------------------|----------------------|
| F3 (C16 to C34) minus PAHs     | VOL-91-5009 | modified from CCME Tier 1 Method | GC/FID               |
| F4 (C34 to C50)                | VOL-91-5009 | modified from CCME Tier 1 Method | GC/FID               |
| Gravimetric Heavy Hydrocarbons | VOL-91-5009 | modified from CCME Tier 1 Method | BALANCE              |
| Terphenyl                      | VOL-91-5009 | modified from CCME Tier 1 Method | GC/FID               |









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

ATTENTION TO: Teresa Weatherhead

PROJECT: 7-22-0040-31

AGAT WORK ORDER: 22H934489

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Aug 24, 2022

PAGES (INCLUDING COVER): 10

VERSION\*: 1

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

\*Notes

Disclaimer:

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



## Certificate of Analysis

AGAT WORK ORDER: 22H934489

PROJECT: 7-22-0040-31

5835 COOPERS AVENUE  
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<http://www.agatlabs.com>

CLIENT NAME: TERRAPROBE INC

SAMPLING SITE: Centennial Heights Park

ATTENTION TO: Teresa Weatherhead

SAMPLED BY: H.P

### O. Reg. 558 Metals and Inorganics

DATE RECEIVED: 2022-08-18

DATE REPORTED: 2022-08-24

| Parameter                         | Unit | SAMPLE DESCRIPTION: TCLP |       |         |
|-----------------------------------|------|--------------------------|-------|---------|
|                                   |      | G / S                    | RDL   | 4219594 |
| Arsenic Leachate                  | mg/L | 2.5                      | 0.010 | <0.010  |
| Barium Leachate                   | mg/L | 100                      | 0.010 | 0.261   |
| Boron Leachate                    | mg/L | 500                      | 0.050 | <0.050  |
| Cadmium Leachate                  | mg/L | 0.5                      | 0.010 | <0.010  |
| Chromium Leachate                 | mg/L | 5                        | 0.050 | <0.050  |
| Lead Leachate                     | mg/L | 5                        | 0.010 | <0.010  |
| Mercury Leachate                  | mg/L | 0.1                      | 0.01  | <0.01   |
| Selenium Leachate                 | mg/L | 1                        | 0.010 | <0.010  |
| Silver Leachate                   | mg/L | 5                        | 0.010 | <0.010  |
| Uranium Leachate                  | mg/L | 10                       | 0.050 | <0.050  |
| Fluoride Leachate                 | mg/L | 150                      | 0.10  | 0.12    |
| Cyanide Leachate                  | mg/L | 20                       | 0.05  | <0.05   |
| (Nitrate + Nitrite) as N Leachate | mg/L | 1000                     | 0.70  | <0.70   |

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg. 558 - Schedule IV Leachate Quality Criteria  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.  
Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



*Nvine Basly*



## Certificate of Analysis

AGAT WORK ORDER: 22H934489

PROJECT: 7-22-0040-31

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CLIENT NAME: TERRAPROBE INC

SAMPLING SITE: Centennial Heights Park

ATTENTION TO: Teresa Weatherhead

SAMPLED BY: H.P

### O. Reg. 558 - Benzo(a) pyrene

DATE RECEIVED: 2022-08-18

DATE REPORTED: 2022-08-24

|                         |      | SAMPLE DESCRIPTION: |       | TCLP       |
|-------------------------|------|---------------------|-------|------------|
|                         |      | SAMPLE TYPE:        |       | Soil       |
|                         |      | DATE SAMPLED:       |       | 2022-08-17 |
| Parameter               | Unit | G / S               | RDL   | 4219594    |
| Benzo(a)pyrene Leachate | mg/L | 0.001               | 0.001 | <0.001     |
| Surrogate               | Unit | Acceptable Limits   |       |            |
| Acridine-d9             | %    | 50-140              |       | 100        |
| Naphthalene-d8          | %    | 50-140              |       | 102        |
| Terphenyl-d14           | %    | 50-140              |       | 79         |

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg. 558 - Schedule IV Leachate Quality Criteria  
 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.

