

Phase Two Environmental Site Assessment

9541 Weston Road, Vaughan, Ontario

City of Vaughan
Draft Report
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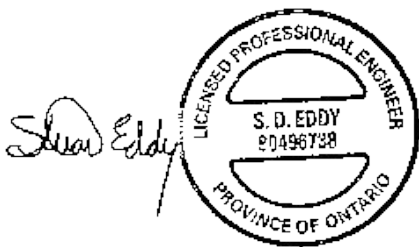
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Distribution

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1 Summary

Englobe Corp. (Englobe) was retained by the City of Vaughan (herein referred to as the “Client”) to complete a Phase Two Environmental Site Assessment (ESA) for the property located at 9541 Weston Road in Vaughan, Ontario (herein referred to as the “Site” or “Phase Two Property”). The Site is located in the southeastern quadrant of the intersection of Weston Road and Ashberry Boulevard in the City of Vaughan, Ontario. Compass direction described in this report is referenced to “Project North” which runs parallel to Weston Road, located immediately to the west of the Site. The Site location is shown on Figure 1 in Appendix A.

It is understood that this Phase Two ESA is being completed for due diligence purposes in support of proposed fire station development. Englobe understands that filing a Record of Site Condition (RSC) with the Ministry of Environment, Conservation and Parks (MECP) is not required at this time.

The Phase Two Property is an irregularly-shaped parcel of land with approximately 4,092 m² in area, which is currently occupied with an asphalt paved parking lot and grassed area. It is located adjacent to the east side of Weston Road, in the southeastern quadrant of the intersection of Weston Road and Ashberry Boulevard.

Englobe has completed a Phase One ESA for the Site in 2022. The Phase One ESA identified current and/or historical Potentially Contaminating Activities (PCAs) at the Site and/or surrounding properties, which resulted in Areas of Potential Environmental Concern (APECs) at the Site.

The two (2) APECs, one associated with onsite PCAs and one APEC associated with offsite PCAs, identified on the Site from the Phase One ESA are presented in the table below and provided on the Figure 3 in Appendix A.

Areas of Potential Environmental Concern

APEC	Location of APEC	Potentially Contaminating Activity (PCA)	Location of PCA	Contaminants of Potential Concern*	Media Potentially Impacted
APEC 1	Entire Site	Historical use of fill materials # 30 - Importation of Fill Materials of Unknown Quality	On-site	Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN, EC, SAR and pH, PHCs, BTEX, VOCs, PAHs, PCBs, OCPs	Soil
APEC 2	The north portion of the Site	Registered as a waste generator of photo processing wastes and inorganic laboratory chemicals # Undefined PCA No.	Off-site	Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN, EC, SAR and pH, PHCs, BTEX, VOCs, PAHs	Soil and Groundwater

Notes:*

PHCs - Petroleum Hydrocarbon Fractions F1 to F4
BTEX - Benzene, Toluene, Ethylbenzene and Xylenes
VOCs - Volatile Organic Compounds
PAHs - Polycyclic Aromatic Hydrocarbons
PCBs- Polychlorinated Biphenyl
OCPs - Organochlorine Pesticides
B-HWS-Hot Water Soluble Boron
EC-Electrical Conductivity
SAR-Sodium Absorption Ratio

Based on the findings of the Phase One ESA, a Phase Two ESA was required and recommended. Consequently, a Phase Two ESA was carried out in order to further investigate soil and groundwater quality at the Site.

This Phase Two ESA was completed in accordance with the Ontario Regulation 153/04 (O. Reg. 153/04), as amended. The Phase Two ESA consisted of drilling 15 boreholes (BH1 to BH13, BH15 and BH16), including eight (8) deep boreholes and seven (7) shallow boreholes. Five (5) boreholes (BH1, BH8, BH9, BH12 and BH15) were instrumented with monitoring wells. Representative soil and groundwater samples were collected and submitted to the laboratory for analysis of Metals and Inorganics (M&I), Petroleum Hydrocarbon Fractions F1 to F4 (PHCs), including benzene, toluene, ethylbenzene and xylenes (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs), Organochlorine pesticides (OCPs), pH and/or grain size.

Based on the results of this Phase Two ESA, the soil stratigraphy at the investigative locations generally comprises fill (sand and gravel) overlying native sand with some silt. The groundwater levels measured from the monitoring wells ranged from 1.18 to 7.76 m bgs. The water table is within the silt layer. The aquifer encountered during this Phase Two ESA appears to be an unconfined aquifer. The estimated thickness of the asphalt layer (except for BH4, BH13, BH15, and BH16 covered by a surficial topsoil layer with an average thickness of 0.2 m) ranged from 0.08 to 0.11 m. The granular base/ subbase material at the borehole locations consisted of sand and gravel that ranged from 0.12 to 0.3 m. The thickness of native sandy silt or silt/silty sand with some clay ranges from 0.3 m to 8.2 m. No bedrock was encountered during the Phase Two ESA drilling.

The soil and groundwater analytical results were compared to the Generic Site Condition Standards presented in the MECP document entitled "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act," dated April 15, 2011. For the purposes of this assessment, the soil analytical results have been compared to the Table 2: Full Depth Generic Site Condition Standards in a Potable Groundwater Condition (hereinafter referred to as the "MECP Table 2 Standards"). Specifically, the soil analytical results were compared to the Standards listed under Industrial/Commercial/Community (ICC) Property Use and medium to fine textured soils. The groundwater analytical results were compared to the Standards listed under All Types of Property Use.

According to the soil analytical results, concentrations of the EC and SAR from soil samples at various borehole locations were detected at the concentrations greater than the applicable MECP Table 2 ICC Standards. Based on the findings of Phase One ESA and Phase Two ESA Site visit, the Site was historically and currently used as a vehicle parking lot. Thus, de-icing activities and/or substances appear to be applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both during the winter season. Per Section 49.1 of O.Reg.153/04, the presence of road salt compounds (e.g., sodium, chloride, EC, SAR) is not considered to exceed the Regulation if the application to surfaces is for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. The analytical results of the remaining soil samples tested for M&I, PHCs, BTEX, VOCs and PCBs and PAHs were either below the laboratory detection limits or met the applicable Table 2 ICC Standards.

According to the groundwater analytical results, concentrations of chloride and sodium parameters from groundwater sample (BHMW15) were detected at the concentrations greater than the applicable MECP Table 2 Standards. Considering the location of BH15 is close to the parking lot and pedestrian sidewalk in the Vellore Hall Park, de-icing activities and/or substances appear to be applied to surfaces for the safety of pedestrian traffic under conditions of snow or ice or both during the winter season. The analytical results of the remaining groundwater samples tested for M&I, PHCs, BTEX, VOCs and PCBs were either below the laboratory detection limits or met the applicable Table 2 Standards.

The statements made in this Executive Summary are subject to the same Property and Confidentiality as contained below and Limitations included in Section 7.1 and should be read in conjunction with the remainder of this report.

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If tests have been performed, the results of these tests are valid only for the sample described in this report.

Subcontractors of Englobe who may have performed laboratory work are duly evaluated according to the purchasing procedure of our quality system. For further information or details, please contact your project manager.”

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2 Introduction

Englobe Corp. (Englobe) was retained by the City of Vaughan (herein referred to as the “Client”) to complete a Phase Two Environmental Site Assessment (ESA) for the property located at 9541 Weston Road in Vaughan, Ontario (herein referred to as the “Site” or “Phase Two Property”). The Site is located in the southeastern quadrant of the intersection of Weston Road and Ashberry Boulevard in the City of Vaughan, Ontario. The compass direction described in this report is referenced to “Project North”, which runs parallel to Weston Road, located immediately to the west of the Site. The Site location is shown in Figure 1 in Appendix A.

Englobe has also completed a Phase One ESA for the Site in April 2022. The Phase One ESA identified current and/or historical Potentially Contaminating Activities (PCAs) at the Site and/or surrounding properties within the Phase one Study Area, which resulted in Areas of Potential Environmental Concern (APECs) at the Site. Consequently, a Phase Two ESA was recommended in order to further investigate the soil and groundwater quality at the Site in the identified APECs.

Written authorization to proceed with this work was provided by the Client on December 16, 2022. The proposed Phase Two ESA work plan associated with this assessment was implemented between January 13, 2022 to March 16, 2022. It is understood that this Phase Two ESA is being completed for due diligence purposes in support of proposed fire station development. Englobe understands that filing a Record of Site Condition (RSC) with the Ministry of Environment, Conservation and Parks (MECP) is not required at this time.

2.1 Site Description

A summary of the Site details is presented in the following table.

Table 1 Site Details

Property	Detail
Site Area	Approximately 4,092 m ²
Municipal Address	9541 Weston Road, Vaughan, Ontario
PIN(s)	033290297
Legal Description (s)	PT LT 17 CON 5, VAUGHAN, PT 1, 65R10012, VAUGHAN
Geodetic Coordinates to Centroid (approx..)	UTM Zone 17T 616000 m E 4854295 m N 1983 North American Datum

Notes: PIN - Property Identification Number
UTM - Universal Transverse Mercator

The Phase Two Property was vacant with no buildings or structures during the Phase One ESA Site Visit and Phase Two ESA by Englobe. The ground cover comprised of an asphalt paved parking lot and grassed area part of Vellore Hall Park. The Site is accessed through Weston Road at west portion of the Site.

The Phase Two Property is an irregularly shaped parcel of land with approximately 4,092 m² in area. The Site is surrounded by residential/commercial community and institutional buildings to the north and west, woodlands to the south and east. Weston Road runs north-south at west adjacent of the Site. The Study Area and Surrounding Land Use is presented on Figure 2 in Appendix A.

2.2 Property Ownership

Englobe obtained the land parcel information from GeoWarehouse on December 15, 2021, regarding the current and past owners of the land parcels comprising the Site. The results of the land title search are shown in the following table.

Table 2 Property Ownership

Date	Property Owner
Prior to 1999	Unknown
1999-Present	The Corporation of the City of Vaughan

2.3 Current and Proposed Future Uses

At the time of this Phase Two ESA, the Site is currently used as a parking lot with no building structures. Based on the information provided by the Client, it is understood that the Site will be redeveloped as a fire station.

Englobe also understands that filing a Record of Site Condition (RSC) with the Ministry of Environment, Conservation and Parks (MECP) is not required at this time.

2.4 Applicable Site Condition Standard

The soil and groundwater analytical results were compared to the standards as presented in the MECP document entitled “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act,” dated April 15, 2011 (hereinafter referred to as the MECP Standards).

The MECP Standards provide a number of distinct criteria based on certain parameters, including current/proposed land use of the Site, whether groundwater in the area of the Site is relied upon as a source of potable water, the texture of the soils encountered at the Site, and whether any part of the Site would be classified as an environmentally sensitive area, including consideration of the pH of soils encountered.

Land Use

The Site is currently a parking lot and a portion of the grassed area with no structures for industrial use purposes. According to the information provided by the Client, it is understood that the Site will be redeveloped as a fire station as a future development plan. As a conservative consideration, the Residential/Parkland/Institutional land use Standards are applicable to the Site.

Groundwater Use

Based on a review of the well records presented in the ERIS report and the MECP well record Map (MECP, 2021), domestic water supply wells were existed within the Study Area. Thus, potable groundwater condition standards are applicable to the Site.

Soil Texture

Based on the results of the Geotechnical Investigation Report, Completed by Englobe in March 2022,, the soil stratigraphy at the borehole locations primarily comprises of an asphalt pavement/topsoil, followed by sand and gravel (base/subbase material) overlying native sandy silt/silt and silty sand with some clay to the maximum drilling depth. Based on the grain size analysis from boreholes BH2, BH8

and BH12, the soil was identified 99.1%, 77.2% and 78.5% particles to be medium to fine-textured (less than 75 µm). Thus, the medium to fine-textured soil standards were applied.

Environmentally Sensitive Areas

As per the findings of the Phase One ESA, no Provincially Significant Wetlands (PSWs), Areas of Natural and Scientific Interest (ANSIs) or water bodies were identified at the Site or within a 30 m radius of the Site.

Areas of Natural Significance

As per the findings of the Phase One ESA, no areas of natural significance were identified at the Site or within a 30 m radius of the Site.

Soil pH

Soil samples were collected for both surface and subsurface soils and submitted to the laboratory for pH analysis. The pH values of surface soils from the soil samples (BH1-1, BH8-2, BH9-1, BH12-1 and BH15-1) ranged from 7.51 to 7.76; The pH value of subsurface soil reported for the soil samples (BH3-5 and BH13-6) ranged from 7.52 to 7.57. Therefore, soil pH values are within 5 to 9 for surface soil and 5 to 11 for subsurface soil. Considering the pH values of the soil samples are within the acceptable range, thus, the Site is not considered an environmentally sensitive site.

Shallow Soil/Depth to Groundwater

Bedrock was not encountered at a depth of less than 2.0 m bgs across the Site. In addition, groundwater was recorded at depths ranging between 1.18 m and 7.76 m bgs at the Site based on the water level measurements on March 9, 2022. As such, the shallow soil Standards are not considered applicable for the Site.

Site Condition Standard Determination

Based on the above-noted information, the applicable Site Condition Standards are those listed in Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition (hereinafter referred to as the "MECP Table 2 Standards"). Specifically, the soil analytical results were compared to the Standards listed under Industrial/Commercial/Community (ICC) Property Use and for medium to fine-textured soils. The groundwater analytical results were compared to the Standards listed under All Types of Property Use.

3 Background

3.1 Physical Setting

The Phase Two Property is an irregularly shaped parcel of land with approximately 4,092 m² in area and is currently occupied with a parking lot and grassed area. Based on aerial photographs from Phase One ESA, several buildings/structures were historically located on the property; however, all buildings appear to have been demolished and/or removed from the Site. The Site has been developed as a parking lot since 2002 and has remained the same property use to present.

The Site is currently zoned as open space by the City of Vaughan and is surrounded by a mix of residential, commercial, and agricultural land uses (City of Vaughan Zoning By-law and key Maps, 2021). The Site is bordered by Weston Road to the west, and woodlands/parks to the south and east.

The Site is located within an area with quaternary geology consisting of Halton Till, including predominantly silt to silty clay matrix, high in matrix carbonate content and clast poor Pleistocene. The primary physiographic landform in the area of the Site is Bevelled Till Plains, with surficial geology of clayey silt to sandy silt. The bedrock geology consists of Georgina Bay Formation, Blue Mountain Formation, Billings Formation, Collingwood Member, Eastview Member with shale, limestone, dolostone and siltstone.

During this investigation, no water bodies, streams, ponds, or wetland areas were observed on the Site or within the surrounding area. The nearest water body is observed to be an unnamed creek and/or a water pond, approximately 600 m to the northeast of the Site.

Information provided on the MNRF Natural Heritage online map indicates that there are no local Provincially Significant Wetlands (PSWs) or Areas of Natural Scientific Interest (ANSIs) on or directly adjacent to the Site. Based on the review of MECP's online Source Protection Information Atlas, the Site and surrounding properties are not within the well-head protection areas.

The City of Vaughan obtains its potable water from Lake Ontario. The Phase Two Property is a parking lot land, a municipal drinking water system is not expected to be at the Site. Based on a review of the well records, no potable groundwater wells were identified at the Site. Fifteen (15) well records were identified within the Phase One Study Area, which are used for monitoring/observation wells, test holes purposes, domestic water supply or are abandoned wells.

3.2 Past Investigations

Englobe requested copies of all available previous environmental reports that were completed for the Site.

Englobe also has completed a Phase One ESA for the Site, the report entitled "*Phase One Environmental Site Assessment, 9541 Weston Road, Vaughan, Ontario*", dated April 7, 2022 (hereinafter referred as to the "2022 Englobe Phase One ESA"). The following potentially contaminating activities (PCAs) were identified for the Site and surrounding properties. The PCAs were evaluated to determine Areas of Potential Environmental Concern (APEC) that may affect the Site resulting from these activities. The identified APECs, one associated with onsite PCAs and one APEC associated with off-site PCAs, are listed in the table below.

Table 3 Areas of Potential Environmental Concern

APEC	Location of APEC	Potentially Contaminating Activity (PCA)	Location of PCA	Contaminants of Potential Concern*	Media Potentially Impacted
APEC 1	Entire Site	Historical use of fill materials PCA# 30 - Importation of Fill Materials of Unknown Quality	On-site	Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN, EC, SAR and pH, PHCs, BTEX, VOCs, PAHs, PCBs, OCPs	Soil
APEC 2	The north portion of the Site	Registered as a waste generator of photo processing wastes and inorganic laboratory chemicals PCA# Undefined PCA No.	Off-site	Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN, EC, SAR and pH, PHCs, BTEX, VOCs, PAHs	Soil and Groundwater

Notes: *

- PHCs - Petroleum Hydrocarbon Fractions F1 to F4
- BTEX - Benzene, Toluene, Ethylbenzene and Xylenes
- VOCs - Volatile Organic Compounds
- PAHs - Polycyclic Aromatic Hydrocarbons
- PCBs- Polychlorinated Biphenyl
- OCPs - Organochlorine Pesticides
- B-HWS-Hot Water Soluble Boron
- EC-Electrical Conductivity
- SAR-Sodium Absorption Ratio

Based on these findings, Englobe recommended that a subsurface environmental investigation (Phase Two ESA) be completed to assess the potential environmental contamination associated with these on-Site and off-site activities and associated environmental concerns.

4 Scope of Investigation

4.1 Overview of Site Investigation

The scope of work completed for this Phase Two ESA was developed in order to investigate the soil and groundwater quality at the Site. The Phase Two ESA consisted of the following tasks:

- Preparation of a Site-specific health and safety plan and work plan;
- Clearance of underground utilities/services at the Site, specifically the proposed borehole/monitoring well locations prior to the drilling activities, through Ontario OneCall for public locations, and retaining a private locator to clear and mark the drilling locations as well;
- Advance 15 boreholes to depths ranging from approximately 4.4 m to 8.2 m below ground surface (m bgs), which included five (5) boreholes (BH1, BH8, BH9, BH12 and BH15) instrumented as monitoring wells and ten (10) boreholes completed during the geotechnical investigation. The Phase Two ESA drilling program was conducted concurrently with the geotechnical investigation.
- Oversee the drilling activities and log the subsurface conditions encountered within each borehole. The soil samples were collected at regular depth intervals, visually classified, and screened in the field for headspace vapour concentrations using a portable gas detector (i.e., PID and RKL Eagle).
- Submission of selected soil samples submitted to an accredited and certified laboratory for the chemical analyses for one or more of the following Parameters: Metals and Inorganics, Petroleum Hydrocarbon Fractions F1 to F4 (PHCs), including benzene, toluene, ethylbenzene and xylenes (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs), pH and grain size; the samples were collected at the time of Excess Soil field sampling program.
- Install/develop five (5) groundwater monitoring wells in the advanced boreholes to a maximum depth of 8.0 m bgs, in accordance with Ontario Regulation 903, as amended;
- Collection and submission of groundwater samples from the five (5) monitoring wells for one or more of the following laboratory analyses: M&I, PHCs, BTEX, VOCs, PCBs and/or PAHs. Conduct the elevation survey, monitor the groundwater levels to determine the depth to the groundwater table, and evaluate the presence/absence of phase separated liquids and organic subsurface vapour concentrations in the installed monitoring wells.
- Disposal of soil cuttings and purged groundwater by a certified waste disposal contractor; and
- Preparation of the Phase Two ESA report.

All work performed by Englobe as part of this Phase Two ESA was carried out in accordance with applicable regulations, industry standards, and Ontario Regulation 153/04 (O. Reg. 153/04), as amended.

4.2 Media Investigated

A summary of the investigated media is presented below. Detailed descriptions, including media, chemical parameters, depths, and assessment locations, are provided in the Sampling and Analysis Plan, in Figure 4, Appendix A.

Prior to the initiation of the field activities, a sampling and analysis plan was prepared by Englobe in order to provide a detailed summary of the proposed investigative locations and soil and groundwater analytical program. The sampling and analysis plan is provided in Appendix B.

Englobe investigated soil and groundwater in the APECs identified on the Phase Two Property. As part of this Phase Two ESA, Englobe collected and analyzed soil and groundwater samples via the newly advanced boreholes and newly installed monitoring wells at the Site.

There was no water body or sediment identified on the Phase Two Property, sediment was not sampled and analyzed as part of this Phase Two ESA.

4.3 Phase One Conceptual Site Model

Englobe previously completed a Phase One ESA for the Site. Based on the findings of the Phase One ESA, APECs were identified at the Site. These APECs were associated with the historical and/or current PCAs on the Site and/or surrounding properties.

The mandatory requirements for the Phase One Conceptual Site Model are outlined in “Table 1 of Schedule D, Part VI - Phase One Environmental Site Assessment Report in O. Reg. 153/04 as amended”, and the findings/details from the Phase One ESA completed by Englobe are summarized in the table below.

Table 4 Phase One Conceptual Site Model

O.Reg. 153/04 Schedule D (Part VI) Table 1 Requirement	Phase One ESA Findings / Details
Show any existing buildings and structures	No buildings or structures are located on the Site.
Identify and locate water bodies located in whole or in part on the Study Area	No water bodies were observed on the Site or Study Area.
Identify and locate any areas of natural significance located in whole or in part on the Study Area	There were no ANSIs or PSWs at the Site or within the Study Area.
Locate any drinking water wells at the Site	Based on a review of the well records presented in the ERIS report, no potable water supply well was identified on the Site, while 11 domestic water supply wells were identified on the surrounding properties within the Study Area.
Show roads, including names, within the Study Area	The Site is located to the east of Weston Road. The Phase One Study Area consists of a parking lot in the southeastern quadrant of the intersection of Weston Road and Ashberry Boulevard in the City of Vaughan, Ontario.
Show uses of properties adjacent to the Site	The surrounding and adjacent properties consist of residential, commercial and institutional properties.
Identify and locate any PCA	The following PCAs have been identified within the Phase One Study Area: (PCA number as identified in Column A of Table 2 of Schedule D of O.Reg 153/04, as amended) PCA#NA - Waste generator PCA# 30 - Importation of Fill Material of Unknown Quality The locations of the PCAs are shown in Drawing 4, Appendix A.
Identify and locate any APECs	The following APECs have been identified at, on, or under the Phase One Property: APEC1: Entirety of Site (fill of unknown quality) APEC2: North portion of the Site The locations of the APECs are shown in Drawing 5, Appendix A.

O.Reg. 153/04 Schedule D (Part VI) Table 1 Requirement	Phase One ESA Findings / Details
Describe and assess any areas where potentially contaminating activity on or potentially affecting the Phase One Property has occurred.	Based on the PCAs and resulting APECs on the Phase One Property, the media potentially impacted includes soil and groundwater.
Describe and assess and contaminants of potential environmental concern	Based on the PCAs and identified APECs on the Site, the following contaminants of potential environmental concern have been identified: PHC (Fractions F1-F4), BTEX, PAHs, PCBs, VOCs, OCPs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN, EC, SAR and pH.
Describe and assess the potential for underground utilities, if any, to affect contaminant distribution and transport	The underground utilities consist of sanitary/storm sewers, water distribution, gas, communication, and/or hydro services. There is potential for these utilities to affect contaminant distribution and transport given that the underground utility corridors can serve as preferential pathways.
Describe and assess available regional or Site specific geological and hydrogeological information	Based on a review of the contour lines from the OBM, the topography of the Site and the surrounding area appears to be relatively flat and gently slopes to the southeast. The Site appears to be at elevations between approximately 225 m and 226 m asl, depending on location. The surficial geology of the Site and Study Area consists of clayey silt to sandy silt. The bedrock geology consists of Georgina Bay Formation, Blue Mountain Formation, Billings Formation, Collingwood Member, Eastview Member with shale, limestone, dolostone and siltstone. Based on aerial photographs, an unnamed creek, which is approximately 600 m northeast of the Site, flows from northwest to southeast. The shallow groundwater in the Site area appears to flow in a south/southeast direction.
Describe and assess how any uncertainty or absence of information obtained in each of the components of the Phase One ESA could affect the validity of the model.	The material in the Phase One ESA report prepared by Englobe reflects the judgment of Englobe in light of the information made available at the time of the Site reconnaissance on the date set out in the report and on information available at the time of preparation of this report. It should be noted that assessments made throughout this environmental assignment rely heavily on information supplied by others. While every effort has been made to use reliable and multiple sources, Englobe makes no guaranty of the accuracy or completeness of this third-party information available to us at the time of preparing this report. Hence, the historical records review is considered to be a potential source of uncertainty during the Phase One ESA. It is Englobe's opinion that the uncertainty or absence of information in the records review, interviews, and site reconnaissance of the Phase One ESA are not anticipated to affect the validity of the conclusions.

4.4 Deviations from Sampling and Analysis Plan

No significant deviations from the sampling and analysis work plan were encountered. Due to the limited amount of water in BH1, BH8, BH9 and BH12, no groundwater samples have been taken from BH1 and BH12. In addition, selected analytical parameters were tested in the groundwater samples from BH8 and BH9.

4.5 Impediments

No significant physical impediments were encountered during the fieldwork of Phase Two ESA. However, the ground within the Site was covered by snow at the time of the investigation which limited visibility at the Site.

5 Investigation Method

5.1 General

The Phase Two ESA was conducted in general accordance with the O. Reg. 153/04, as amended, under the supervision of Sam Voore, P.Eng., QP_{ESA}, with field activities following the MECP Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario, and Englobe Standard Operating Procedures, which are in accordance with O. Reg. 153/04, as amended.

5.2 Drilling and Excavating

Prior to the commencement of the field activities, a Phase Two ESA sampling and analysis plan was prepared by Englobe, as presented in Appendix B.

Following the clearance of public and private utility locates, fifteen (15) boreholes were advanced at the Site (BH1 to BH13, BH15 and BH16) on January 13, 14 and January 21, 2022 to depths of approximately 4.4 m or 8.2 m bgs. Phase Two ESA drilling program was conducted concurrently with the geotechnical investigation, and the soil samples were collected at the time of Excess Soil field sampling program.

Five (5) selected boreholes (BH1, BH8, BH9, BH12, and BH15) were instrumented as monitoring wells. The boreholes were advanced using a CME95 conventional drilling rig, equipped with split spoon sampling rods and 152 mm solid stem augers supplied and operated by Drilltech Drilling Ltd. of Newmarket, Ontario (Drilltech).

Representative soil samples were recovered from the boreholes at a regular interval of 0.6 m using split spoon soil sampling equipment. To minimize the potential for cross-contamination between samples, the split spoon samplers were washed with Alconox detergent and rinsed with potable and distilled water before each use.

The locations of the above-referenced boreholes/monitoring wells are illustrated in the attached Borehole and Monitoring Well Location Plan, Figure 4 in Appendix A.

The fieldwork was observed by a member of our engineering staff who documented the drilling and sampling procedures; recorded the results; documented the soil stratigraphy; monitored the groundwater conditions; directed and recorded the installations of the monitoring wells; carried out headspace vapour testing and cared for the recovered soil samples.

5.3 Soil Sampling

All soil samples collected from the boreholes using split spoon soil sampling equipment were subdivided for chemical analysis and/or soil vapour headspace screening. Selected samples were field preserved using laboratory-prepared methanol extraction kits (to field-preserve volatile parameters), placed in laboratory-supplied containers, packed in coolers with ice, and delivered to the laboratory for chemical analysis.

Based on the observation of soil samples from each borehole, the Site stratigraphy generally consisted of an asphalt pavement/topsoil, followed by the granular base/subbase material (sand and gravel) overlying native sandy silt/silt and silty sand with some clay to the maximum drilling depth.

The borehole logs, presented in Appendix C, include the soil descriptions, stratigraphy, headspace readings, and sample analysis.

5.4 Field Screening Measurements

Combustible Soil Vapour (CSV) headspace (i.e., the entrained air space in the bagged soil) on all soil samples were screened using an RKI Eagle 2 Portable Gas Detector, Type 101 (RKI). The RKI Eagle 2 was equipped with a catalytic combustible gas detector (CCGD), calibrated to hexane (HEX) with a detection limit of 5 parts per million (ppm) for the detection of petroleum hydrocarbon vapor concentrations. Additionally, the unit was equipped with a photoionization detector (PID) calibrated to isobutylene (IBL) to detect VOC vapour concentrations with a detection limit of 1 ppm. The CCGD were operated in methane elimination mode, and the vapour metres were all calibrated using hexane and isobutylene calibration gases prior to each use.

Based on the CSV headspace reading results of the soil samples, visual/olfactory examination of the soil samples for unusual staining, odours, and/or the presence of other deleterious matter, and soil types and water level, selected soil samples from the boreholes were submitted to an accredited laboratory for chemical analysis.

5.5 Groundwater: Monitoring Well Installation

Five (5) boreholes (BH1, BH8, BH9, BH12, and BH15) were instrumented with groundwater monitoring wells. The monitoring wells were installed to collect groundwater levels and representative groundwater samples.

The monitoring wells were constructed using flush-thread 50 mm diameter Trilock Polyvinyl Chloride (PVC) screens and riser pipe equipped with rubber O-ring seals. The monitoring well screen consisted of a 1.5 m or 3 m length of number 10 slot size pipe. The base of the well screen was completed with a solid PVC end cap and the top with a lockable “J” plug. All pipe components were pre-wrapped in plastic, which was removed at the time of well installation to minimize the potential for cross-contamination. The annular space between the well casing and borehole wall was filled with sand pack from the base to 0.3 m above the well screen. The annular space above the sand pack to within approximately 0.2 m of grade was filled with hydrated bentonite as a seal. All monitoring wells were completed with monument protective steel cover and cemented into place. Monument protective steel cover provides a stable and secure protective covering, which is also readily recognizable in the winter season.

Following the completion of monitoring well installations, the wells were developed of a minimum of three (3) well volumes of water or until dry to remove any groundwater potentially impacted by drilling activities and to reduce the amount of sediment within the wells using dedicated Waterra™ tubing and inertial foot valves in January 2022.

The groundwater monitoring well installed by Ace was documented by our engineering staff. A diagram of the newly installed monitoring wells is provided on the respective borehole logs in Appendix C.

5.6 Groundwater: Field Measurement of Water Quality Parameters

Groundwater from all newly-installed monitoring wells was pumped using a peristaltic pump with a low flow (typically less than 200 millilitres per minute [mL/min]) controller, periodically monitoring both groundwater table drawdown and the water quality indicator parameters during the well purge. Groundwater from each well was discharged through a flow-through cell equipped with a Horiba U-52

Multi-parameter Water Quality Meter and probes to measure indicator parameters, i.e., pH, oxidation-reduction potential (ORP), electrical conductivity (EC), dissolved oxygen (DO), turbidity (NTU) and water temperature. After groundwater table drawdown and/or the field indicator parameters had stabilized, indicating that the well was recharging with formation water, groundwater samples can be collected and submitted for laboratory analyses.

5.7 Groundwater: Sampling

Groundwater and potential non-aqueous phase liquid (NAPL) thickness, if any, were measured at the monitoring well locations on March 9, and 16, 2022 using a Solinst Model 122 electronic oil water interface meter. No NAPL was detected on the surface of the water table or at the bottom of the monitoring wells on the respective measurement dates.

Prior to use and between each water level measurement, the interface probe was washed with an Alconox detergent/water mixture and then rinsed with water and distilled water to prevent cross-contamination.

Dedicated Waterra™ low-density polyethylene (LDPE) tubing and Waterra™ inertial lift foot valves were installed in the monitoring wells to facilitate well development. The monitoring wells were purged of a minimum of three to five well volumes of groundwater. Purged and wash water was collected into sealed, labelled drums.

The monitoring wells (BH1, BH8, BH9, BH12, and BH15) were sampled on March 9 and 16, 2022 using a low flow sampling method. The objective of low flow sampling is to maintain a minimum water level drawdown and minimize turbidity releasing disturbances in the water column. Groundwater is sampled upon achieving chemical stabilization of purged water as evaluated from measurements of specific field water quality indicator parameters.

Application of the low flow sampling method involved the use of a peristaltic pump installed at a specified depth to maintain a water table drawdown of less than 10 cm. The peristaltic pump was connected by dedicated LDPE tubing to a flow cell and multi-sensor water quality meter (Horiba U-52). Chemical stabilization of the purged water was monitored by taking field quality parameter measurements of pH, temperature, electrical conductivity (EC), dissolved oxygen (DO), turbidity and oxidation-reduction potential (ORP). Groundwater table drawdown was monitored by a Solinst model 122 oil water interface meter. Prior to sampling, the calibration of the peristaltic pump was set to 200 mL/min and the pumping rate was monitored and adjusted accordingly to maintain a water table drawdown of less than 10 cm. The maximum pumping rate was not to exceed 500 mL/min or fall below 100 mL/min. Chemical stabilization of the purged groundwater was monitored by taking field parameter measurements at 5-minute intervals and comparing the measurements to applicable stabilization criteria. The purged water is considered stabilized, and representative of formation water as evidenced by three consecutive readings within the set stabilization criteria for individual parameters.

The applied stabilization criteria are summarized as follows:

Table 5 Groundwater Quality Parameter Monitoring

Parameter	Stabilization Criteria*
Temperature (°C)	+/- 0.5 C
Electrical Conductivity (mS/cm)	+/- 3%
Dissolved Oxygen (mg/L)	+/- 10%
pH	+/- 0.1
Oxygen Reduction Potential (mV)	+/-10 mV
Turbidity (NTU)	+/- 10% or less than 50

Notes:* Average of three consecutive readings
°C - degrees Celsius

mg/L - milligrams per litre
mS/cm - milliSiemens per centimetre
mv - millivolts
NTU - Nephelometric turbidity units

The groundwater samples were then collected directly from the pump discharge line into the appropriate sample containers supplied by the laboratory. Groundwater samples collected for metals analysis were field filtered. The groundwater samples were packed in coolers with ice in preparation to be delivered directly to the laboratory under chain of custody protocol for chemical analyses.

5.8 Sediment: Sampling

Sediment was not sampled as part of this Phase Two ESA.

5.9 Analytical Testing

All soil and groundwater samples were collected in laboratory supplied containers and were delivered to the Eurofins Environment Testing Canada Inc., Ottawa, Ontario, for environmental chemical analysis, and Englobe Toronto Laboratory for geotechnical analysis within the allowable holding times. “Worst-case” and/or representative soil samples were selected on the basis of field screening tests and visual or olfactory evidence of potential contamination and at locations where contaminants are expected to be present (e.g., fill materials, near the water table, etc.).

The selected soil and groundwater samples were submitted to the laboratory for analysis of one or more of the following parameters:

- Petroleum Hydrocarbon Fractions (PHC) F1 to F4;
- Benzene, Toluene, Ethylbenzene and Xylenes (BTEX);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Volatile Organic Compounds (VOCs);
- O. Reg. 153/04 Metals and Inorganic Parameters (M&I);
- Polychlorinated Biphenyls (PCBs);
- Organochlorine pesticides (OCPs)
- pH; and/or
- Grain size.

The laboratory analyses carried out for this investigation are summarized in the table below.

Table 6 Soil and Groundwater Analyses Summary

Sample Location	Sample ID	Approximate Depth (m bgs)	Media	Rationale	Laboratory Analyses
Soil Samples					
BH1	BH1-1	0.1-0.7	Soil	Chemical characterization of soil in the vicinity of APECs 1 and 2.	M&I, including EC and SAR, PAHs
	BH1-2	0.8-1.4			Metals, EC, SAR
	BH1-3	1.5-2.1			PHCs, BTEX
	BH1-5	3.1-3.7			VOCs, PHCs, BTEX
BH2	BH2-1	0.1-0.7	Soil		Metals, EC, SAR, PAHs, PHCs, BTEX

Sample Location	Sample ID	Approximate Depth (m bgs)	Media	Rationale	Laboratory Analyses
	BH2-6	3.8-4.4		Chemical characterization of soil in the vicinity of APECs 1 and 2.	VOCs, PHCs, BTEX
	Dup-4 (Duplicate of BH 2-6)	3.8-4.4		Quality Assurance and Quality Control.	VOCs, PHCs, BTEX
BH3	BH3-1	0.1-0.7	Soil	Chemical characterization of soil in the vicinity of APECs 1, and 2.	Metals, EC, SAR, PCBs
	BH3-5	3.1-3.7			PHCs, BTEX
	Dup-7 (Duplicate of BH 3-1)	0.8-1.4		Quality Assurance and Quality Control.	PCBs
BH4	BH4-1	0.1-0.7	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR, PAHs
	BH4-2	0.8-1.4			PHCs, BTEX
	BH4-9	7.6-8.2			PHCs, BTEX
BH5	BH5-1	0.1-0.7	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR, OCPs
	BH5-3	1.5-2.1			PHCs, BTEX
	BH5-9	7.6-8.2			PHCs, BTEX
	Dup-5 (Duplicate of BH 5-1)	0.1-0.7		Quality Assurance and Quality Control.	OCPs
BH6	BH6-1	0.1-0.7	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR, PAHs
	BH6-9	7.6-8.2			PHCs, BTEX
BH7	BH7-1	0.1-0.7	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR, PAHs
	BH7-3	1.5-2.1			PHCs, BTEX
	BH7-6	3.8-4.4			PHCs, BTEX
	Dup-2 (Duplicate of BH 7-1)	0.1-0.7		Quality Assurance and Quality Control	PAHs
	Dup-3 (Duplicate of BH 7-1)	1.5-2.1			PHCs, BTEX
BH8	BH8-1	0.1-0.7	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR,
	B3H8-2	0.8-1.4			M&I, EC, SAR, PAHs
	BH8-7	4.6-5.2			VOCs, PHCs, BTEX
BH9	BH9-1	0.1-0.7	Soil	Chemical characterization of soil in the vicinity of APEC 1.	M&I, EC, SAR
	BH9-2	0.8-1.4			Metals, EC, SAR, PAHs, PCBs
	BH9-3	1.5-2.1			VOCs, PHCs, BTEX
	BH9-9	7.6-8.2			PHCs, BTEX
BH10	BH10-1	0.1-0.7	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR,
	BH10-2	0.8-1.4			PHCs, BTEX
BH11	BH11-1	0.1-0.7	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR,
	BH11-2	0.8-1.4			PHCs, BTEX
	BH11-7	4.6-5.2			VOCs, PHCs, BTEX

Sample Location	Sample ID	Approximate Depth (m bgs)	Media	Rationale	Laboratory Analyses
	Dup-1 (Duplicate of BH 11-1)	0.1-0.7		Quality Assurance and Quality Control	Metals
BH12	BH12-1	0.1-0.7	Soil	Chemical characterization of soil in the vicinity of APEC 1.	M&I, EC, SAR, PAHs
	BH12-2	0.8-1.4			Metals, EC, SAR, PHCs, BTEX
	BH12-8	6.1-6.7			VOCs, PHCs, BTEX
BH13	BH13-1	0.1-0.7	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR
	BH13-6	3.8-4.4			PHCs, BTEX
BH15	BH15-1	0.1-0.7	Soil	Chemical characterization of soil in the vicinity of APEC 1.	M&I, EC, SAR
	BH15-2	0.8-1.4			Metals, EC, SAR
BH16	BH16-1	0.1-0.7	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR, OCPs
	BH16-2	0.8-1.4			PHCs, BTEX
	BH16-6	3.8-4.4			VOCs, PHCs, BTEX
Groundwater Sampling					
BH 1	BHMW1	4.03	Groundwater	Chemical characterization of soil in the vicinity of APECs 1, and 2.	N/A
BH 8	BHMW8	4.81	Groundwater	Chemical characterization of soil in the vicinity of APECs 1, and 2.	VOCs, BTEX
BH 9	BHMW9	7.90	Groundwater	Chemical characterization of soil in the vicinity of APECs 1, and 2.	VOCs, BTEX
BH 12	BHMW12	7.81	Groundwater	Chemical characterization of soil in the vicinity of APECs 1, and 2.	N/A
BH 15	BHMW15	4.14	Groundwater	Chemical characterization of soil in the vicinity of APECs 1, and 2.	M&I, VOCs, PHCs, BTEX, PAHs, PCBs
BH 15	BHMW21 and DUP1 (Duplicate of BHMW15)	4.14	Groundwater	Quality Assurance and Quality Control	M&I, VOCs, PHCs, BTEX, PAHs, PCBs

Notes: N/A - no groundwater sample to the laboratory for chemical analysis due to dry condition in the monitoring well

5.10 Residue Management Procedures

Soil cuttings, wash water, and purged groundwater generated as part of this Phase Two were contained in 205 L steel drums equipped with locking secure lids. Englobe will arrange a licensed subcontractor (Apex Environmental Services Inc.) to pick up and dispose of these drums.

5.11 Elevation Surveying

An elevation survey was conducted to establish the top of pipe and ground surface elevations at the borehole/monitoring well locations. The borehole locations were surveyed by Englobe personnel using Sokkia GRX2 GNSS Receiver GPS connected to MAGNET Enterprise network referenced to UTM

Zone 17T (NAD83). The ground surface elevations at each investigative location are shown on the borehole logs included in Appendix C.