4219594 The sample was leached according to Regulation 558 protocol. Analysis was performed on the leachate.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 22H934489

PROJECT: 7-22-0040-31

5835 COOPERS AVENUE  
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CLIENT NAME: TERRAPROBE INC  
 SAMPLING SITE: Centennial Heights Park

ATTENTION TO: Teresa Weatherhead  
 SAMPLED BY: H.P

### O. Reg. 558 - VOCs

DATE RECEIVED: 2022-08-18

DATE REPORTED: 2022-08-24

| SAMPLE DESCRIPTION:           |            | TCLP              |       |         |
|-------------------------------|------------|-------------------|-------|---------|
| SAMPLE TYPE:                  |            | Soil              |       |         |
| DATE SAMPLED:                 |            | 2022-08-17        |       |         |
| Parameter                     | Unit       | G / S             | RDL   | 4219594 |
| Vinyl Chloride Leachate       | mg/L       | 0.2               | 0.030 | <0.030  |
| 1,1 Dichloroethene Leachate   | mg/L       | 1.4               | 0.020 | <0.020  |
| Dichloromethane Leachate      | mg/L       | 5.0               | 0.030 | <0.030  |
| Methyl Ethyl Ketone Leachate  | mg/L       | 200               | 0.090 | <0.090  |
| Chloroform Leachate           | mg/L       | 10.0              | 0.020 | <0.020  |
| 1,2-Dichloroethane Leachate   | mg/L       | 0.5               | 0.020 | <0.020  |
| Carbon Tetrachloride Leachate | mg/L       | 0.5               | 0.020 | <0.020  |
| Benzene Leachate              | mg/L       | 0.5               | 0.020 | <0.020  |
| Trichloroethene Leachate      | mg/L       | 5.0               | 0.020 | <0.020  |
| Tetrachloroethene Leachate    | mg/L       | 3.0               | 0.050 | <0.050  |
| Chlorobenzene Leachate        | mg/L       | 8.0               | 0.010 | <0.010  |
| 1,2-Dichlorobenzene Leachate  | mg/L       | 20.0              | 0.010 | <0.010  |
| 1,4-Dichlorobenzene Leachate  | mg/L       | 0.5               | 0.010 | <0.010  |
| Surrogate                     | Unit       | Acceptable Limits |       |         |
| Toluene-d8                    | % Recovery | 50-140            |       | 107     |
| 4-Bromofluorobenzene          | % Recovery | 50-140            |       | 103     |

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg. 558 - Schedule IV Leachate Quality Criteria  
 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.

4219594 Sample was prepared using Regulation 558 protocol and a zero headspace extractor.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 22H934489

PROJECT: 7-22-0040-31

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<http://www.agatlabs.com>

CLIENT NAME: TERRAPROBE INC  
 SAMPLING SITE: Centennial Heights Park

ATTENTION TO: Teresa Weatherhead  
 SAMPLED BY: H.P

### Total PCBs (soil)

DATE RECEIVED: 2022-08-18

DATE REPORTED: 2022-08-24

|                           |      | SAMPLE DESCRIPTION: |     | TCLP       |
|---------------------------|------|---------------------|-----|------------|
|                           |      | SAMPLE TYPE:        |     | Soil       |
|                           |      | DATE SAMPLED:       |     | 2022-08-17 |
| Parameter                 | Unit | G / S               | RDL | 4219594    |
| Polychlorinated Biphenyls | µg/g |                     | 0.1 | <0.1       |
| Moisture Content          | %    |                     | 0.1 | 5.7        |
| Surrogate                 | Unit | Acceptable Limits   |     |            |
| Decachlorobiphenyl        | %    | 60-130              |     | 84         |

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

4219594 Results are based on the dry weight of soil extracted.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

## Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H934489

PROJECT: 7-22-0040-31

ATTENTION TO: Teresa Weatherhead

SAMPLING SITE: Centennial Heights Park

SAMPLED BY: H.P

| Soil Analysis          |       |           |           |        |     |                |              |                    |       |          |                    |       |              |                   |
|------------------------|-------|-----------|-----------|--------|-----|----------------|--------------|--------------------|-------|----------|--------------------|-------|--------------|-------------------|
| RPT Date: Aug 24, 2022 |       |           | DUPLICATE |        |     |                | Method Blank | REFERENCE MATERIAL |       |          | METHOD BLANK SPIKE |       | MATRIX SPIKE |                   |
| PARAMETER              | Batch | Sample Id | Dup #1    | Dup #2 | RPD | Measured Value |              | Acceptable Limits  |       | Recovery | Acceptable Limits  |       | Recovery     | Acceptable Limits |
|                        |       |           |           |        |     |                | Lower        | Upper              | Lower |          | Upper              | Lower |              | Upper             |