5.12 Quality Assurance and Quality Control Measures

Quality assurance/quality control (QA/QC) measures were incorporated into the field sampling and laboratory analytical programs to provide for the provision of data of accepted accuracy, precision, and representativeness. Related measures consisted of equipment decontamination protocols, equipment calibration, sample collection and handling protocols, field documentation, residuals management, and contractor provision.

Borehole drilling and monitoring well installation was undertaken by an MECP licensed well drilling contractor and overseen by experienced Englobe field personnel. The drilling and monitoring well installation were undertaken using accepted equipment, methodologies and materials as documented by field personnel.

Decontamination procedures were followed during the course of soil and groundwater sampling as follows:

- All drilling and monitoring equipment having potential to come into contact with potentially contaminated soil and groundwater was decontaminated prior to and following each use. Decontamination consisted of washing equipment with a non-phosphate soap/water mixture followed by rinsing with distilled water;
- Prior to installation, well screens and riser pipes were not allowed to come into contact with the ground or any drilling equipment;
- All individual soil and groundwater samples and containers were handled with disposable chemical resistant nitrile gloves to minimize the potential for cross-contamination;
- Soil and groundwater samples were collected into pre-cleaned laboratory supplied containers;
- Specific procedures were followed for the documentation, handling, and transport of the soil and groundwater samples including:
 - Soil and groundwater samples, upon collection, were placed in ice chilled coolers to minimize the potential for chemical activity and sample degradation; and,
 - Upon completion of the sampling, soil and groundwater samples were assigned unique identification numbers and submitted to the contractual laboratory under the proper chain of custody protocols within the test-specific holding times.

Field duplicate samples were collected to evaluate the precision/reproducibility of the sampling programs, including the soil sampled from boreholes BH11-1 (Dup-1), BH7-1 (Dup-2), BH7-3 (Dup-3), BH2-6 (Dup-4), BH5-1 (Dup-5), and BH3-2 (Dup-7) for analyses of metals, PAHs, PHCs, BTEX, VOCs, PCBs, OCPs and the groundwater sampled from monitoring well BHMW15 (Dup1 and BHMW21) for analysis of metals and inorganic parameters, PAHs, PHCs, BTEX, VOCs and PCBs.

The contractual laboratory, Eurofins Environment Testing Canada Inc. performed chemical analysis following written procedures and referenced methods incorporating QA/QC protocols. Chemical analyses for specific analytical test groups were performed in accordance with the “Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act” MECP 2011. Analytical test group specific quality control samples were prepared and analyzed by the contractual laboratory including:

- Duplicates to evaluate method reproducibility and sample homogeneity;
- Method blanks to evaluate potential bias;
- Spike blanks to evaluate method accuracy and bias;

- Matrix spikes to evaluate extraction efficiency and matrix interferences; and,
- Surrogate samples to evaluate extraction efficiency.

Quality control results evaluated by the contractual laboratory were compared to applicable alert and control criteria and are presented in the quality control reports accompanying the certificates of analysis.

6 Review and Evaluation

6.1 Geology

Based on the results of this Phase Two ESA, the soil stratigraphy at the investigative locations generally comprises the granular base/subbase material (sand and gravel) overlying native sandy silt/silt and silty sand with some clay. The groundwater levels measured from the monitoring wells ranged from 1.18 to 7.76 m bgs. The water table is within the silt layer. The aquifer encountered during this Phase Two ESA appears to be an unconfined aquifer. The estimated thickness of the asphalt layer (except for BH4, BH13, BH15, and BH16 covered by a surficial topsoil layer with an average thickness of 0.2 m) ranged from 0.08 to 0.11 m. The granular base/ subbase material at the borehole locations consisted of sand and gravel that ranged from 0.12 to 0.3 m. The thickness of native sandy silt or silt/silty sand with some clay ranges from 0.3 m to 8.2 m. No bedrock was encountered during the Phase Two ESA drilling.

A summary of the soil stratigraphy encountered during this assessment and the corresponding depths and elevations are summarized in the borehole logs provided in Appendix C.

6.2 Groundwater: Elevation and Flow Direction

In general, the monitoring well screens were placed in an attempt to straddle the shallow groundwater table, to allow for groundwater level monitoring and appropriate groundwater quality assessment.

On March 9, 2022, groundwater levels and potential NAPL levels were measured at each monitoring well location by utilizing a Solinst Model 122 oil water interface meter. The water levels were determined by referencing the existing ground surface and/or the surveyed elevation of the monitoring well casing. No evidence of NAPL was detected on the surface of the water table or at the bottom of the monitoring wells during the groundwater level measurement dates.

Groundwater measurements at the monitoring well locations were summarized in Section 9.2. Based on the groundwater level measurements at the monitoring well locations, the groundwater elevations are between approximately 217.4 m and 223.6 m asl.

Based on the groundwater level measurements collected on March 9, 2022, the estimated groundwater flow direction at the Site is in a south/southwest direction, relative to project north, as shown on the Estimated Groundwater Flow Direction Plan, Figure 5 in Appendix A. It should be noted that the groundwater depth and flow direction may be locally influenced by Site drainage conditions and underground structures such as previous excavations, utility conduits, building footing, etc. Seasonal variation should be expected.

6.3 Groundwater: Hydraulic Gradients

Based on the groundwater levels at the Site, the horizontal hydraulic gradient was calculated as 0.1012 m/m (BH9 and BH15). There were no paired monitoring wells installed at the Site, vertical hydraulic gradient was not calculated during this assessment.

6.4 Fine-Medium Soil Texture

Based on the field observations, the predominant soils encountered at the Site were native sandy silt/silty sand with some clay. Based on grain size analysis on soils collected from boreholes BH2, BH8 and BH12, the soil was identified to be medium to fine-textured (with 77.2% and 78.5% particle size less than 75 µm). Therefore, Englobe utilized the medium to fine textured soil standards as per O. Reg. 153/04, as amended.

6.5 Soil: Field Screening

CSV headspace readings were carried out on all soil samples obtained from the borehole locations using an RKI Eagle™ 2 Portable Gas Detector, Type 101 that was set to methane-response elimination mode and calibrated to hexane and isobutylene standards. In general, the headspace vapour readings of all soil samples were measured between 0 and 25 parts per million (ppm) by hexane (HEX) and between 0 and 1 ppm by isobutylene (IBL), which is indicative of non-detectable to elevated concentrations of volatiles in the recovered soil samples.

6.6 Soil Quality

Soil samples were selected based on field screening readings and visual and/or olfactory evidence of potential contamination and at locations where contaminants would be expected to be found (i.e., fill materials, or soil near the water table, etc.).

Soil samples were submitted to the laboratory for chemical analysis for the contaminants of concern including one or more of metals and inorganic parameters, PHCs, BTEX, VOCs, PAHs, PCBs, OCPs, pH and/or grain size.

Based on the analytical results, Electrical conductivity and SAR were identified at concentrations greater than the applicable MECP Table 2 ICC Standards in the soil samples collected from the investigative locations at the Site.

The exceeded parameters in soil samples are summarized in the table below.

Table 7 Soil Exceedances Summary

BH No.	Sample ID	Sampling Depth, (m)	Sampling Date	Contaminants	Results	Table 2 ICC Standards
BH 1	BH 1-1	0.1-0.7	January 14, 2022	EC (Ms/cm) SAR	2.19 37.8	1.4 12
BH 2	BH 2-1	0.1-0.7	January 14, 2022	EC (Ms/cm) SAR	4.18 81.8	1.4 12
BH 3	BH 3-1	0.1-0.7	January 21, 2022	EC (Ms/cm) SAR	3.31 55.8	1.4 12
BH 4	BH 4-1	0.1-0.7	January 14, 2022	EC (Ms/cm) SAR	3.19 68.4	1.4 12
BH 5	BH 5-1	0.1-0.7	January 14, 2022	EC (Ms/cm) SAR	2.03 30.1	1.4 12
BH 6	BH 6-1	0.1-0.7	January 21, 2022	EC (Ms/cm) SAR	3.95 42.6	1.4 12
BH 7	BH 7-1	0.1-0.7	January 14, 2022	EC (Ms/cm) SAR	6.39 111	1.4 12

BH No.	Sample ID	Sampling Depth, (m)	Sampling Date	Contaminants	Results	Table 2 ICC Standards
	BH 8-2	0.8-1.4	January 13, 2022	EC (Ms/cm)	1.66	12
	BH 9-2	0.8-1.4	January 13, 2022	EC (Ms/cm) SAR	5.88 147	1.4 12
BH 10	BH 10-1	0.1-0.7	January 13, 2022	EC (Ms/cm) SAR	2.84 40.0	1.4 12
BH 11	BH 11-1	0.1-0.7	January 13, 2022	EC (Ms/cm) SAR	7.04 162	1.4 12
BH 12	BH 12-1	0.1-0.7	January 13, 2022	EC (Ms/cm) SAR	4.11 58.8	1.4 12

According to the soil analytical results, concentrations of the EC and SAR from soil samples at various borehole locations were detected at the concentrations greater than the applicable MECP Table 2 ICC Standards. Based on the findings of Phase One ESA and Phase Two ESA Site visit, the Site was historically and currently used as a vehicle parking lot. Thus, de-icing activities and/or substances appear to be applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both during the winter season. Per Section 49.1 of O.Reg.153/04, the presence of road salt compounds (e.g., sodium, chloride, EC, SAR) is not considered to exceed the Regulation if the application to surfaces is for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. The analytical results of the remaining soil samples tested for M&I, PHCs, BTEX, VOCs and PCBs and PAHs were either below the laboratory detection limits or met the applicable Table 2 ICC Standards.

The analytical data for all the soil samples collected from the Site and submitted for laboratory analysis are provided in Analytical Tables in Appendix D. The Certificates of Analysis for the samples collected and submitted for laboratory analysis as part of this investigation are included in Appendix E.

6.7 Groundwater Quality

Groundwater samples were submitted to the laboratory for chemical analysis for one or more of metals and inorganic parameters, VOCs, PHCs, BTEX, PAHs and PCBs.

Based on the sample analytical results, metals and inorganic parameters (Chloride and Sodium) in groundwater collected from BH15 exceeded the applicable Table 2 Standards, as illustrated in the table below and presented on Figure 23.

Table 8 Groundwater Exceedances Summary

Sample ID	Parameter	Contaminants Concentration (µg/L)	Table 2 SCS Fine (µg/L)
BHMW15	Chloride	4130000	790000
	Sodium	2930000	490000

According to the groundwater analytical results, concentrations of chloride and sodium parameters from groundwater sample (BHMW15) were detected at the concentrations greater than the applicable MECP Table 2 Standards. Considering the location of BH15 is close to the parking lot and pedestrian sidewalk in the Vellore Hall Park, de-icing activities and/or substances appear to be applied to surfaces for the safety of pedestrian traffic under conditions of snow or ice or both during the winter season. The analytical results of the remaining groundwater samples tested for M&I, PHCs, BTEX, VOCs and PCBs were either below the laboratory detection limits or met the applicable Table 2 Standards.

The analytical data for the groundwater samples collected from the Site and submitted for laboratory analysis are presented in Analytical Tables in Appendix D. The Certificates of Analysis for the samples collected and submitted for laboratory analysis as part of this investigation are included in Appendix E.

6.8 Sediment Quality

Sediment was not sampled as part of this Phase Two ESA.

6.9 Quality Assurance and Quality Control Results

All sample containers (with the appropriate preservatives added), including soil field preservation containers, were provided by Eurofins. The samples were kept cold in coolers with ice and delivered to the laboratory within the required timelines to fulfill sample storage and holding time requirements under chain of custody protocols.

Laboratory certificates of analysis have been received for all groundwater samples analyzed as part of this assessment. Copies of the complete laboratory certificates of analysis are presented in Appendix E.

One trip blank was submitted to the laboratory with the groundwater sample submission for chemical analysis of VOC parameters. Additionally, field duplicate soil and groundwater samples were submitted to the laboratory for chemical analysis as part of the QA/QC program. A summary of the field duplicates is provided in the table below.

Table 9 Summary of QA/QC Program

Sample Location	Primary Sample ID	Duplicate Sample ID	Media	Analysis Performed
BH 2	BH 2-6	Dup-4	Soil	VOCs, PHCs, BTEX
BH 3	BH 3-2	Dup-7	Soil	PCBs
BH 5	BH5-1	Dup-5	Soil	OCPs
BH 7	BH7-1	Dup-2	Soil	PAHs
	BH7-3	Dup-3	Soil	PHCs, BTEX
BH 11	BH11-1	Dup-1	Soil	Metals
BH 15	BHMW15	BHMW21	Groundwater	PCBs, PAHs
	BHMW15	GW-DUP1	Groundwater	M&I, PHCs, BTEX, VOCs

Field duplicate samples were collected to evaluate sample precision related to the analyses of all submitted soil and groundwater samples. One field duplicate sample for both soil and groundwater samples was submitted for laboratory analysis for every ten samples. Relative Percent Difference (RPD) calculations were determined for each compound if it was measured in both the submitted sample and the corresponding duplicate sample at concentrations more than 5 times of the method detection limit for the respective parameter. A summary of the RPD calculations for soil samples is shown in the table below:

Table 10 Soil RPD

Sample ID	Sample Depth	Parameters	Analyzed Concentration (µg/g)	Duplicate Concentration (µg/g)	RPD (%)	Alert Criteria
Dup1 (Duplicate of BH 11-1)	0.1-0.7 mbgs	Chromium	30	20	10.0	40%
		Cobalt	6	7	3.8	
		Copper	16	17	1.5	
		Lead	17	21	5.3	
		Nickel	19	16	4.3	
		Vanadium	26	27	0.9	
		Zinc	56	64	3.3	

The RPD results were compared to the recommended alert criteria used by Eurofins (contractual laboratory) for all calculable parameters for the analyzed soil samples. Seven (7) parameters in the analyzed soil sample and its duplicate pair had detectable concentrations in which the RPDs were calculable. All calculable RPDs for the soil duplicate pairs were within the recommended alert criteria of 40% used by Eurofins Quality Assurance.

A summary of the RPD calculations for groundwater samples is shown in the table below:

Table 11 Groundwater RPD

Sample ID	Parameters	Analyzed Concentration (µg/L)	Duplicate Concentration (µg/L)	RPD (%)	Alert Criteria
GW-DUP1 (Duplicate of BHMW15)	Chloride	4130000	3950000	1.1	20%
	Sodium	2930000	2850000	0.7	
	Electrical Conductivity	11800	11800	5	10%

Three (3) parameters in the analyzed groundwater sample and its duplicate pair had detectable concentrations in which the RPDs were calculable. All calculable RPDs for the groundwater duplicate pairs were within the recommended alert criteria of 20% used by Eurofins Quality Assurance.

Based on the above discussions, it is the opinion of Englobe that the overall objectives of the investigation were met in terms of the quality of the field and laboratory data obtained.

7 Conclusions

This Phase Two ESA was conducted by Mr. Feng Li of Englobe under the guidance and supervision of Mr. Sam Voore, P.Eng., a Qualified Person as defined by O. Reg. 153/04, as amended. Englobe understands that filing a Record of Site Condition (RSC) with the Ministry of Environment, Conservation and Parks (MECP) is not required at this time.

This Phase Two ESA was completed in accordance with the Ontario Regulation 153/04 (O. Reg. 153/04), as amended. The Phase Two ESA consisted of drilling 15 boreholes (BH1 to BH13, BH15 and BH16), including eight (8) deep boreholes and seven (7) shallow boreholes. Five (5) boreholes (BH1, BH8, BH9, BH12 and BH15) were instrumented with monitoring wells. Representative soil and groundwater samples were collected and submitted to the laboratory for analysis of Metals and Inorganics (M&I), Petroleum Hydrocarbon Fractions F1 to F4 (PHCs), including benzene, toluene, ethylbenzene and xylenes (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs), Organochlorine pesticides (OCPs), pH and/or grain size.

Based on the results of this Phase Two ESA, the soil stratigraphy at the investigative locations generally comprises fill (sand and gravel) overlying native sand with some silt. The groundwater levels measured from the monitoring wells ranged from 1.18 to 7.76 m bgs. The water table is within the silt layer. The aquifer encountered during this Phase Two ESA appears to be an unconfined aquifer. The estimated thickness of the asphalt layer (except for BH4, BH13, BH15, and BH16 covered by a surficial topsoil layer with an average thickness of 0.2 m) ranged from 0.08 to 0.11 m. The granular base/ subbase material at the borehole locations consisted of sand and gravel that ranged from 0.12 to 0.3 m. The thickness of native sandy silt or silt/silty sand with some clay ranges from 0.3 m to 8.2 m. No bedrock was encountered during the Phase Two ESA drilling.

According to the soil analytical results, concentrations of the EC and SAR from soil samples at various borehole locations were detected at the concentrations greater than the applicable MECP Table 2 ICC Standards. Based on the findings of Phase One ESA and Phase Two ESA Site visit, the Site was historically and currently used as a vehicle parking lot. Thus, de-icing activities and/or substances appear to be applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both during the winter season. Per Section 49.1 of O.Reg.153/04, the presence of road salt compounds (e.g., sodium, chloride, EC, SAR) is not considered to exceed the Regulation if the application to surfaces is for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. The analytical results of the remaining soil samples tested for M&I, PHCs, BTEX, VOCs and PCBs and PAHs were either below the laboratory detection limits or met the applicable Table 2 ICC Standards.

According to the groundwater analytical results, concentrations of chloride and sodium parameters from groundwater sample (BHMW15) were detected at the concentrations greater than the applicable MECP Table 2 Standards. Considering the location of BH15 is close to the parking lot and pedestrian sidewalk in the Vellore Hall Park, de-icing activities and/or substances appear to be applied to surfaces for the safety of pedestrian traffic under conditions of snow or ice or both during the winter season. The analytical results of the remaining groundwater samples tested for M&I, PHCs, BTEX, VOCs and PCBs were either below the laboratory detection limits or met the applicable Table 2 Standards.

8 Statement of Limitations

This report (hereinafter, the “Report”) was prepared by Englobe Corp. (hereinafter the “Company”) and is provided for the sole and exclusive use and benefit of the City of Vaughan (the “Client”). Ownership in and copyright for the contents of the Report belong to the Company.

No other person is authorized to rely on, use, copy, duplicate, reproduce or disseminate this Report, in whole or in part and for any reason whatsoever, without the express prior written consent of the Company. Any person using this Report, other than the person(s) to whom it is directly addressed, does so entirely at its own risk. The Company assumes no responsibility or liability in connection with decisions made or actions taken based on the Report, or the observations and/or comments contained within the Report. Others with interest in the Site and/or subject matter of this Report should undertake their own investigations and studies to determine how or if they or their plans could be affected.

This Report should be considered in its entirety; selecting specific portions of the Report may result in the misinterpretation of the content.

The work performed by the Company was carried out in accordance with the terms and conditions specified in the Professional Services Agreement between the Company and the Client, in accordance with currently accepted engineering standards and practices and in a manner consistent with the level of skill, care and competence ordinarily exercised by members of the same profession currently practicing under similar conditions and like circumstances in the same jurisdiction in which the services were provided. Standards, guidelines and practices may change over time; those which were applied to produce this Report may be obsolete or unacceptable at a later date.

The findings, recommendations, suggestions, or opinions expressed in this Report reflect the Company’s best professional judgement based on observations and/or information reasonably available at the time the work was performed, as appropriate for the scope, work schedule and budgetary constraints established by the Client. No other warranty or representation, expressed or implied, is included in this Report including, but not limited to, that the Report deals with all issues potentially applicable to the Site and/or that the Report deals with any and all of the important features of the Site, except as expressly provided in the scope of work.

This Report has been prepared for the specific Site, development, building, design or building assessment objectives and/or purposes that were described to the Company by the Client. The applicability and reliability of the content of this Report, subject to the limitations provided herein, are only valid to the extent that there has been no material alteration or variation thereto, and the Company expressly disclaims any obligation to update the Report. However, the Company reserves the right to amend or supplement this Report based on additional information, documentation or evidence made available to it.

The Company makes no representation concerning the legal significance of its findings, nor as to the present or future value of the property, or its fitness for a particular purpose and hereby disclaims any responsibility or liability for consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

Since the passage of time, natural occurrences, and direct or indirect human intervention may affect the views, conclusions and recommendations (if any) provided in this Report, it is intended for immediate use.

In preparing this Report, the Company has relied in good faith on information provided by others and has assumed that such information is factual, accurate and complete. The Company accepts no responsibility or liability for any deficiency, misstatement or inaccuracy in this Report resulting from the information provided, concealed or not fully disclosed by those individuals.

The conclusions presented herein are based on information gathered from a limited historical review of readily available geological, historical and regulatory information and a field inspection program. Sampling and analysis of soil, groundwater or any other material were not carried out as part of this assessment. Consequently, the presence and/or extent of any adverse environmental impact cannot be verified. The potential for environmental liability and/or environmental impact is an opinion that has been arrived at within the scope of this assessment.

It is recommended practice that the Company be retained during subsequent phases of the project, to confirm that the conditions throughout the Site do not deviate materially from those encountered throughout the Sampling program.

Any description of the Site and its physical setting documented in this Report is presented for informational purposes only, to provide the reader a better understanding of the Site and scope of work. Any topographic benchmarks and elevations are primarily to establish relative elevation differences between sampling locations and should not be used for other purposes such as grading, excavation, planning, development, or similar purposes.

Any results from laboratory or other subcontractors reported herein have been carried out by others, and the Company cannot warrant their accuracy.

This Statement of Limitations forms an integral part of this report.

9 References

City of Vaughan Zoning By-law and key Maps, 2021

https://www.vaughan.ca/services/business/zoning_by_law_and_opas/Pages/default.aspx

Ontario Geological Survey. 2011. Bedrock Geology of Ontario. Miscellaneous Release - Data 126-Revision 1, Scale 1:250 000.

Ontario Geological Survey. 2010. Surficial Geology of Southern Ontario. Miscellaneous Release - Data 128-Revised.

Ontario Ministry of Natural Resources, 2010 Ontario Base Map, scale 1:22,000.

Ontario Ministry of Environment Regulation 153/04.

MECP, 2011, Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act

Phase One Environmental Site Assessment, 9541 Weston Road, Vaughan, Ontario, dated April 2022, prepared by Englobe Corp.

10 Tables

10.1 Monitoring Well Installation

Table 12: Monitoring Well Installation Details

Groundwater Monitoring Well	Monitoring Well Depth (m bgs)	Monitoring Well Screen Length (m)	Elevation of Ground Surface (m asl)	Elevation of Well Riser (m asl)
BHMW1	4.03	1.5	225.6	113.8
BHMW8	7.81	3	225.2	116.6
BHMW9	7.90	3	225.2	109.8
BHMW12	7.81	3	225	108.0
BHMW15	4.14	1.5	224.8	107.6

10.2 Water Levels

Table 13 - Groundwater Elevations

Groundwater Monitoring Well	Monitoring Well Depth (m bgs)	Depth to Water (m bgs) March 9-22	Elevation of Ground Surface (m asl)	Groundwater Elevation (m asl)
BHMW1	4.03	4.01	225.6	221.6
BHMW8	7.81	7.62	225.2	217.6
BHMW9	7.90	7.76	225.2	217.4
BHMW12	7.81	Dry	225	N/A
BHMW15	4.14	1.18	224.8	223.6

10.3 LNAPLs and DNAPLs

LNAPLs/DNAPLs were not encountered in the boreholes during drilling on (January 13,14 and 21, 2022). Evidence of LNAPLs/DNAPLs were not encountered during groundwater sampling of the monitoring wells on March 9, and 16, 2022.

10.4 Soil Data

The soil data summary table is provided in Table 13 in Appendix D.

10.5 Groundwater Data

The groundwater data summary table is provided in Table 14 in Appendix D.

10.6 Sediment Data

No sediment samples were collected and submitted for laboratory analysis as part of this Phase Two ESA.

10.7 Soil: Maximum Concentration Data

The soil maximum concentration data is provided in Table 15 in Appendix D.

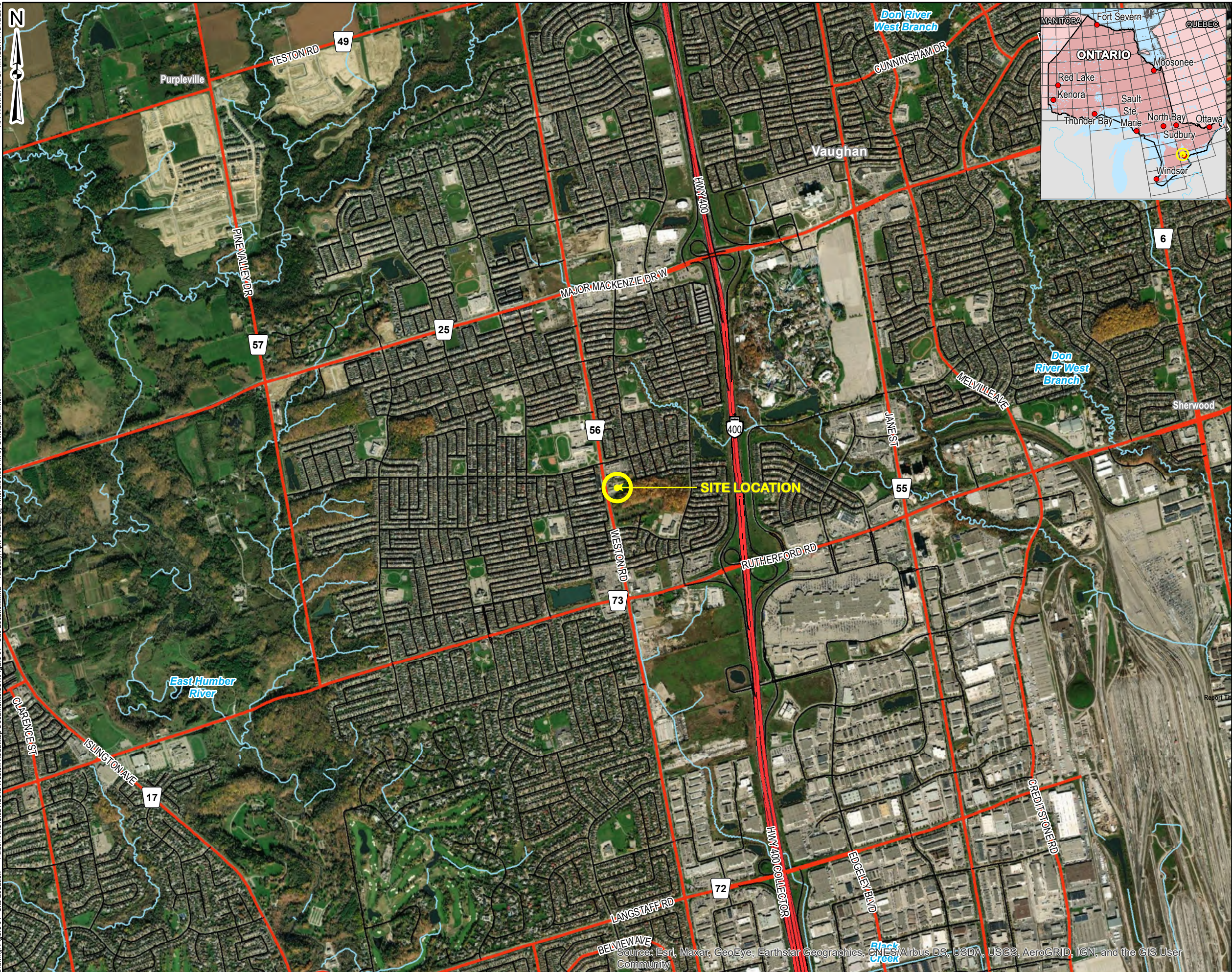
10.8 Groundwater: Maximum Concentration Data

The groundwater maximum concentration data is provided in Table 16 in Appendix D.

Appendix A

Figures










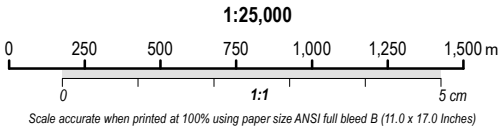
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Projection: Transverse Mercator
Datum: North American 1983

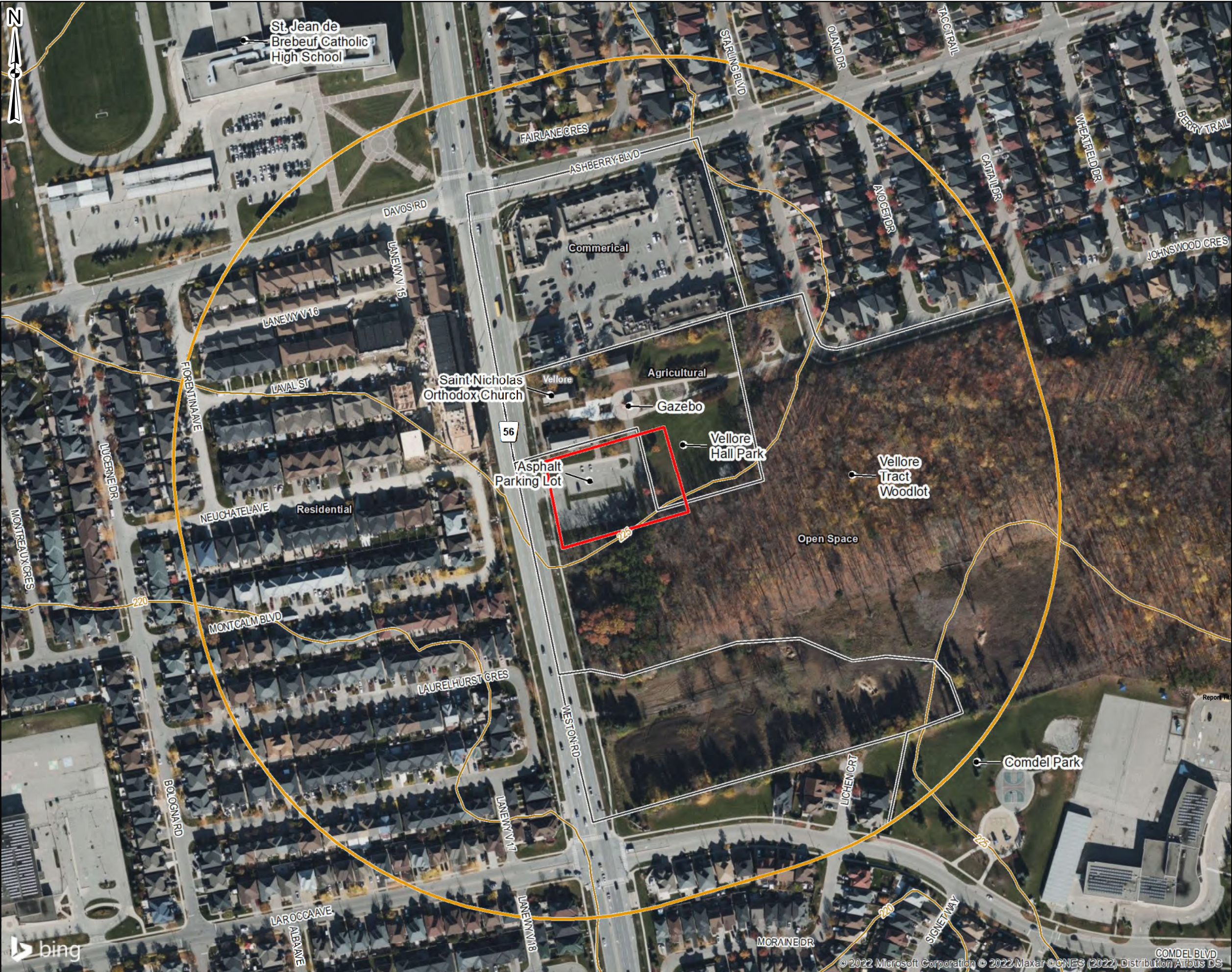
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-  Expressway / Highway
-  Major Road
-  Minor Road
-  Railway
-  Watercourse

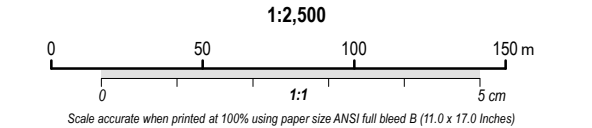


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Revision	Date	Issue	GIS #
Client			
City of Vaughan			
Site			
9541 Weston Road, Vaughan, Ontario			
e			
Phase Two Environmental Site Assessment			
Drawing Title			
Site Location Plan			
Designed By		Scale	
S.W.		1:25,000	
Drawn By		Date	
C.M.		April, 2022	
Approved By		Project No.	
W.J.		02112512.000	
Figure No.			
1			



- Notes**
- 1. This drawing shall be read in conjunction with the associated technical report.
 - 2. Coordinate System: NAD 1983 UTM Zone 17 T
Projection: Transverse Mercator
Datum: North American 1983

- Legend**
- Site Boundary
 - 250 m Study Area
 - City of Vaughn Zoning
 - Contour (5 m Interval)



A	2022-04-05	-	02112512
Revision	Date	Issue	GIS #

Client
City of Vaughan

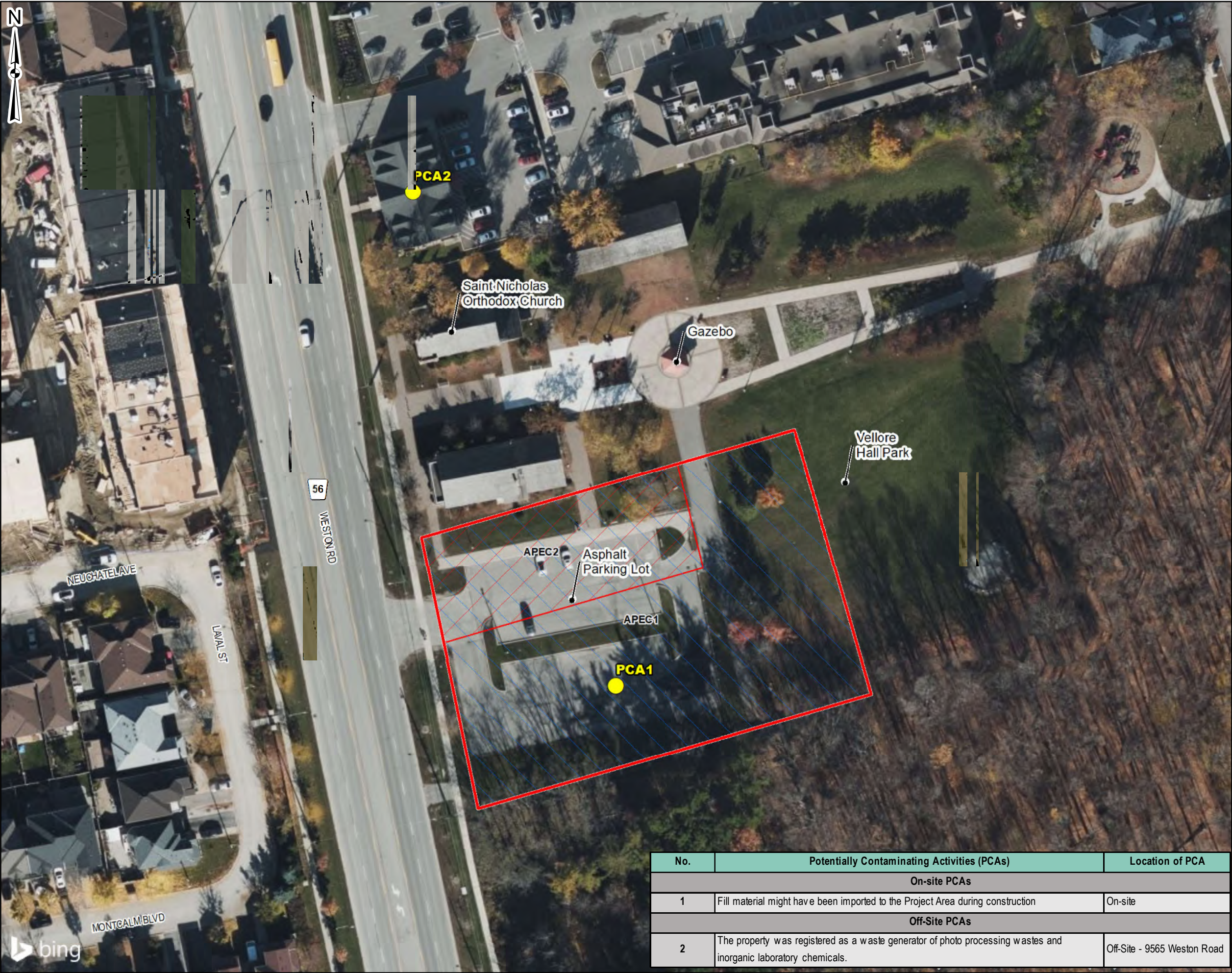
Site
9541 Weston Road, Vaughan, Ontario

Report Title
Phase Two Environmental Site Assessment

Drawing Title
Study Area and Surrounding Land Use Plan

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Drawn By	C.M.	Date	April, 2022
Approved By	W.J.	Project No.	02112512.000
Figure No.	2		

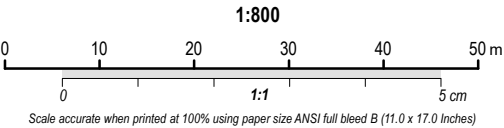
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Tuesday, April 19, 2022 @ Time: 3:32:31 PM by Christopher Mitchell



Notes

1. This drawing shall be read in conjunction with the associated technical report.
2. Coordinate System: NAD 1983 UTM Zone 17 T
Projection: Transverse Mercator
Datum: North American 1983

- Legend**
- Potentially Contaminating Activity (PCA)
 - Site Boundary
 - Area of Potential Environmental Concern (APEC)**
 - APEC1
 - APEC2



A	2022-04-19	-	02112512
Revision	Date	Issue	GIS #

Client
City of Vaughan

Site
9541 Weston Road, Vaughan, Ontario

Report Title
Phase Two Environmental Site Assessment

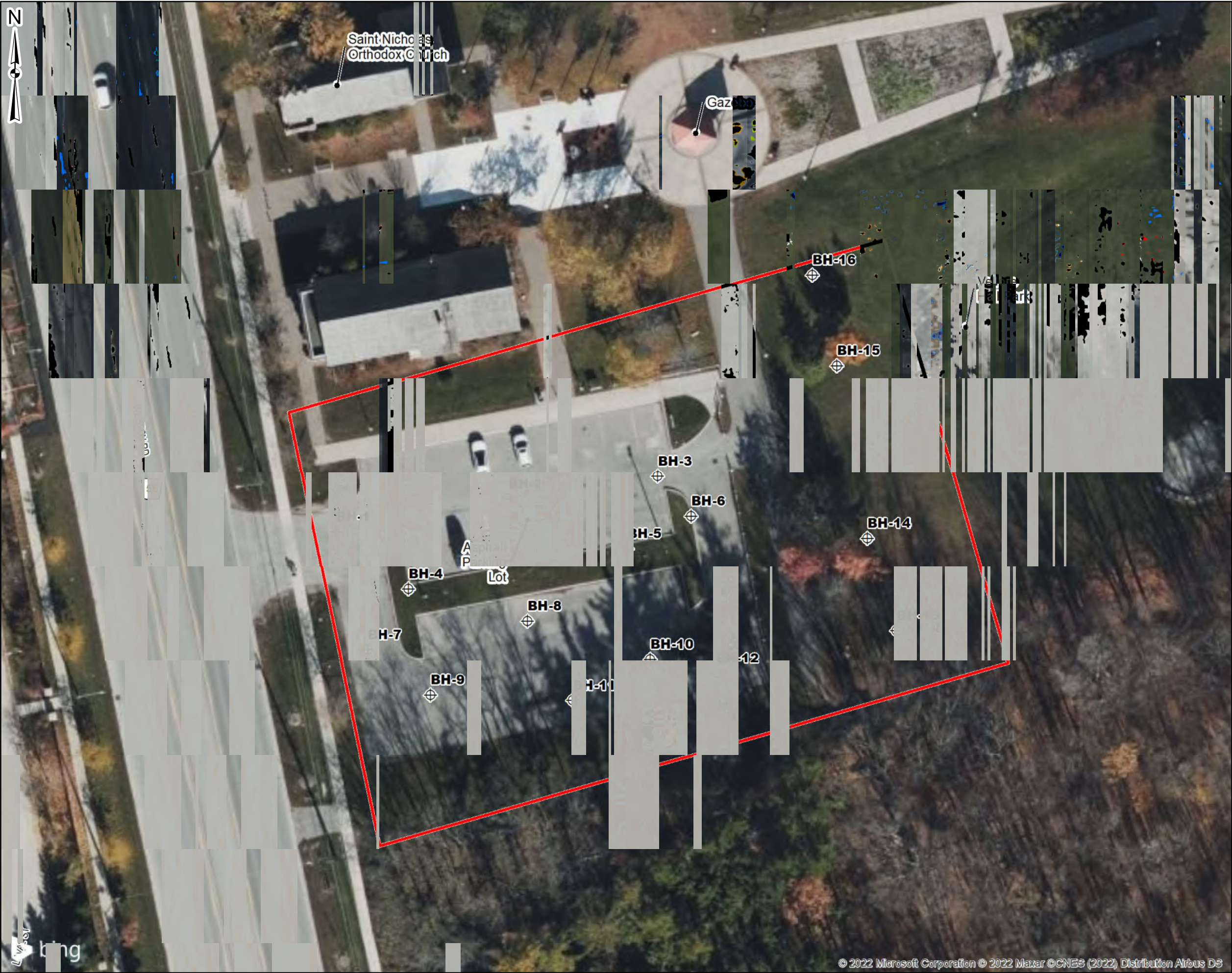
Drawing Title
Site Plan

Designed By	S.W.	Scale	1:800
Drawn By	C.M.	Date	April, 2022
Approved By	W.J.	Project No.	02112512.000