**O. Reg. 558 Metals and Inorganics**

|                                   |         |         |        |        |      |         |      |     |      |      |     |      |      |     |      |
|-----------------------------------|---------|---------|--------|--------|------|---------|------|-----|------|------|-----|------|------|-----|------|
| Arsenic Leachate                  | 4219594 | 4219594 | <0.010 | <0.010 | NA   | < 0.010 | 102% | 70% | 130% | 107% | 80% | 120% | 105% | 70% | 130% |
| Barium Leachate                   | 4219594 | 4219594 | 0.261  | 0.260  | 0.3% | < 0.010 | 112% | 70% | 130% | 100% | 80% | 120% | 99%  | 70% | 130% |
| Boron Leachate                    | 4219594 | 4219594 | <0.050 | <0.050 | NA   | < 0.050 | 94%  | 70% | 130% | 101% | 80% | 120% | 112% | 70% | 130% |
| Cadmium Leachate                  | 4219594 | 4219594 | <0.010 | <0.010 | NA   | < 0.010 | 99%  | 70% | 130% | 103% | 80% | 120% | 99%  | 70% | 130% |
| Chromium Leachate                 | 4219594 | 4219594 | <0.050 | <0.050 | NA   | < 0.050 | 92%  | 70% | 130% | 99%  | 80% | 120% | 104% | 70% | 130% |
| Lead Leachate                     | 4219594 | 4219594 | <0.010 | <0.010 | NA   | < 0.010 | 95%  | 70% | 130% | 93%  | 80% | 120% | 93%  | 70% | 130% |
| Mercury Leachate                  | 4219594 | 4219594 | <0.01  | <0.01  | NA   | < 0.01  | 94%  | 70% | 130% | 94%  | 80% | 120% | 93%  | 70% | 130% |
| Selenium Leachate                 | 4219594 | 4219594 | <0.010 | <0.010 | NA   | < 0.010 | 101% | 70% | 130% | 100% | 80% | 120% | 104% | 70% | 130% |
| Silver Leachate                   | 4219594 | 4219594 | <0.010 | <0.010 | NA   | < 0.010 | 95%  | 70% | 130% | 103% | 80% | 120% | 91%  | 70% | 130% |
| Uranium Leachate                  | 4219594 | 4219594 | <0.050 | <0.050 | NA   | < 0.050 | 98%  | 70% | 130% | 109% | 80% | 120% | 109% | 70% | 130% |
| Fluoride Leachate                 | 4219594 | 4219594 | 0.12   | 0.12   | NA   | < 0.10  | 102% | 90% | 110% | 106% | 90% | 110% | 97%  | 70% | 130% |
| Cyanide Leachate                  | 4219594 | 4219594 | <0.05  | <0.05  | NA   | < 0.05  | 91%  | 70% | 130% | 112% | 80% | 120% | 108% | 70% | 130% |
| (Nitrate + Nitrite) as N Leachate | 4219594 | 4219594 | <0.70  | <0.70  | NA   | < 0.70  | 98%  | 80% | 120% | 96%  | 80% | 120% | 106% | 70% | 130% |

Comments: NA signifies Not Applicable.

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

Certified By:



## Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H934489

PROJECT: 7-22-0040-31

ATTENTION TO: Teresa Weatherhead

SAMPLING SITE: Centennial Heights Park

SAMPLED BY: H.P

### Trace Organics Analysis

| RPT Date: Aug 24, 2022        |         |           | DUPLICATE |         |     | Method Blank | REFERENCE MATERIAL |                   |       | METHOD BLANK SPIKE |                   |       | MATRIX SPIKE |                   |       |
|-------------------------------|---------|-----------|-----------|---------|-----|--------------|--------------------|-------------------|-------|--------------------|-------------------|-------|--------------|-------------------|-------|
| PARAMETER                     | Batch   | Sample Id | Dup #1    | Dup #2  | RPD |              | Measured Value     | Acceptable Limits |       | Recovery           | Acceptable Limits |       | Recovery     | Acceptable Limits |       |
|                               |         |           |           |         |     |              |                    | Lower             | Upper |                    | Lower             | Upper |              | Lower             | Upper |
| O. Reg. 558 - Benzo(a) pyrene |         |           |           |         |     |              |                    |                   |       |                    |                   |       |              |                   |       |
| Benzo(a)pyrene Leachate       | 4208181 |           | < 0.001   | < 0.001 | NA  | < 0.001      | 88%                | 50%               | 140%  | 102%               | 50%               | 140%  | 100%         | 50%               | 140%  |
| O. Reg. 558 - VOCs            |         |           |           |         |     |              |                    |                   |       |                    |                   |       |              |                   |       |
| Vinyl Chloride Leachate       | 4217435 |           | <0.030    | <0.030  | NA  | < 0.030      | 73%                | 50%               | 140%  | 115%               | 50%               | 140%  | 86%          | 50%               | 140%  |
| 1,1 Dichloroethene Leachate   | 4217435 |           | <0.020    | <0.020  | NA  | < 0.020      | 99%                | 50%               | 140%  | 83%                | 60%               | 130%  | 96%          | 50%               | 140%  |
| Dichloromethane Leachate      | 4217435 |           | <0.030    | <0.030  | NA  | < 0.030      | 106%               | 50%               | 140%  | 87%                | 60%               | 130%  | 77%          | 50%               | 140%  |
| Methyl Ethyl Ketone Leachate  | 4217435 |           | <0.090    | <0.090  | NA  | < 0.090      | 97%                | 50%               | 140%  | 87%                | 50%               | 140%  | 98%          | 50%               | 140%  |
| Chloroform Leachate           | 4217435 |           | <0.020    | <0.020  | NA  | < 0.020      | 102%               | 50%               | 140%  | 82%                | 60%               | 130%  | 103%         | 50%               | 140%  |
| 1,2-Dichloroethane Leachate   | 4217435 |           | <0.020    | <0.020  | NA  | < 0.020      | 102%               | 50%               | 140%  | 78%                | 60%               | 130%  | 107%         | 50%               | 140%  |
| Carbon Tetrachloride Leachate | 4217435 |           | <0.020    | <0.020  | NA  | < 0.020      | 91%                | 50%               | 140%  | 77%                | 60%               | 130%  | 93%          | 50%               | 140%  |
| Benzene Leachate              | 4217435 |           | <0.020    | <0.020  | NA  | < 0.020      | 119%               | 50%               | 140%  | 77%                | 60%               | 130%  | 93%          | 50%               | 140%  |
| Trichloroethene Leachate      | 4217435 |           | <0.020    | <0.020  | NA  | < 0.020      | 98%                | 50%               | 140%  | 112%               | 60%               | 130%  | 102%         | 50%               | 140%  |
| Tetrachloroethene Leachate    | 4217435 |           | <0.050    | <0.050  | NA  | < 0.050      | 101%               | 50%               | 140%  | 113%               | 60%               | 130%  | 110%         | 50%               | 140%  |
| Chlorobenzene Leachate        | 4217435 |           | <0.010    | <0.010  | NA  | < 0.010      | 90%                | 50%               | 140%  | 96%                | 60%               | 130%  | 100%         | 50%               | 140%  |
| 1,2-Dichlorobenzene Leachate  | 4217435 |           | <0.010    | <0.010  | NA  | < 0.010      | 90%                | 50%               | 140%  | 90%                | 60%               | 130%  | 94%          | 50%               | 140%  |
| 1,4-Dichlorobenzene Leachate  | 4217435 |           | <0.010    | <0.010  | NA  | < 0.010      | 91%                | 50%               | 140%  | 94%                | 60%               | 130%  | 96%          | 50%               | 140%  |
| Total PCBs (soil)             |         |           |           |         |     |              |                    |                   |       |                    |                   |       |              |                   |       |
| Polychlorinated Biphenyls     | 4204111 |           | < 0.1     | < 0.1   | NA  | < 0.1        | 96%                | 60%               | 140%  | 96%                | 60%               | 140%  | 98%          | 60%               | 140%  |

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

Certified By: \_\_\_\_\_





## Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H934489

PROJECT: 7-22-0040-31

ATTENTION TO: Teresa Weatherhead

SAMPLING SITE: Centennial Heights Park

SAMPLED BY: H.P

| PARAMETER                         | AGAT S.O.P   | LITERATURE REFERENCE                                 | ANALYTICAL TECHNIQUE    |
|-----------------------------------|--------------|--|-------------------------|
| Soil Analysis                     |              |  |                         |
| Arsenic Leachate                  | MET-93-6103  | EPA 1311 & modified from EPA 6020B ICP-MS            |                         |
| Barium Leachate                   | MET-93-6103  | EPA 1311 & modified from EPA 6020B ICP-MS            |                         |
| Boron Leachate                    | MET-93-6103  | EPA 1311 & modified from EPA 6020B ICP-MS            |                         |
| Cadmium Leachate                  | MET-93-6103  | EPA 1311 & modified from EPA 6020B ICP-MS            |                         |
| Chromium Leachate                 | MET-93-6103  | EPA 1311 & modified from EPA 6020B ICP-MS            |                         |
| Lead Leachate                     | MET-93-6103  | EPA 1311 & modified from EPA 6020B ICP-MS            |                         |
| Mercury Leachate                  | MET-93-6103  | EPA 1311 & modified from EPA 6020B ICP-MS            |                         |
| Selenium Leachate                 | MET-93-6103  | EPA 1311 & modified from EPA 6020B ICP-MS            |                         |
| Silver Leachate                   | MET-93-6103  | EPA 1311 & modified from EPA 6020B ICP-MS            |                         |
| Uranium Leachate                  | MET-93-6103  | EPA 1311 & modified from EPA 6020B ICP-MS            |                         |
| Fluoride Leachate                 | INOR-93-6018 | EPA 1311 & modified from<br>SM4500-F-C               | ION SELECTIVE ELECTRODE |
| Cyanide Leachate                  | INOR-93-6052 | EPA 1311 modified from MOE 3015<br>SM 4500 CN-I,G387 | TECHNICON AUTO ANALYZER |
| (Nitrate + Nitrite) as N Leachate | INOR-93-6053 | EPA SW 846-1311 & modified from<br>SM 4500 - NO3- I  | LACHAT FIA              |



## Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 22H934489

PROJECT: 7-22-0040-31

ATTENTION TO: Teresa Weatherhead

SAMPLING SITE: Centennial Heights Park

SAMPLED BY: H.P

| PARAMETER                     | AGAT S.O.P   | LITERATURE REFERENCE                          | ANALYTICAL TECHNIQUE |
|-------------------------------|--------------|---|----------------------|
| Trace Organics Analysis       |              |   |                      |
| Benzo(a)pyrene Leachate       | ORG-91-5105  | modified from EPA 3510C and EPA 8270E         | GC/MS                |
| Acridine-d9                   | ORG-91-5105  | modified from EPA 3510C and EPA 8270E         | GC/MS                |
| Naphthalene-d8                | ORG-91-5105  | modified from EPA 3510C and EPA 8270E         | GC/MS                |
| Terphenyl-d14                 | ORG-91-5105  | modified from EPA 3510C and EPA 8270E         | GC/MS                |
| Vinyl Chloride Leachate       | VOL-91-5001  | EPA 1311, modified from EPA 5030C & EPA 8260D | (P&T)GC/MS           |
| 1,1 Dichloroethene Leachate   | VOL-91-5001  | EPA 1311, modified from EPA 5030C & EPA 8260D | (P&T)GC/MS           |
| Dichloromethane Leachate      | VOL-91-5001  | EPA 1311, modified from EPA 5030C & EPA 8260D | (P&T)GC/MS           |
| Methyl Ethyl Ketone Leachate  | VOL-91-5001  | EPA 1311, modified from EPA 5030C & EPA 8260D | (P&T)GC/MS           |
| Chloroform Leachate           | VOL-91-5001  | EPA 1311, modified from EPA 5030C & EPA 8260D | (P&T)GC/MS           |
| 1,2-Dichloroethane Leachate   | VOL-91-5001  | EPA 1311, modified from EPA 5030C & EPA 8260D | (P&T)GC/MS           |
| Carbon Tetrachloride Leachate | VOL-91-5001  | EPA 1311, modified from EPA 5030C & EPA 8260D | (P&T)GC/MS           |
| Benzene Leachate              | VOL-91-5001  | EPA 1311, modified from EPA 5030C & EPA 8260D | (P&T)GC/MS           |
| Trichloroethene Leachate      | VOL-91-5001  | EPA 1311, modified from EPA 5030C & EPA 8260D | (P&T)GC/MS           |
| Tetrachloroethene Leachate    | VOL-91-5001  | EPA 1311, modified from EPA 5030C & EPA 8260D | (P&T)GC/MS           |
| Chlorobenzene Leachate        | VOL-91-5001  | EPA 1311, modified from EPA 5030C & EPA 8260D | (P&T)GC/MS           |
| 1,2-Dichlorobenzene Leachate  | VOL-91-5001  | EPA 1311, modified from EPA 5030C & EPA 8260D | (P&T)GC/MS           |
| 1,4-Dichlorobenzene Leachate  | VOL-91-5001  | EPA 1311, modified from EPA 5030C & EPA 8260D | (P&T)GC/MS           |
| Toluene-d8                    | VOL-91-5001  | modified from EPA 5030B & EPA 8260D           | (P&T)GC/MS           |
| 4-Bromofluorobenzene          | VOL-91- 5001 | modified from EPA 5030B & EPA 8260D           | (P&T)GC/MS           |
| Polychlorinated Biphenyls     | ORG-91-5113  | modified from EPA SW-846 3541 & 8082          | GC/ECD               |
| Decachlorobiphenyl            | ORG-91-5113  | modified from EPA SW-846 3541 & 8082          | GC/ECD               |
| Moisture Content              | ORG-91-5009  | modified from CCME Tier 1 Method              | BALANCE              |