Figure No.
3

No.	Potentially Contaminating Activities (PCAs)	Location of PCA
On-site PCAs		
1	Fill material might have been imported to the Project Area during construction	On-site
Off-Site PCAs		
2	The property was registered as a waste generator of photo processing wastes and inorganic laboratory chemicals.	Off-Site - 9565 Weston Road

Drawing: Figure 04 - Borehole Location Plan Folder: A:\GIS\02112512 Weston Road\Map Documents\Phase II\Figure 04 - Borehole Location Plan.mxd Tuesday, April 19, 2022 @ Time: 3:33:02 PM by Christopher Mitchell APPROX. DATE OF IMAGERY: 10/15/2019

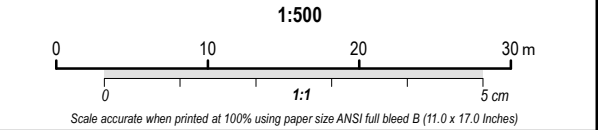


Notes

1. This drawing shall be read in conjunction with the associated technical report.
2. Coordinate System: NAD 1983 UTM Zone 17 T
Projection: Transverse Mercator
Datum: North American 1983

Legend

 Borehole
 Site Boundary



A	2022-04-19	-	02112512
Revision	Date	Issue	GIS #

Client
City of Vaughan

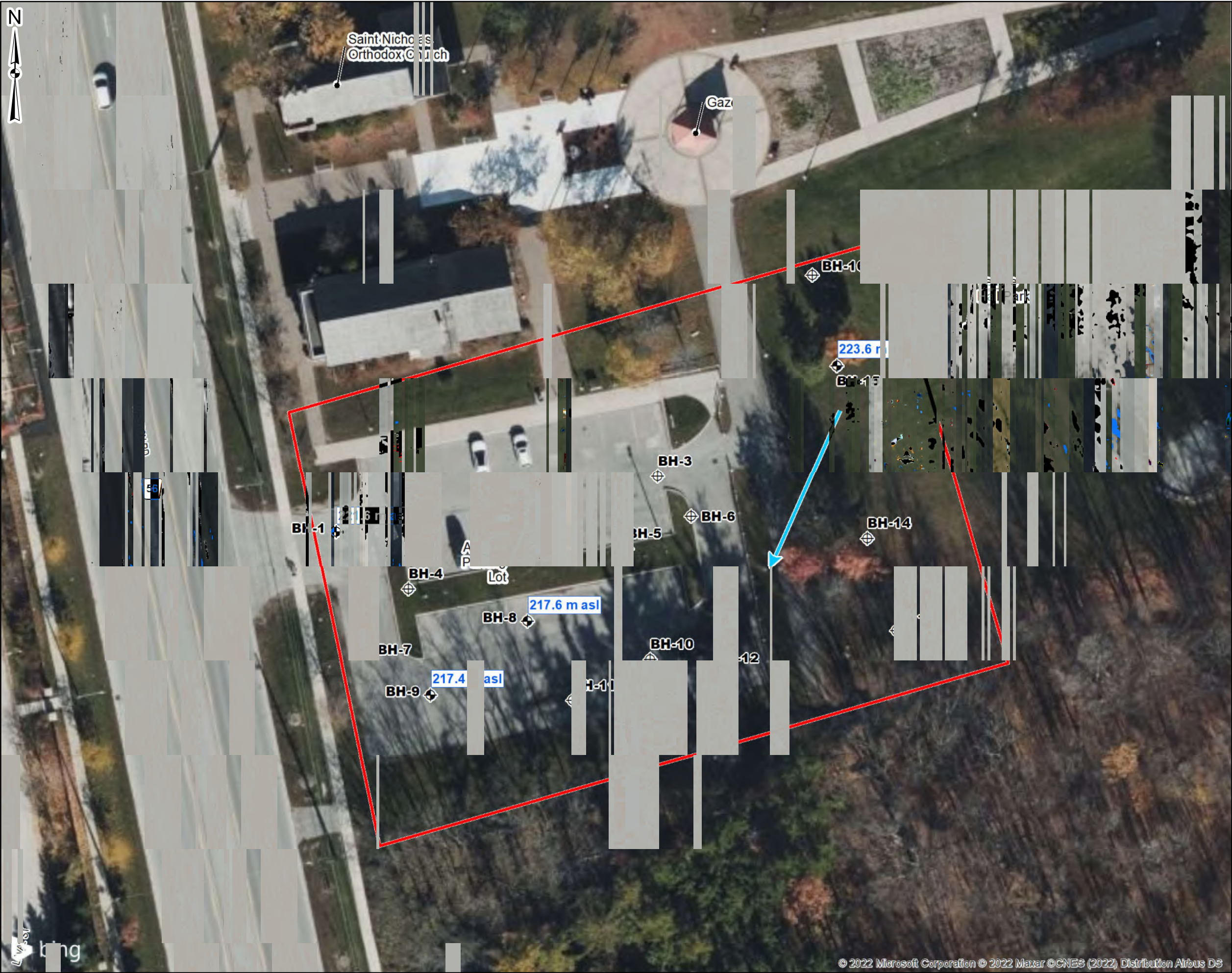
Site
9541 Weston Road, Vaughan, Ontario

Report Title
Phase Two Environmental Site Assessment

Drawing Title
Borehole Location Plan

Designed By	S.W.	Scale	1:500
Drawn By	C.M.	Date	April, 2022
Approved By	W.J.	Project No.	02112512.000

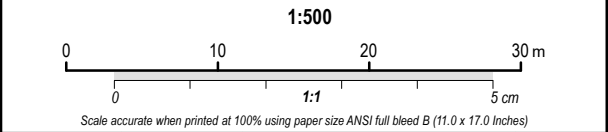
Figure No.
4



Notes

1. This drawing shall be read in conjunction with the associated technical report.
2. Coordinate System: NAD 1983 UTM Zone 17 T
Projection: Transverse Mercator
Datum: North American 1983

- Legend**
- Borehole
 - Borehole / Groundwater Monitoring Well
 - Interpreted Groundwater Flow Direction
 - Site Boundary



A	2022-04-19	-	02112512
Revision	Date	Issue	GIS #

Client
City of Vaughan

Site
9541 Weston Road, Vaughan, Ontario

Report Title
Phase Two Environmental Site Assessment

Drawing Title
Groundwater Elevations & Estimated Groundwater Flow Direction

Designed By	S.W.	Scale	1:500
Drawn By	C.M.	Date	April, 2022
Approved By	W.J.	Project No.	02112512.000

Figure No.
5

Appendix B

Sampling and Analysis Plan



eNGLOBE



January 10, 2022

Ms. Adriana Tantalo
Project Manager
City of Vaughan
2141 Major Mackenzie Drive
Vaughan, Ontario L5A 1T1

Subject: **Sampling and Analysis Plan**
Phase Two Environmental Site Assessment
9541 Weston Road
Vaughan, Ontario
Project Reference: 02112512.000

1 INTRODUCTION

Englobe Corp. (Englobe) was retained by City of Vaughan (hereinafter referred to as the “Client”) to complete a Phase One Environmental Site Assessment (ESA) for a property located at 9541 Weston Road, Vaughan, Ontario (hereinafter referred to as the “Site”, “Phase One Property” or “Phase Two Property”), the findings of the Phase One ESA are presented under separate cover:

- “Phase One Environmental Site Assessment, 9541 Weston Road, Vaughan, Ontario” prepared by Englobe for City of Vaughan (Englobe Reference No.02112512.000)

Based on the findings of this Phase One ESA, potentially contaminating activities (PCAs) on the Site and the surrounding properties within the Phase One Study Area were identified, and areas of potential environmental concern (APECs) on the Phase One Property were identified as presented below:

Table 1 Areas of Potential Environmental Concern

APEC	Location of APEC	Potentially Contaminating Activity (PCA)	Location of PCA	Contaminants of Potential Concern*	Media Potentially Impacted
APEC 1	Entire Site	Historical use of fill materials # 30 - Importation of Fill Materials of Unknown Quality	On-site	Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN, EC, SAR and pH, PHCs, BTEX, VOCs, PAHs, PCBs, OCPs	Soil

APEC	Location of APEC	Potentially Contaminating Activity (PCA)	Location of PCA	Contaminants of Potential Concern*	Media Potentially Impacted
APEC 2	The north portion of the Site	Registered as a waste generator of photo processing wastes and inorganic laboratory chemicals # Undefined PCA No.	Off-site	Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN, VOCs	Soil and Groundwater

Notes: *

- PHCs - Petroleum Hydrocarbon Fractions F1 to F4
- BTEX - Benzene, Toluene, Ethylbenzene and Xylenes
- VOCs - Volatile Organic Compounds
- PAHs - Polycyclic Aromatic Hydrocarbons
- PCBs- Polychlorinated Biphenyl
- OCPs - Organochlorine Pesticides
- B-HWS-Hot Water Soluble Boron
- EC-Electrical Conductivity
- SAR-Sodium Absorption Ratio

The purpose of the Phase Two ESA is to investigate soil and groundwater environmental quality at the Site at the aforementioned areas of potential environmental concerns.

2 Phase Two ESA Sampling and Analysis Plan

The Phase Two ESA sampling and analysis plan has been prepared to identify possible soil and groundwater contamination at the Site. The sampling and analysis plan will consist of advancement of 15 boreholes, installation of seven (7) boreholes as groundwater monitoring wells. All monitoring wells will be instrumented with a 1.5 m or 3 m screen length of number 10 slot size pipe. The soil and groundwater samples will be collected and submitted to accredited laboratory for chemical analysis. The Sampling and Analysis Plan is presented in Table 1, hereafter.

Table 2 Sampling and Analysis Plan

Sample Location	Sample ID	Approximate Depth	Media	Rationale	Laboratory Analyses
BH1	Sample No.1	Worst-case (fill)	Soil	Chemical characterization of soil in the vicinity of APECs 1 and 2.	Metals and inorganics, PAHs
	Sample No.2	Worst-case	Soil		VOCs, PHCs, BTEX
BH2	Sample No.1	Surface (fill)	Soil	Chemical characterization of soil in the vicinity of APECs 1 and 2.	Metals, EC, SAR, PAHs
	Sample No.2	Worst-case (fill)	Soil		VOCs, PHCs, BTEX
	Duplicate	Depends	Soil	Quality Assurance and Quality Control	VOCs, PHCs, BTEX
BH3	Sample No.1	Worst-case (fill)	Soil	Chemical characterization of soil in the vicinity of APECs 1 and 2.	Metals, EC, SAR, PCBs
	Sample No.2	Worst-case	Soil		PHCs, BTEX

Sample Location	Sample ID	Approximate Depth	Media	Rationale	Laboratory Analyses
	Duplicates	Depends	Soil	Quality Assurance and Quality Control	PCBs
BH4	Sample No.1	Worst-case (fill)	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR, PAHs
	Sample No.2	Worst-case	Soil		PHCs, BTEX
BH5	Sample No.1	Worst-case (fill)	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR, OCPs
	Sample No.2	Worst-case	Soil		PHCs, BTEX
	Duplicate	Depends	Soil	Quality Assurance and Quality Control	OCPs
BH6	Sample No.1	Worst-case (fill)	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR, PAHs
	Sample No.2	Worst-case	Soil		PHCs, BTEX
BH7	Sample No.1	Worst-case (fill)	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR, PAHs
	Sample No.2	Worst-case	Soil		PHCs, BTEX
	Duplicate	Depends	Soil	Quality Assurance and Quality Control	PAHs
BH8	Sample No.1	Surface (fill)	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals and inorganics, PAHs
	Sample No.2	Worst-case	Soil		VOCs, PHCs, BTEX
BH9	Sample No.1	Surface (fill)	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR, PAHs, PCBs
	Sample No.2	Worst-case	Soil		PHCs, BTEX
BH10	Sample No.1	Surface (fill)	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR,
	Sample No.2	Worst-case	Soil		PHCs, BTEX
BH11	Sample No.1	Surface (fill)	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR,
	Sample No.2	Worst-case	Soil		VOCs, PHCs, BTEX

Sample Location	Sample ID	Approximate Depth	Media	Rationale	Laboratory Analyses
	Duplicates	Depends	Soil	Quality Assurance and Quality Control	Metals
BH12	Sample No.1	Surface (fill)	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, inorganics, PAHs
	Sample No.2	Worst-case	Soil		VOCs, PHCs, BTEX
BH13	Sample No.1	Surface (fill)	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR
	Sample No.2	Worst-case	Soil		PHCs, BTEX
BH15	Sample No.1	Surface (fill)	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, inorganics
	Sample No.2	Surface (fill)	Soil		Metals, EC, SAR
BH16	Sample No.1	Surface (fill)	Soil	Chemical characterization of soil in the vicinity of APEC 1.	Metals, EC, SAR, OCPs
	Sample No.2	Worst-case	Soil		VOCs, PHCs, BTEX
BH1	BHMW1	Depends	Groundwater	Chemical characterization of soil in the vicinity of APECs 1, and 2.	Metals, inorganics, PAHs, PHCs, BTEX, VOCs and/or PCBs
BH8	BHMW2	Depends	Groundwater	Chemical characterization of soil in the vicinity of APECs 1, and 2.	Metals, inorganics, PAHs, PHCs, BTEX, VOCs and/or PCBs
BH9	BHMW3	Depends	Groundwater	Chemical characterization of soil in the vicinity of APECs 1, and 2.	Metals, inorganics, PAHs, PHCs, BTEX, VOCs and/or PCBs
BH12	BHMW4	Depends	Groundwater	Chemical characterization of soil in the vicinity of APECs 1, and 2.	Metals, inorganics, PAHs, PHCs, BTEX, VOCs and/or PCBs
BH15	BHMW5	Depends	Groundwater	Chemical characterization of soil in the vicinity of APECs 1, and 2.	Metals, inorganics, PAHs, PHCs, BTEX, VOCs and/or PCBs
BH15	BHMW15	Depends	Groundwater	Quality Assurance and Quality Control	Metals, inorganics, PAHs, PHCs, BTEX, VOCs and/or PCBs

Notes:

*Chemical analysis program may change based on field conditions encountered.
Field preserve any and all locations of staining/odour, etc.*

Waste Management: Soil cuttings, wash water, and purged groundwater generated as part of this Phase Two ESA will be contained in 205 L steel drums equipped with locking secure lids. Englobe can arrange a licensed subcontractor to pick up and dispose of these drums upon the request from the Client.

Monitoring Well Installation, Development and Groundwater Sampling: Five boreholes will be equipped with groundwater monitoring wells for environmental sampling and analysis purposes. Therefore, the screens will be placed in an attempt to intercept the water table. These will require development and sampling following the drilling activities. Please refer to Table 1 for the analytical program.

QA/QC: The soil and groundwater analysis program will include the submission of one duplicate soil sample and one duplicate groundwater sample for analysis of metals and inorganic parameters, PHCs, BTEX, PAHs, VOCs, PCBs and OCPs. Please note that the samples will be collected at random and submitted for identical chemical analysis. The duplicate samples are to be collected in “lifts,” where the original sample container and the duplicate sample container are filled half-way and alternated during sampling to ensure that the field duplicate is representative of the original field sample.

Appendix C

Borehole Log



eNGLOBE

Englobe

Logged By: P. Jin

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	Dry	none
Feb 14, 2022	Dry	
Feb 24, 2022	4.0	

LOG OF BOREHOLE No. BH03

Englobe

Project No. 02112512.000

DRAWING No. BH3

Project: City of Vaughan Fire Station - 9541 Weston Road, Woodbridge, Ontario

Sheet No. 1 of 1

Location: Refer to Borehole Location Plan

N 4,854,305.111 E 616,028.716

Date Drilled: 2022-1-14

Drill Type: Solid Stem Augers

Datum: Geodetic

Split Spoon Sample



Auger Sample



SPT (N) Value



Dynamic Cone Test



Shelby Tube



Shear Strength by

Vane Test



Natural Moisture Content



Atterberg Limits



Undrained Triaxial at

% Strain at Failure



Shear Strength by

Penetrometer Test



GWL	SYMBOL	SOIL DESCRIPTION	ELEV. m	DEPTH m	Standard Penetration Test N Value				SAMPLER	SPT NO.	Natural Unit Weight kN/m ³	Percent of Fines, %
					40	80	120	160				
		ASPHALT CONCRETE (90 mm)	224.9	0								
		SAND AND GRAVEL (Granular Base/Subbase, 120 mm)	224.8									
		SANDY SILT: trace clay, brown, moist, compact to dense	224.7									
				1								
				2								
				3								
				4								
		SILTY SAND: brown, moist, dense to very dense	222.0									
				1								
				2								
				3								
				4								
		Terminated at 4.4 m	220.5									
		Borehole advanced using continuous flight solid stem augering equipment on January 14, 2022 by DrillTech Drilling LTD.										

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	Dry	none

Checked By: A. Rahman

Logged By: P. Jin

CLASSIFICATION LOG 02112512.GPJ LOG A GWGL02.GDT 22-3-1

LOG OF BOREHOLE No. BH04

Englobe

Project No. 02112512.000

DRAWING No. BH4

Project: City of Vaughan Fire Station - 9541 Weston Road, Woodbridge, Ontario

Sheet No. 1 of 1

Location: Refer to Borehole Location Plan

N 4,854,288.738 E 615,980.069

Date Drilled: 2022-1-13

Drill Type: Solid Stem Augers

Datum: Geodetic

Split Spoon Sample



Auger Sample



SPT (N) Value



Dynamic Cone Test



Shelby Tube



Shear Strength by

Vane Test



Natural Moisture Content



Atterberg Limits



Undrained Triaxial at

% Strain at Failure



Shear Strength by

Penetrometer Test



0
15
10



GWL	SYMBOL	SOIL DESCRIPTION	ELEV. m	DEPTH m	Standard Penetration Test N Value		Natural Moisture Content % Atterberg Limits (% Dry Weight)	SAMPLES	SPT NO	Natural Unit Weight kN/m ³	Percent of Fines, %
					40	80	120	160			
		TOPSOIL (160 mm)	225.4	0							
		SAND AND GRAVEL (Granular Base/Subbase, 150 mm)	225.2	0.2	17				11.3		
		SANDY SILT: trace to some clay, brown, moist, loose to dense	225.1								
				1	7				15.4		
				2	34				10.8		
			2.2								
		SILTY SAND: brown, moist to wet, compact to very dense	223.2								
				3	63				12.9		
				4	73				19.2		
				5	59				11.9		
				6	63				21.0		
				7							
				8	50				21.0		
				9							
			218.1								
				10	22				10.3		
			8.2								
		Terminated at 8.2 m	217.2								
		Borehole advanced using continuous flight solid stem augering equipment on January 13, 2022 by DrillTech Drilling LTD.									

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	7.3	none

Checked By: A. Rahman

Logged By: P. Jin

CLASSIFICATION LOG 02112512.GPJ LOG A GWGL02.GDT 22-3-1

LOG OF BOREHOLE No. BH06

Englobe

Project No. 02112512.000

DRAWING No. BH6

Project: City of Vaughan Fire Station - 9541 Weston Road, Woodbridge, Ontario

Sheet No. 1 of 1

Location: Refer to Borehole Location Plan

N 4,854,299.182 E 616,019.578

Date Drilled: 2022-1-13

Drill Type: Solid Stem Augers

Datum: Geodetic

Split Spoon Sample



Auger Sample



SPT (N) Value



Dynamic Cone Test



Shelby Tube



Shear Strength by

Vane Test



Natural Moisture Content



Atterberg Limits



Undrained Triaxial at

% Strain at Failure



Shear Strength by

Penetrometer Test



0
15
10



GWL	SYMBOL	SOIL DESCRIPTION	ELEV. m	DEPTH m	Standard Penetration Test N Value		Natural Moisture Content %		SAMPLES	SPT No.	Natural Unit Weight kN/m³	Percent of Fines, %
					40	80	120	160				
		ASPHALT CONCRETE (100 mm)	225.0	0.1								
		SAND AND GRAVEL (Granular Base/Subbase, 150 mm)	224.9									
		SANDY SILT: trace clay, brown, moist, compact	224.7		27				17.8	SS1		
				1	13				10.5	SS2		
				2	22				11.4	SS3		
				3	25				14.7	SS4		
		SILTY SAND: brown, moist, dense	222.1									
				4	33				16.6	SS5		
				5	42				12.8	SS6		
				6	40				14.8	SS7		
				7								
				8	33				18.6	SS8		
		CLAYEY SILT: trace gravel, grey, wet, very stiff	218.3									
				9	17				115.7.3	SS9		
		Terminated at 8.2 m	216.7									
		Borehole advanced using continuous flight solid stem augering equipment on January 13, 2022 by DrillTech Drilling LTD.										

CLASSIFICATION LOG 02112512.GPJ LOG A GWGL02 GDT 22-3-1

Checked By: A. Rahman

Logged By: P. Jin

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	Dry	none

LOG OF BOREHOLE No. BH08

Englobe

Project No. 02112512.000

DRAWING No. BH8

Project: City of Vaughan Fire Station - 9541 Weston Road, Woodbridge, Ontario

Sheet No. 1 of 1

Location: Refer to Borehole Location Plan

N 4,854,284.188 E 615,997.335

Date Drilled: 2022-1-13

Drill Type: Solid Stem Augers

Datum: Geodetic

Split Spoon Sample



Auger Sample



SPT (N) Value



Dynamic Cone Test



Shelby Tube



Shear Strength by

Vane Test



Natural Moisture Content



Atterberg Limits



Undrained Triaxial at

% Strain at Failure



Shear Strength by

Penetrometer Test



0
15
10

GWL	SYMBOL	SOIL DESCRIPTION	ELEV. m	DEPTH m	Standard Penetration Test N Value		Natural Moisture Content % Atterberg Limits (% Dry Weight)	SAMPLES	SPT No.	Natural Unit Weight kN/m³	Percent of Fines %		
					Shear Strength								
					kPa								
		ASPHALT CONCRETE (80 mm)	225.2	0									
		SAND AND GRAVEL (Granular Base/Subbase, 250 mm)	225.1	0.1									
		SANDY SILT: trace gravel, brown, moist, loose	224.8	0.3			7.8						
				1	7		15.0			SS1			
		SILT: some sand, trace clay, brown, moist, compact to very dense Gr: 0%, Sa: 13.8%, Si: 78.3%, Cl: 7.9%	223.8	1.4			9.0			SS2			
				2	28								

CLASSIFICATION LOG 02112512.GPJ LOG A GWGL02.GDT 22-3-1

Checked By: A. Rahman

Logged By: P. Jin

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	7.6	none
Feb 14, 2022	7.6	
Feb 24, 2022	Dry	

LOG OF BOREHOLE No. BH10

Englobe

Project No. 02112512.000

DRAWING No. BH10

Project: City of Vaughan Fire Station - 9541 Weston Road, Woodbridge, Ontario

Sheet No. 1 of 1

Location: Refer to Borehole Location Plan

N 4,854,285.523 E 616,013.237

Date Drilled: 2022-1-14

Drill Type: Solid Stem Augers

Datum: Geodetic

Split Spoon Sample



Auger Sample



SPT (N) Value



Dynamic Cone Test



Shelby Tube



Shear Strength by

Vane Test



Natural Moisture Content



Atterberg Limits



Undrained Triaxial at

% Strain at Failure



Shear Strength by

Penetrometer Test



LOG OF BOREHOLE No. BH11

Englobe

Project No. 02112512.000

DRAWING No. BH11

Project: City of Vaughan Fire Station - 9541 Weston Road, Woodbridge, Ontario

Sheet No. 1 of 1

Location: Refer to Borehole Location Plan

N 4,854,275.359 E 616,002.160

Date Drilled: 2022-1-21

Drill Type: Solid Stem Augers

Datum: Geodetic

Split Spoon Sample



Auger Sample



SPT (N) Value



Dynamic Cone Test



Shelby Tube



Shear Strength by

Vane Test



Natural Moisture Content



Atterberg Limits



Undrained Triaxial at

% Strain at Failure



Shear Strength by

Penetrometer Test



0
15
10



GWL	SOIL DESCRIPTION	ELEV. m	DEPTH m	Standard Penetration Test N Value		Natural Moisture Content %		SAMPLES	SPT	Natural Unit Weight kN/m³	Percent of Fines, %
				40	80	120	160				
	ASPHALT CONCRETE (110 mm)	225.0	0.1								
	SAND AND GRAVEL (Granular Base/Subbase, 120 mm)	224.9									
	SILT: some clay, brown, moist, loose to very dense	224.7									
	Gr: 0%, Sa: 0%, Si: 87.7%, Cl: 12.3%										
			1	10				17.9	SS1		
			2	10				13.0	SS2		
			3	16				20.3	SS3		
			4	47				13.2	SS4		
			5	65				17.5	SS5		
			6	50				15.8	SS6		
			7	58				17.2	SS7		
			8	29				16.1	SS8		
			9	28				22.4	SS9		
	Terminated at 8.2 m	216.7									
	Borehole advanced using continuous flight solid stem augering equipment on January 21, 2022 by DrillTech Drilling LTD.										

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	7.5	none

Checked By: A. Rahman

Logged By: P. Jin

CLASSIFICATION LOG 02112512.GPJ LOG A GWGL02.GDT 22-3-1

Englobe

Project No. 02112512.000

DRAWING No. BH12

Project: City of Vaughan Fire Station - 9541 Weston Road, Woodbridge, Ontario

Sheet No. 1 of 1

Location: Refer to Borehole Location Plan

N 4,854,275.874 E 616,022.481

Date Drilled: 2022-1-21

Drill Type: Solid Stem Augers

Datum: Geodetic

Split Spoon Sample



Auger Sample



SPT (N) Value



Dynamic Cone Test



Shelby Tube



Shear Strength by

Vane Test



Natural Moisture Content



Atterberg Limits



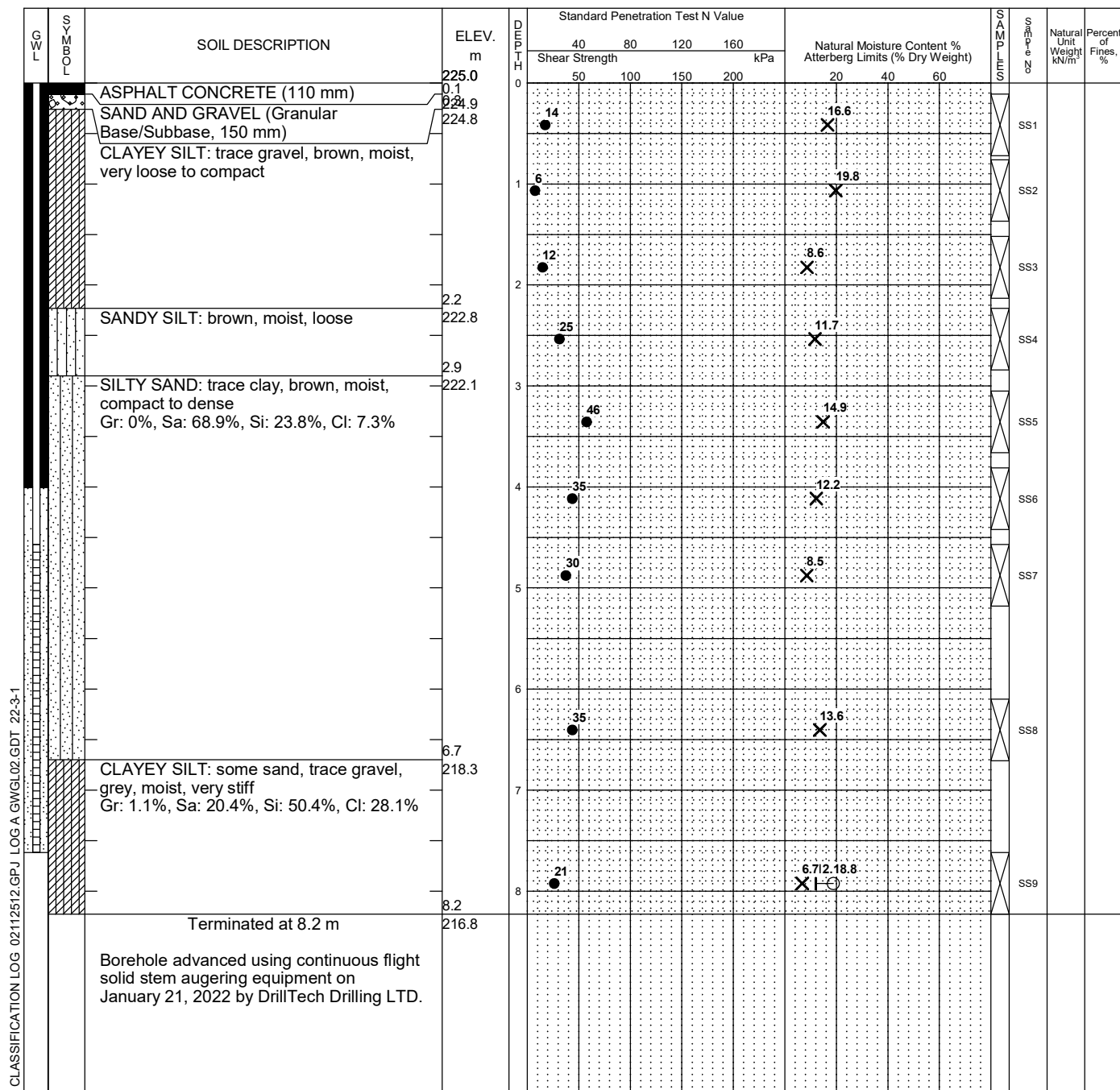
Undrained Triaxial at



% Strain at Failure



Shear Strength by Penetrometer Test



Time	Water Level (m)	Depth to Cave (m)
Upon Completion	Dry	none
Feb 14, 2022	Dry	
Feb 24, 2022	7.6	

LOG OF BOREHOLE No. BH13

Englobe

Project No. 02112512.000

DRAWING No. BH13

Project: City of Vaughan Fire Station - 9541 Weston Road, Woodbridge, Ontario

Sheet No. 1 of 1

Location: Refer to Borehole Location Plan

N 4,854,286.170 E 616,050.535

Date Drilled: 2022-1-21

Drill Type: Solid Stem Augers

Datum: Geodetic

Split Spoon Sample



Auger Sample



SPT (N) Value



Dynamic Cone Test



Shelby Tube



Shear Strength by

Vane Test



Natural Moisture Content

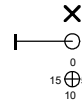
Atterberg Limits

Undrained Triaxial at

% Strain at Failure




Shear Strength by

Penetrometer Test



0
15
10



GWL	SYMBOL	SOIL DESCRIPTION	ELEV. m	DEPTH m	Standard Penetration Test N Value				Natural Moisture Content % Atterberg Limits (% Dry Weight)				SAMPLES	SPT No	Natural Unit Weight kN/m³	Percent of Fines %
					Shear Strength kPa											
					40	80	120	160	20	40	60					
		TOPSOIL (200 mm)	225.8	0												
		SAND AND GRAVEL (Granular Base/Subbase, 150 mm)	225.6	0.2	15					25.9				SS1		
		CLAYEY SANDY SILT: trace gravel, brown, moist, firm to hard Gr: 0.3%, Sa: 25.2%, Si: 43.7%, Cl: 30.8%	225.4	0.4												
				1	7					20.0				SS2		
				2	12					12.0				SS3		
				3	21					11.8				SS4		
				4	30					12.3				SS5		
				4	40					13.4				SS6		
		Terminated at 4.4 m	221.4													
		Borehole advanced using continuous flight solid stem augering equipment on January 21, 2022 by DrillTech Drilling LTD.														

Checked By: A. Rahman

Logged By: P. Jin

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	Dry	none

LOG OF BOREHOLE No. BH15

Englobe

Project No. 02112512.000

DRAWING No. BH15

Project: City of Vaughan Fire Station - 9541 Weston Road, Woodbridge, Ontario

Sheet No. 1 of 1

Location: Refer to Borehole Location Plan

N 4,854,317.902 E 616,043.569

Date Drilled: 2022-1-21

Drill Type: Solid Stem Augers

Datum: Geodetic

Split Spoon Sample



Auger Sample



SPT (N) Value



Dynamic Cone Test



Shelby Tube



Shear Strength by

Vane Test



Natural Moisture Content

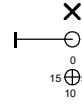
Atterberg Limits

Undrained Triaxial at

% Strain at Failure

Shear Strength by

Penetrometer Test



GWL	SYMBOL	SOIL DESCRIPTION	ELEV. m	DEPTH m	Standard Penetration Test N Value				Natural Moisture Content % Atterberg Limits (% Dry Weight)				SAMPLES	SAMPLE NO	Natural Unit Weight kN/m³	Percent of Fines, %
					Shear Strength											
					40	80	120	160	20	40	60					
			224.8	0												
		TOPSOIL (210 mm)	0.2													
		SILTY CLAY: some sand, trace gravel, brown, moist, firm to very stiff Gr: 2.7%, Sa: 18.2%, Si: 37.0%, Cl: 42.1%	224.6	0.2	25					18.2				SS1		
				1	10					11.8				SS2		
				2	17					11.9				SS3		
			222.2	3	17					11.2				SS4		
				4	23					14.2				SS5		
				4	8					113.523.1				SS6		
		Terminated at 4.4 m	220.4													
		Borehole advanced using continuous flight solid stem augering equipment on January 21, 2022 by DrillTech Drilling LTD.														

CLASSIFICATION LOG 02112512.GPJ LOG A GWGL02.GDT 22-3-1

Checked By: A. Rahman

Logged By: P. Jin

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	2.7	none
Feb 14, 2022	2.7	
Feb 24, 2022	1.3	

Englobe

Logged By: P. Jin

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	Dry	none

Appendix D

Analytical Tables



eNGLOBE

Table 14
Soil Analytical Results
Metals and Inorganics

Parameters	Units	RDL	Guideline SOIL MECP Table 2 ICC Med-Fine	Sample ID Laboratory ID Sample Depth (metres below ground surface) Sample Collection Date (m/d/y)																				
				BH 1-1	BH 1-2	BH 2-1	BH 3-1	BH 4-1	BH 5-1	BH 6-1	BH 7-1	BH 8-1	BH 8-2	BH 9-1	BH 9-2	BH 10-1	BH 11-1	DUP-1	BH 12-1	BH 12-2	BH 13-1	BH 15-1	BH 15-2	BH 16-1
				1606024	1606025	1606028	1606834	1606031	1606034	1606837	1606038	1606043	1606044	1606046	1606047	1606050	1606052	1606053	1606056	1606057	1606839	1606841	1606842	1606843
				@ 0.1-0.7 1/14/2022	@ 0.8-1.4 1/14/2022	@ 0.1-0.7 1/14/2022	@ 0.1-0.7 1/21/2022	@ 0.1-0.7 1/14/2022	@ 0.1-0.7 1/14/2022	@ 0.1-0.7 1/21/2022	@ 0.1-0.7 1/14/2022	@ 0.1-0.7 1/13/2022	@ 0.8-1.4 1/13/2022	@ 0.1-0.7 1/13/2022	@ 0.8-1.4 1/13/2022	@ 0.1-0.7 1/13/2022	@ 0.1-0.7 1/13/2022	Duplication of BH 11-1	@ 0.1-0.7 1/13/2022	@ 0.8-1.4 1/13/2022	@ 0.1-0.7 1/21/2022	@ 0.1-0.7 1/21/2022	@ 0.8-1.4 1/21/2022	@ 0.1-0.7 1/21/2022
Metals and Inorganics																								
Antimony	ug/g	1	50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Arsenic	ug/g	1	18	2	4	2	4	2	3	4	3	3	2	2	3	3	3	4	4	4	2	2	3	
Barium	ug/g	1	670	46	65	57	94	29	51	59	63	39	20	21	38	63	53	75	84	65	23	46	54	59
Beryllium	ug/g	1	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Boron	ug/g	5	120	<5	<5	15	<5	<5	<5	<5	5	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	5	<5	
Boron (Hot Water Soluble)	ug/g	0.5	2	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	-	-	-	<0.5	-	-	<0.5	-	-
Cadmium	ug/g	0.4	1.9	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	
Chromium	ug/g	1	160	20	28	12	25	18	20	27	20	16	11	10	14	21	30	20	27	22	14	16	16	20
Cobalt	ug/g	1	100	5	8	2	8	4	6	6	7	7	4	3	6	7	6	7	8	9	3	4	6	5
Copper	ug/g	1	300	16	20	5	19	14	16	14	18	16	11	12	15	17	16	17	21	21	5	12	12	14
Cyanide (Free)	ug/g	0.005	0.051	<0.005	-	-	-	-	-	-	-	-	<0.005	<0.005	-	-	-	-	<0.005	-	-	<0.005	-	-
Chromium VI	ug/g	0.2	10	<0.20	-	-	-	-	-	-	-	-	<0.20	<0.20	-	-	-	-	<0.20	-	-	0.21	-	-
Lead	ug/g	1	120	14	12	8	8	15	14	9	11	9	4	115	6	13	17	21	46	10	6	11	5	13
Mercury	ug/g	0.1	20	<0.1	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	-	-	<0.1	-	-
Molybdenum	ug/g	1	40	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Nickel	ug/g	1	340	14	23	5	18	12	15	18	17	16	9	8	14	16	19	16	20	21	8	10	12	13
Selenium	ug/g	0.5	5.5	<0.5	0.7	<0.5	0.5	<0.5	0.6	<0.5	<0.5	0.6	0.6	<0.5	0.6	0.7	0.6	0.6	0.9	0.9	<0.5	<0.5	<0.5	<0.5
Silver	ug/g	0.2	50	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
Thallium	ug/g	1	3.3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Uranium	ug/g	0.5	33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Vanadium	ug/g	2	86	20	31	8	35	20	24	29	28	24	18	14	21	27	26	27	33	29	17	21	24	25
Zinc	ug/g	2	340	44	62	10	42	44	52	42	48	47	21	56	31	58	56	64	63	47	18	34	26	48
Other Parameters																								
Moisture (%)	%	0.1	NV	-	-	9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pH (pH Units)	-	2	NV	7.76	-	-	-	-	-	-	-	-	7.69	7.75	-	-	-	-	-	-	-	7.51	-	
Electrical Conductivity	mS/cm	0.05	1.4	2.19	3.32	4.18	3.31	3.19	2.03	3.95	6.39	3.38	1.66	3.76	5.88	2.81	7.04	-	4.11	8.5	0.34	0.42	0.42	0.40
Sodium Absorption Ratio (SAR)	-	0.01	12	37.8	17.0	81.8	55.8	68.4	30.1	42.6	111	12.2	6.36	79.4	147	40.0	162	-	58.8	126	1.18	1.35	6.11	0.89

Notes		
RDL	Reportable Detection Limit	
NV	No Criteria/RDL Value	
NA	Not Applicable	
<	Values is less than the RDL	
MECP	Soil, ground water and sediment standards for use under Part XV.1 of the Environmental Protection Act (MOE 2011), Table 2. Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial/Commercial/Community Property Use for medium and fine textured soils.	
Yellow Highlight	Exceeds Table 2 ICC Standard	

Table 14
Soil Analytical Results
Organochlorinated Pesticides (OCPs)

Parameters	Units	RDL	Guideline SOIL MECP Table 2 ICC Med-Fine	Sample ID Laboratory ID Sample Depth (m bgs) Sample Collection Date (m/d/y)		
				BH 5-1	DUP-5	BH 16-1
				1606034	1606035	1606843
				@ 0.1-0.7 1/14/2022	Duplication of BH 5-1	@ 0.1-0.7 1/21/2022
OPCs						
Aldrin	ug/g	0.006	0.11	<0.006	<0.006	<0.002
Chlordane	ug/g	0.018	0.05	<0.018	<0.018	<0.006
Dieldrin	ug/g	0.006	0.11	<0.006	<0.006	<0.002
Endosulfan I + Endosulfan II	ug/g	0.006	0.38	<0.012	<0.012	<0.004
Endrin	ug/g	0.006	0.04	<0.006	<0.006	<0.002
gamma-BHC	ug/g	0.006	NV	<0.006	<0.006	<0.002
Heptachlor	ug/g	0.006	0.19	<0.006	<0.006	<0.002
Heptachlor epoxide	ug/g	0.006	0.05	<0.006	<0.006	<0.002
Hexachlorobenzene	ug/g	0.006	0.66	<0.006	<0.006	<0.002
Hexachlorobutadiene	ug/g	0.006	0.095	<0.006	<0.006	<0.002
Hexachloroethane	ug/g	0.006	0.043	<0.006	<0.006	<0.002
Methoxychlor	ug/g	0.006	1.6	<0.006	<0.006	<0.002
p,p'-DDD	ug/g	0.006	4.6	<0.006	<0.006	<0.002
p,p'-DDE	ug/g	0.006	0.65	<0.006	<0.006	<0.002
p,p'-DDT	ug/g	0.006	1.4	<0.006	<0.006	<0.002

Notes

RDL	Reportable Detection Limit
NV	No Criteria/RDL Value
NA	Not Applicable
'<'	Values is less than the RDL
MECP	Soil, ground water and sediment standards for use under Part XV.1 of the Environmental Protection Act (MOE 2011), Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial/Commercial/Community Property Use for medium and fine textured soils.
Yellow Highlight	Exceeds Table 2 ICC Standard

Table 14
Soil Analytical Results
PAHs

April 2022

Parameters	Units	RDL	Guideline SOIL MECP Table 2 ICC Med-Fine	Sample ID Laboratory ID Sample Depth (metres below ground surface) Sample Collection Date (m/d/y)								
				BH 1-1	BH 2-1	BH 4-1	BH 6-1	BH 7-1	DUP-2	BH 8-2	BH 9-2	BH 12-1
				1606024	1606028	1606031	1606837	1606038	1606039	1606044	1606047	1606056
				@ 0.1-0.7 1/14/2022	@ 0.1-0.7 1/14/2022	@ 0.1-0.7 1/14/2022	@ 0.1-0.7 1/21/2022	@ 0.1-0.7 1/14/2022	Duplication of BH 7-1	@ 0.8-1.4 1/13/2022	@ 0.8-1.4 1/13/2022	@ 0.1-0.7 1/13/2022
Semi-VOCs /PAHs												
Acenaphthene	ug/g	0.05	29	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	ug/g	0.05	0.17	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	ug/g	0.05	0.74	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	ug/g	0.05	0.96	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	ug/g	0.05	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	ug/g	0.05	0.96	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	ug/g	0.05	9.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	ug/g	0.05	0.96	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	ug/g	0.05	9.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenzo(a,h)anthracene	ug/g	0.05	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	ug/g	0.05	9.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	ug/g	0.05	69	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	ug/g	0.05	0.95	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylnapthalene, 1-	ug/g	0.05	42	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylnapthalene, 2-	ug/g	0.05	42	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Naphthalene	ug/g	0.013	28	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
Phenanthrene	ug/g	0.05	16	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	ug/g	0.05	9.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Notes

RDL	Reportable Detection Limit
NV	No Criteria/RDL Value
NA	Not Applicable
<	Values is less than the RDL
MECP	Soil, ground water and sediment standards for use under Part XV.1 of the Environmental Protection Act (MOE 2011), Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial/Commercial/Community Property Use for medium and fine textured soils.
Yellow Highlight	Exceeds Table 2 ICC Standard

Table 14
Soil Analytical Results
PCBs

Parameters	Units	RDL	Guideline SOIL MECP Table 2 ICC Med-Fine	Sample ID Laboratory ID Sample Depth (m bgs) Sample Collection Date (m/d/y)		
				BH 3-1	DUP-7	BH 9-2
				1606834	1606835	1606047
				@ 0.1-0.7 1/21/2022	Duplication of BH 3-2	@ 0.8-1.4 1/13/2022
PCBs						
Polychlorinated Biphenyls	ug/g	0.02	1.1	<0.02	<0.02	<0.02
Aroclor 1242	ug/g	0.02	NV	<0.02	<0.02	<0.02
Aroclor 1248	ug/g	0.02	NV	<0.02	<0.02	<0.02
Aroclor 1254	ug/g	0.02	NV	<0.02	<0.02	<0.02
Aroclor 1260	ug/g	0.02	NV	<0.02	<0.02	<0.02

Notes

RDL	Reportable Detection Limit
NV	No Criteria/RDL Value
NA	Not Applicable
'<'	Values is less than the RDL
MECP	Soil, ground water and sediment standards for use under Part XV.1 of the Environmental Protection Act (MOE 2011), Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial/Commercial/Community Property Use for medium and fine textured soils.
Yellow Highlight	Exceeds Table 2 ICC Standard

Table 14
Soil Analytical Results
Petroleum Hydrocarbons (PHCs, F1 to F4) and BTEX

Parameters	Units	RDL	Guideline SOIL MECP Table 2 ICC Med-Fine	Sample ID Laboratory ID Sample Depth (m bgs) Sample Collection Date (m/d/y)																								
				BH 1-3	BH 1-5	BH 2-1	BH 2-6	DUP-4	BH 3-5	BH 4-2	BH 4-9	BH 5-3	BH 5-9	BH 6-9	BH 7-3	DUP-3	BH 7-4	BH 8-7	BH 9-3	BH 9-9	BH 10-2	BH 11-2	BH 11-7	BH 12-2	BH 12-9	BH 13-6	BH 16-2	BH 16-8
				1606028	1606027	1606028	1606029	1606030	1606836	1606032	1606033	1606036	1606037	1606838	1606040	1606041	1606042	1606045	1606048	1606049	1606051	1606054	1606055	1606057	1606058	1606840	1606844	1606845
				@ 1.5-2.1 1/14/2022	@ 3.1-3.7 1/14/2022	@ 0.1-0.7 1/14/2022	@ 3.8-4.4 1/14/2022	Duplication of BH 2-6	@ 3.1-3.7 1/21/2022	@ 0.8-1.4 1/14/2022	@ 7.6-8.2 1/14/2022	@ 1.5-2.1 1/14/2022	@ 7.6-8.2 1/14/2022	@ 7.6-8.2 1/21/2022	@ 1.5-2.1 1/14/2022	Duplication of BH 7-3	@ 3.8-4.4 1/14/2022	@ 4.6-5.2 1/13/2022	@ 1.5-2.1 1/13/2022	@ 7.6-8.2 1/13/2022	@ 0.8-1.4 1/13/2022	@ 0.8-1.4 1/13/2022	@ 4.6-5.2 1/13/2022	@ 0.8-1.4 1/13/2022	@ 6.1-6.7 1/13/2022	@ 3.8-4.4 1/21/2022	@ 0.8-1.4 1/21/2022	
				BTEX & Petroleum Hydrocarbons																								
Benzene	ug/g	0.0068	0.4	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068		
Ethylbenzene	ug/g	0.018	1.6	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018		
F1 (C6 to C10)	ug/g	10	65	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
F1-BTEX	ug/g	10	NV	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		
F2 (C10 to C16)	ug/g	2	250	<2	<2	<2	<2	<2	3	<2	<2	<2	<2	7	<2	<2	<2	2	<2	<2	<2	<2	<2	4	5	7		
F3 (C16 to C34)	ug/g	20	2500	<20	<20	20	<20	<20	<20	<20	<20	<20	<20	60	<20	<20	<20	<20	100	<20	<20	<20	<20	<20	<20	30		
F4 (C34 to C50)	ug/g	20	6600	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20		
Toluene	ug/g	0.08	9	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08		
Xylene (Total)	ug/g	0.05	30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Xylene, m/p-	ug/g	0.05	NV	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Xylene, o-	ug/g	0.05	NV	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Notes																												
RDL		Reportable Detection Limit																										
NV		No Criteria/RDL Value																										
NA		Not Applicable																										
<		Values is less than the RDL																										
MECP		Soil, ground water and sediment standards for use under Part XV.1 of the Environmental Protection Act (MOE 2011), Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial/Commercial/Community (ICC) Property Use for medium and fine textured soils.																										
Yellow Highlight		Exceeds Table 2 ICC Standard																										

Table 14
Soil Analytical Results
Volatile Organic Compounds (VOCs)

Parameters	Units	RDL	Guideline SOIL MECP Table 2 ICC Med-Fine	Sample ID Laboratory ID Sample Depth (m bgs) Sample Collection Date (m/d/y)							
				BH 1-5	BH 2-6	DUP-4	BH 8-7	BH 9-3	BH 11-7	BH 12-8	BH 16-6
				1606027	1606029	1606030	1606045	1606048	1606055	1606058	1606845
				@ 3.1-3.7 1/14/2022	@ 3.8-4.4 1/14/2022	Duplication of BH 2-6	@ 4.6-5.2 1/13/2022	@ 1.5-2.1 1/13/2022	@ 4.6-5.2 1/13/2022	@ 6.1-6.7 1/13/2022	@ 3.8-4.4 1/21/2022
VOCs											
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	ug/g	0.05	12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.094	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	ug/g	0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.05	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethene	ug/g	0.05	0.48	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	1.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	ug/g	0.05	0.68	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene, cis + trans	ug/g	0.05	0.081	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.05	0.57	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	0.05	28	<0.50	<0.50	<0.50	<0.50	<0.50	<0.05	<0.05	<0.50
Bromodichloromethane	ug/g	0.05	1.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	0.05	1.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.71	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	ug/g	0.05	0.18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethene	ug/g	0.05	2.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	2.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	ug/g	0.05	25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, trans-1,2-	ug/g	0.05	2.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloromethane	ug/g	0.05	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexane	ug/g	0.05	88	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl ethyl ketone (MEK)	ug/g	0.5	88	0.81	0.72	1.2	1.1	0.87	1.1	1.3	<0.50
Methyl isobutyl ketone (MIBK)	ug/g	0.5	210	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl ether (MTBE)	ug/g	0.05	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Monochlorobenzene	ug/g	0.05	2.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	0.05	43	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	ug/g	0.05	2.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	ug/g	0.01	0.61	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trichlorofluoromethane	ug/g	0.05	5.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02

Notes

RDL	Reportable Detection Limit
NV	No Criteria/RDL Value
NA	Not Applicable
'<'	Values is less than the RDL
MECP	Soil, ground water and sediment standards for use under Part XV.1 of the Environmental Protection Act (MOE 2011), Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial/Commercial/Community Property Use for medium and fine textured soils.
Yellow Highlight	Exceeds Table 2 ICC Standard

Table 15
Groundwater Analytical Results
Metals and Inorganics

Parameters	Units	RDL	MECP Table 2 GW	Sample ID Laboratory ID Sample Collection Date			
				BHMW8	BHMW9	BHMW15	DUP1
				1614023	1614024	1614025	1614026
				9-Mar-2022	9-Mar-2022	9-Mar-2022	Duplication of BHMW15
Metals and Inorganics							
Antimony	ug/L	2	6			<2	<2
Arsenic	ug/L	5	25			<5	<5
Barium	ug/L	50	1000			220	210
Beryllium	ug/L	2	4			<2	<2
Boron	ug/L	50	5000			<50	<50
Cadmium	ug/L	0.5	2.7			<0.5	<0.5
Chloride	ug/L	1000	790000			4130000	3950000
Chromium	ug/L	5	50			<5	<5
Cobalt	ug/L	1	3.8			<1	<1
Copper	ug/L	5	87			<5	<5
Cyanide (Free)	ug/L	5	66			6	8
Hexavalent Chromium	ug/L	10	25			<10	<10
Lead	ug/L	5	10			<5	<5
Mercury	ug/L	0.1	1			<0.1	<0.1
Molybdenum	ug/L	20	70			<20	<20
Nickel	ug/L	20	100			<20	<20
Selenium	ug/L	5	10			<5	<5
Silver	ug/L	0.5	1.5			<0.5	<0.5
Sodium	ug/L	1000	490000			2930000	2850000
Thallium	ug/L	0.5	2			<0.5	<0.5
Uranium	ug/L	5	20			<5	<5
Vanadium	ug/L	5	6.2			<5	<5
Zinc	ug/L	50	1100			<50	<50
Other Parameters							
pH (pH Units)	-	1	NA			7.61	7.65
Electrical Conductivity	mS/cm	5	NA			11800	11800

Notes

RDL	Reportable Detection Limit
NV	No Criteria/RDL Value
NA	Not Applicable
'<'	Values is less than the RDL

MECP Soil, ground water and sediment standards for use under Part XV.1 of the Environmental Protection Act (MOE 2011), Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for all types of Property Use for medium and fine textured soils.

Yellow Highlight	Exceeds Table 2 Groundwater standard
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Table 15
Groundwater Analytical Results
PAHS

Parameters	Units	RDL	MECP Table 2 GW	Sample ID Laboratory ID Collection Date	
				BHMW15	BHMW21
				1614700	1614701
				16-Mar-2022	Duplication of BHMW15
Semi-VOCs /PAHs					
Acenaphthene	ug/L	0.1	4.1	<0.1	<0.1
Acenaphthylene	ug/L	0.1	1	<0.1	<0.1
Anthracene	ug/L	0.1	2.4	<0.1	<0.1
Benzo(a)anthracene	ug/L	0.1	1	<0.1	<0.1
Benzo(a)pyrene	ug/L	0.1	0.01	<0.01	<0.01
Benzo(b)fluoranthene	ug/L	0.1	0.1	<0.05	<0.05
Benzo(g,h,i)perylene	ug/L	0.1	0.2	<0.1	<0.1
Benzo(k)fluoranthene	ug/L	0.1	0.1	<0.05	<0.05
Chrysene	ug/L	0.1	0.1	<0.05	<0.05
Dibenzo(a,h)anthracene	ug/L	0.1	0.2	<0.1	<0.1
Fluoranthene	ug/L	0.1	0.41	<0.1	<0.1
Fluorene	ug/L	0.1	120	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	ug/L	0.1	0.2	<0.1	<0.1
Methylnapthalene, 1-	ug/L	0.1	3.2	<0.1	<0.1
Methylnapthalene, 2-	ug/L	0.1	3.2	<0.1	<0.1
Naphthalene	ug/L	0.1	11	<0.1	<0.1
Phenanthrene	ug/L	0.1	1	<0.1	<0.1
Pyrene	ug/L	0.1	4.1	<0.1	<0.1

Notes

RDL	Reportable Detection Limit
NV	No Criteria/RDL Value
NA	Not Applicable
'<'	Values is less than the RDL
MECP	Soil, ground water and sediment standards for use under Part XV.1 of the Environmental Protection Act (MOE 2011), Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for all types of Property Use for medium and.....
Yellow Highlight	Exceeds Table 2 Groundwater standard

Table 15
Groundwater Analytical Results
PCBs

Parameters	Units	RDL	MECP Table 2 GW	Sample ID Laboratory ID Collection Date	
				BHMW15	BHMW21
				1614700	1614701
				16-Mar-2022	Duplication of BHMW15
PCBs					
Polychlorinated Biphenyls	ug/L	0.1	3	<0.1	<0.1
Aroclor 1016	ug/L	0.1	NV	<0.1	<0.1
Aroclor 1242	ug/L	0.1	NV	<0.1	<0.1
Aroclor 1248	ug/L	0.1	NV	<0.1	<0.1
Aroclor 1254	ug/L	0.1	NV	<0.1	<0.1
Aroclor 1260	ug/L	0.1	NV	<0.1	<0.1

Notes

RDL	Reportable Detection Limit
NV	No Criteria/RDL Value
NA	Not Applicable
'<'	Values is less than the RDL
MECP	Soil, ground water and sediment standards for use under Part XV.1 of the Environmental Protection Act (MOE 2011), Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for all types of Property Use for medium and fine textured soils.
Yellow Highlight	Exceeds Table 2 Groundwater standard

Table 15
Groundwater Analytical Results
Petroleum Hydrocarbons (PHCs, F1 to F4) and BTEX

Parameters	Units	RDL	MECP Table 2 GW	Sample ID Laboratory ID Sample Collection Date						
				BHMW8	BHMW9	BHMW15	DUP1	Trip Blank	BHMW15	BHMW16
				1614023	1614024	1614025	1614026	1614027	1606034	1606837
				9-Mar-2022	9-Mar-2022	9-Mar-2022	Duplication of BHMW15	9-Mar-2022	9-Mar-2022	9-Mar-2022
BTEX & Petroleum Hydrocarbons										
Benzene	ug/L	0.5000	5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
Ethylbenzene	ug/L	0.5	2.4	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
F1 (C6 to C10)	ug/L	20	750	-	-	<20	<20	-	-	-
F1-BTEX	ug/L	20	NV	-	-	<20	<20	-	-	-
F2 (C10 to C16)	ug/L	20	150	-	-	<20	<20	-	-	-
F3 (C16 to C34)	ug/L	50	500	-	-	<50	<50	-	-	-
F4 (C34 to C50)	ug/L	50	500	-	-	<50	<50	-	-	-
Toluene	ug/L	0.4	24	<0.4	<0.4	<0.4	<0.4	<0.4	-	-
Xylene (Total)	ug/L	0.5	300	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
Xylene, m/p-	ug/L	0.4	NV	<0.4	<0.4	<0.4	<0.4	<0.4	-	-
Xylene, o-	ug/L	0.4	NV	<0.4	<0.4	<0.4	<0.4	<0.4	-	-

Notes

RDL	Reportable Detection Limit
NV	No Value
NA	Not Applicable
'<'	Values is less than the RDL
MECP	Soil, ground water and sediment standards for use under Part XV.1 of the Environmental Protection Act (MOE 2011), Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for all types of Property Use for medium and fine textured soils.
Yellow Highlight	Exceeds Table 2 Groundwater standard

Table 15
Groundwater Analytical Results
Volatile Organic Compounds

Parameters	Units	RDL	MECP Table 2 GW	Sample ID Laboratory ID Sample Collection Date						
				BHMW8	BHMW9	BHMW15	DUP1	Trip Blank	BHMW15	BHMW16
				1614023	1614024	1614025	1614026	1614027	1606034	1606837
				9-Mar-2022	9-Mar-2022	9-Mar-2022	Duplication of BHMW15	9-Mar-2022	9-Mar-2022	9-Mar-2022
VOCs										
1,1,1,2-Tetrachloroethane	ug/L	0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5		
1,1,1-Trichloroethane	ug/L	0.4	200	<0.4	<0.4	<0.4	<0.4	<0.4		
1,1,2,2-Tetrachloroethane	ug/L	0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5		
1,1,2-Trichloroethane	ug/L	0.4	5	<0.4	<0.4	<0.4	<0.4	<0.4		
1,1-Dichloroethane	ug/L	0.4	5	<0.4	<0.4	<0.4	<0.4	<0.4		
1,1-Dichloroethene	ug/L	0.5	14	<0.5	<0.5	<0.5	<0.5	<0.5		
1,2-Dichlorobenzene	ug/L	0.4	3	<0.4	<0.4	<0.4	<0.4	<0.4		
1,2-Dichloroethane	ug/L	0.2	5	<0.2	<0.2	<0.2	<0.2	<0.2		
1,2-Dichloropropane	ug/L	0.5	5	<0.5	<0.5	<0.5	<0.5	<0.5		
1,3-Dichlorobenzene	ug/L	0.4	59	<0.4	<0.4	<0.4	<0.4	<0.4		
1,3-Dichloropropene, cis + trans	ug/L	0.3	0.5	<0.3	<0.3	<0.3	<0.3	<0.3		
1,3,5-trimethylbenzene	ug/L	0.3	0.3	<0.3	<0.3	-	-	<0.3		
1,4-Dichlorobenzene	ug/L	0.4	1	<0.4	<0.4	<0.4	<0.4	<0.4		
Acetone	ug/L	30	2700	<30	<30	<30	<30	<30		
Bromodichloromethane	ug/L	0.3	16	<0.3	<0.3	<0.3	<0.3	<0.3		
Bromoform	ug/L	0.4	25	<0.4	<0.4	<0.4	<0.4	<0.4		
Bromomethane	ug/L	0.5	0.89	<0.5	<0.5	<0.5	<0.5	<0.5		
Carbon Tetrachloride	ug/L	0.2	5	<0.2	<0.2	<0.2	<0.2	<0.2		
Chlorobenzene	ug/L	0.5	30	<0.5	<0.5	<0.5	<0.5	<0.5		
Chloroethane	ug/L	0.2	NV	<0.2	<0.2	-	-	<0.2		
Chloroform	ug/L	0.5	22	<0.5	1.3	<0.5	<0.5	<0.5		
cis-1,2-Dichloroethene	ug/L	0.4	17	<0.4	<0.4	<0.4	<0.4	<0.4		
Dibromochloromethane	ug/L	0.3	25	<0.3	<0.3	<0.3	<0.3	<0.3		
Dichlorodifluoromethane	ug/L	0.5	590	<0.5	<0.5	<0.5	<0.5	<0.5		
Dichloroethylene, 1,2-cis-	ug/L	0.4	17	<0.4	<0.4	<0.4	<0.4	<0.4		
Dichloroethylene, trans-1,2-	ug/L	0.4	17	<0.4	<0.4	<0.4	<0.4	<0.4		
Dichloropropylene, 1,3-cis-	ug/L	0.2	NV	<0.2	<0.2	<0.2	<0.2	<0.2		
Dichloropropylene, 1,3-trans-	ug/L	0.2	NV	<0.2	<0.2	<0.2	<0.2	<0.2		
Dichloromethane	ug/L	0.4	50	<4.0	<4.0	<4.0	<4.0	<4.0		
Ethylene Dibromide	ug/L	0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
Hexane	ug/L	5	520	<5	<5	<5	<5	<5		
Methyl ethyl ketone (MEK)	ug/L	10	1800	<10	<10	<10	<10	<10		
Methyl isobutyl ketone (MIBK)	ug/L	10	640	<10	<10	<10	<10	<10		
Methyl tert-butyl ether (MTBE)	ug/L	2	15	<2	<2	<2	<2	<2		
Monochlorobenzene	ug/L	0.5	30	<0.5	<0.5	<0.5	<0.5	<0.5		
Styrene	ug/L	0.5	5.4	<0.5	<0.5	<0.5	<0.5	<0.5		
Tetrachloroethylene	ug/L	0.3	17	<0.3	<0.3	<0.3	<0.3	<0.3		
Trichloroethylene	ug/L	0.3	5	<0.3	<0.3	<0.3	<0.3	<0.3		
Trichlorofluoromethane	ug/L	0.5	150	<0.5	<0.5	<0.5	<0.5	<0.5		
Vinyl Chloride	ug/L	0.2	1.7	<0.2	<0.2	<0.2	<0.2	<0.2		

Notes

RDL	Reportable Detection Limit
NV	No Criteria/RDL Value
NA	Not Applicable
<	Values is less than the RDL
MECP	Soil, ground water and sediment standards for use under Part XV.1 of the Environmental Protection Act (MOE 2011), Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for all types of Property Use for medium and fine textured soils.
Yellow Highlight	Exceeds Table 2 Groundwater standard

Table 16- Soil Maximum Values Summary Table

Sample ID	Depth	Sampling Date	Site	Parameter	Matrix	Criteria ¹	Result	Units
Metals and Inorganics								
N/A	N/A	Jan 14-2022	9541 Weston Rd	Acid Extractable Antimony (Sb)	Soil	50	<1	ug/g
Multiple Samples	N/A	Jan 14-2022	9541 Weston Rd	Acid Extractable Arsenic (As)	Soil	18	4	ug/g
BH3-1	0.1-0.7	Jan 21-2022	9541 Weston Rd	Acid Extractable Barium (Ba)	Soil	670	94	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Acid Extractable Beryllium (Be)	Soil	10	<1	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Acid Extractable Boron (B)	Soil	120	<5	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Boron (Hot Water Soluble)	Soil	2	<0.5	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Acid Extractable Cadmium (Cd)	Soil	1.9	<0.4	ug/g
BH11-1	0.1-0.7	Jan 13-2022	9541 Weston Rd	Acid Extractable Chromium (Cr)	Soil	160	30	ug/g
BH12-2	0.8-1.4	Jan 13-2022	9541 Weston Rd	Acid Extractable Cobalt (Co)	Soil	100	9	ug/g
BH12-1	0.1-0.7	Jan 13-2022	9541 Weston Rd	Acid Extractable Copper (Cu)	Soil	300	21	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Cyanide (Free)	Soil	0.051	<0.005	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Acid Extractable ChromiumVI (Cr6+)	Soil	10	<0.20	ug/g
BH9-1	0.1-0.7	Jan 13-2022	9541 Weston Rd	Acid Extractable Lead (Pb)	Soil	120	115	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Acid Extractable Mercury (Hg)	Soil	20	<0.1	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Acid Extractable Molybdenum (Mo)	Soil	40	<1	ug/g
BH1-2	0.8-1.4	Jan 14-2022	9541 Weston Rd	Acid Extractable Nickel (Ni)	Soil	340	23	ug/g
BH12-1	0.1-0.7	Jan 13-2022	9541 Weston Rd	Acid Extractable Selenium (Se)	Soil	5.5	0.9	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Acid Extractable Silver (Ag)	Soil	50	<0.2	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Acid Extractable Thallium (Tl)	Soil	3.3	<1	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Uranium	Soil	33	<0.5	ug/g
BH3-1	0.1-0.7	Jan 21-2022	9541 Weston Rd	Acid Extractable Vanadium (V)	Soil	86	35	ug/g
BH12-1	0.1-0.7	Jan 13-2022	9541 Weston Rd	Acid Extractable Zinc (Zn)	Soil	340	63	ug/g
BH12-2	0.8-1.4	Jan 13-2022	9541 Weston Rd	Electrical Conductivity	Soil	1.4	8.5	mS/cm
BH11-1	0.1-0.7	Jan 13-2022	9541 Weston Rd	Sodium Absorption Ratio (SAR)	Soil	12	262	-
Semi-VOCs								
N/A	N/A	Jan 14-2022	9541 Weston Rd	Acenaphthene	Soil	29	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Acenaphthylene	Soil	0.17	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Anthracene	Soil	0.74	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Benzo(a)anthracene	Soil	0.96	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Benzo(a)pyrene	Soil	0.3	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Benzo(b)fluoranthene	Soil	0.96	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Benzo(g,h,i)perylene	Soil	9.6	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Benzo(k)fluoranthene	Soil	0.96	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Biphenylene	Soil	9.6	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Dibenz(a,h)anthracene	Soil	0.1	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Fluoranthene	Soil	9.6	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Fluorene	Soil	69	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Indeno(1,2,3-c,d)pyrene	Soil	0.95	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Methylnaphthalene, 1-	Soil	42	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Methylnaphthalene, 2-	Soil	42	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Naphthalene	Soil	28	<0.013	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Phenanthrene	Soil	16	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Pyrene	Soil	9.4	<0.05	ug/g
PHCs & BTEX								
N/A	N/A	Jan 14-2022	9541 Weston Rd	Benzene	Soil	0.4	<0.0068	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Ethylbenzene	Soil	1.6	<0.018	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Toluene	Soil	9	<0.08	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Xylene (Total)	Soil	30	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Xylene, m/p-	Soil	NV	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	Xylene, o-	Soil	NV	<0.05	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	F1 (C6 to C10)	Soil	65	<10	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	F1-BTEX	Soil	NV	<10	ug/g
Multiple Samples	N/A	Jan 14-2022	9541 Weston Rd	F2 (C10 to C16)	Soil	250	7	ug/g
BH9-9	7.6-8.2	Jan 13-2022	9541 Weston Rd	F3 (C16 to C34)	Soil	2500	100	ug/g
N/A	N/A	Jan 14-2022	9541 Weston Rd	F4 (C34 to C50)	Soil	6600	<20	ug/g
VOCs								
N/A	N/A	Jan 14-2022	9541 Weston Rd	1,1,1,2-Tetrachloroethane	Soil	0.11	<0.05	ug/g
N/A	N/A	Jan 14-2022	9542 Weston Rd	1,1,1-Trichloroethane	Soil	12	<0.05	ug/g
N/A	N/A	Jan 14-2022	9543 Weston Rd	1,1,2,2-Tetrachloroethane	Soil	0.094	<0.05	ug/g
N/A	N/A	Jan 14-2022	9544 Weston Rd	1,1,2-Trichloroethane	Soil	0.11	<0.05	ug/g
N/A	N/A	Jan 14-2022	9545 Weston Rd	1,1-Dichloroethane	Soil	0.6	<0.05	ug/g
N/A	N/A	Jan 14-2022	9546 Weston Rd	1,1-Dichloroethene	Soil	0.48	<0.05	ug/g
N/A	N/A	Jan 14-2022	9547 Weston Rd	1,2-Dichlorobenzene	Soil	1.7	<0.05	ug/g
N/A	N/A	Jan 14-2022	9548 Weston Rd	1,2-Dichloroethane	Soil	0.05	<0.05	ug/g
N/A	N/A	Jan 14-2022	9549 Weston Rd	1,2-Dichloropropane	Soil	0.68	<0.05	ug/g
N/A	N/A	Jan 14-2022	9550 Weston Rd	1,3-Dichlorobenzene	Soil	12	<0.05	ug/g
N/A	N/A	Jan 14-2022	9551 Weston Rd	1,3-Dichloropropene, cis + trans	Soil	0.081	<0.05	ug/g
N/A	N/A	Jan 14-2022	9552 Weston Rd	1,4-Dichlorobenzene	Soil	0.57	<0.05	ug/g
N/A	N/A	Jan 14-2022	9553 Weston Rd	Acetone	Soil	28	<0.05	ug/g
N/A	N/A	Jan 14-2022	9554 Weston Rd	Bromodichloromethane	Soil	1.9	<0.05	ug/g
N/A	N/A	Jan 14-2022	9555 Weston Rd	Bromomethane	Soil	1.7	<0.05	ug/g
N/A	N/A	Jan 14-2022	9556 Weston Rd	Bromomethane	Soil	0.05	<0.05	ug/g
N/A	N/A	Jan 14-2022	9557 Weston Rd	Carbon Tetrachloride	Soil	0.71	<0.05	ug/g
N/A	N/A	Jan 14-2022	9558 Weston Rd	Chloroform	Soil	0.08	<0.05	ug/g
N/A	N/A	Jan 14-2022	9559 Weston Rd	cis-1,2-Dichloroethene	Soil	2.5	<0.05	ug/g
N/A	N/A	Jan 14-2022	9560 Weston Rd	Di-bromochloromethane	Soil	2.9	<0.05	ug/g
N/A	N/A	Jan 14-2022	9561 Weston Rd	Dichlorodifluoromethane	Soil	25	<0.05	ug/g
N/A	N/A	Jan 14-2022	9562 Weston Rd	Dichloroethylene, trans-1,2-	Soil	2.5	<0.05	ug/g
N/A	N/A	Jan 14-2022	9563 Weston Rd	Dichloromethane	Soil	2	<0.05	ug/g
N/A	N/A	Jan 14-2022	9564 Weston Rd	Ethylene Dibromide	Soil	0.05	<0.05	ug/g
N/A	N/A	Jan 14-2022	9565 Weston Rd	Hexane	Soil	88	<0.05	ug/g
BH12-8	6.1-6.7	Jan 13-2022	9566 Weston Rd	Methyl ethyl ketone (MEK)	Soil	88	1.3	ug/g
N/A	N/A	Jan 14-2022	9567 Weston Rd	Methyl isobutyl ketone (MIBK)	Soil	210	<0.50	ug/g
N/A	N/A	Jan 14-2022	9568 Weston Rd	Methyl tert-butyl ether (MTBE)	Soil	2.3	<0.05	ug/g
N/A	N/A	Jan 14-2022	9569 Weston Rd	Monochlorobenzene	Soil	2.7	<0.05	ug/g
N/A	N/A	Jan 14-2022	9570 Weston Rd	Styrene	Soil	43	<0.05	ug/g
N/A	N/A	Jan 14-2022	9571 Weston Rd	Tetrachloroethylene	Soil	2.5	<0.05	ug/g
N/A	N/A	Jan 14-2022	9572 Weston Rd	Trichloroethylene	Soil	0.61	<0.01	ug/g
N/A	N/A	Jan 14-2022	9573 Weston Rd	Trichlorofluoromethane	Soil	5.8	<0.05	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Vinyl Chloride	Soil	0.25	<0.02	ug/g
OPCs								
N/A	N/A	Jan 14-2022	9574 Weston Rd	Aldrin	Soil	0.11	<0.006	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Chlordane	Soil	0.05	<0.018	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Dieldrin	Soil	0.11	<0.006	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Endosulfan I + Endosulfan II	Soil	0.38	<0.012	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Endrin	Soil	0.04	<0.006	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	gamma-BHC	Soil	NV	<0.006	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Heptachlor	Soil	0.19	<0.006	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Heptachlor epoxide	Soil	0.05	<0.006	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Hexachlorobenzene	Soil	0.66	<0.006	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Hexachlorobutadiene	Soil	0.095	<0.006	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Hexachloroethane	Soil	0.043	<0.006	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Methoxychlor	Soil	1.6	<0.006	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	p,p'-DDE	Soil	4.6	<0.006	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	p,p'-DDE	Soil	0.65	<0.006	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	p,p'-DDT	Soil	1.4	<0.006	ug/g
PCBs								
N/A	N/A	Jan 14-2022	9574 Weston Rd	Polychlorinated Biphenyls	Soil	1.1	<0.02	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Aroclor 1242	Soil	NV	<0.02	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Aroclor 1248	Soil	NV	<0.02	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Aroclor 1254	Soil	NV	<0.02	ug/g
N/A	N/A	Jan 14-2022	9574 Weston Rd	Aroclor 1260	Soil	NV	<0.02	ug/g

Legend	
Exceeds one Criteria	
DL > Criteria	
Criteria 1	Table 2 ICC Standards-Medium to Fine Textured

Table 17-Groundwater Maximum Values Summary Table

Sample ID	Sampling Date	Site	Parameter	Matrix	Criteria ¹	Result	Units
Metals & Inorg							
N/A	Mar 9-2022	9541 Weston Rd	Antimony	Groundwater	6	<2	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Arsenic	Groundwater	25	<5	ug/l
BHWMW15	Mar 9-2022	9541 Weston Rd	Barium	Groundwater	1000	220	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Beryllium	Groundwater	4	<2	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Boron	Groundwater	5000	<50	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Cadmium	Groundwater	2.7	<0.5	ug/l
BHWMW15	Mar 9-2022	9541 Weston Rd	Chloride	Groundwater	790000	4130000	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Chromium	Groundwater	50	<5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Cobalt	Groundwater	3.8	<1	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Copper	Groundwater	87	<5	ug/l
BHWMW15	Mar 9-2022	9541 Weston Rd	Cyanide (Free)	Groundwater	66	6	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Hexavalent Chromium	Groundwater	25	<10	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Lead	Groundwater	10	<5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Mercury	Groundwater	1	<0.1	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Molybdenum	Groundwater	70	<20	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Nickel	Groundwater	100	<20	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Selenium	Groundwater	10	<5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Silver	Groundwater	1.5	<0.5	ug/l
BHWMW15	Mar 9-2022	9541 Weston Rd	Sodium	Groundwater	490000	2990000	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Thallium	Groundwater	2	<0.5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Uranium	Groundwater	20	<5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Vanadium	Groundwater	6.2	<5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Zinc	Groundwater	1100	<50	ug/l
BHWMW15	Mar 9-2022	9542 Weston Rd	Electrical Conductivity	Groundwater	NA	11800	mS/cm
PHCs & BTEX							
N/A	Mar 9-2022	9541 Weston Rd	Benzene	Groundwater	5	<0.5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Ethylbenzene	Groundwater	2.4	<0.5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Toluene	Groundwater	24	<0.4	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Xylene (Total)	Groundwater	300	<0.5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Xylene, m/p	Groundwater	NV	<0.4	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Xylene, o-	Groundwater	NV	<0.4	ug/l
N/A	Mar 9-2022	9541 Weston Rd	F1 (C6 to C10)	Groundwater	750	<20	ug/l
N/A	Mar 9-2022	9541 Weston Rd	F1-BTEX	Groundwater	NV	<20	ug/l
N/A	Mar 9-2022	9541 Weston Rd	F2 (C10 to C16)	Groundwater	150	<20	ug/l
N/A	Mar 9-2022	9541 Weston Rd	F3 (C16 to C34)	Groundwater	500	<50	ug/l
N/A	Mar 9-2022	9541 Weston Rd	F4 (C34 to C50)	Groundwater	500	<50	ug/l
VOCs							
N/A	Mar 9-2022	9541 Weston Rd	1,1,1,2-Tetrachloroethane	Groundwater	1.1	<0.5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	1,1,1-Trichloroethane	Groundwater	200	<0.4	ug/l
N/A	Mar 9-2022	9541 Weston Rd	1,1,2,2-Tetrachloroethane	Groundwater	1	<0.5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	1,1,2-Trichloroethane	Groundwater	5	<0.4	ug/l
N/A	Mar 9-2022	9541 Weston Rd	1,1-Dichloroethane	Groundwater	5	<0.4	ug/l
N/A	Mar 9-2022	9541 Weston Rd	1,1-Dichloroethene	Groundwater	14	<0.5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	1,2-Dichlorobenzene	Groundwater	3	<0.4	ug/l
N/A	Mar 9-2022	9541 Weston Rd	1,2-Dichloroethane	Groundwater	5	<0.2	ug/l
N/A	Mar 9-2022	9541 Weston Rd	1,2-Dichloropropane	Groundwater	5	<0.5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	1,3-Dichlorobenzene	Groundwater	59	<0.4	ug/l
N/A	Mar 9-2022	9541 Weston Rd	1,3-Dichloropropene, cis + trans	Groundwater	0.5	<0.3	ug/l
N/A	Mar 9-2022	9541 Weston Rd	1,3,5-trimethylbenzene	Groundwater	0.3	<0.3	ug/l
N/A	Mar 9-2022	9541 Weston Rd	1,4-Dichlorobenzene	Groundwater	1	<0.4	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Acetone	Groundwater	2700	<30	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Bromodichloromethane	Groundwater	16	<0.3	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Bromoform	Groundwater	25	<0.4	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Bromomethane	Groundwater	0.89	<0.5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Carbon Tetrachloride	Groundwater	5	<0.2	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Chlorobenzene	Groundwater	30	<0.5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Chloroethane	Groundwater	NV	<0.2	ug/l
BHWMW9	Mar 9-2022	9541 Weston Rd	Chloroform	Groundwater	22	1.3	ug/l
N/A	Mar 9-2022	9541 Weston Rd	cis-1,2-Dichloroethene	Groundwater	17	<0.4	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Dibromochloromethane	Groundwater	25	<0.3	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Dichlorodifluoromethane	Groundwater	590	<0.5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Dichloroethylene, 1,2-cis-	Groundwater	17	<0.4	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Dichloroethylene, trans-1,2-	Groundwater	17	<0.4	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Dichloropropylene, 1,3-cis-	Groundwater	NV	<0.2	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Dichloropropylene, 1,3-trans-	Groundwater	NV	<0.2	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Dichloromethane	Groundwater	50	<4.0	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Ethylene Dibromide	Groundwater	0.2	<0.2	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Hexane	Groundwater	520	<5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Methyl ethyl ketone (MEK)	Groundwater	1800	<10	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Methyl isobutyl ketone (MIBK)	Groundwater	640	<10	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Methyl tert-butyl ether (MTBE)	Groundwater	15	<2	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Monochlorobenzene	Groundwater	30	<0.5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Styrene	Groundwater	5.4	<0.5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Tetrachloroethylene	Groundwater	17	<0.3	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Trichloroethylene	Groundwater	5	<0.3	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Trichlorofluoromethane	Groundwater	150	<0.5	ug/l
N/A	Mar 9-2022	9541 Weston Rd	Vinyl Chloride	Groundwater		<0.2	ug/l
Semi-VOCs / PAHs							
N/A	Mar 16-2022	9541 Weston Rd	Acenaphthene	Groundwater	4.1	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Acenaphthylene	Groundwater	1	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Anthracene	Groundwater	2.4	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Benzo(a)anthracene	Groundwater	1	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Benzo(a)pyrene	Groundwater	0.01	<0.01	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Benzo(b)fluoranthene	Groundwater	0.1	<0.05	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Benzo(g,h,i)perylene	Groundwater	0.2	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Benzo(k)fluoranthene	Groundwater	0.1	<0.05	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Chrysene	Groundwater	0.1	<0.05	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Dibenzo(a,h)anthracene	Groundwater	0.2	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Fluoranthene	Groundwater	0.41	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Fluorene	Groundwater	120	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Indeno(1,2,3-c,d)pyrene	Groundwater	0.2	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Methylnaphthalene, 1-	Groundwater	3.2	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Methylnaphthalene, 2-	Groundwater	3.2	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Naphthalene	Groundwater	11	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Phenanthrene	Groundwater	1	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Pyrene	Groundwater	4.1	<0.1	ug/l
PCBs							
N/A	Mar 16-2022	9541 Weston Rd	Polychlorinated Biphenyls	Groundwater	3	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Aroclor 1016	Groundwater	NV	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Aroclor 1242	Groundwater	NV	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Aroclor 1248	Groundwater	NV	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Aroclor 1254	Groundwater	NV	<0.1	ug/l
N/A	Mar 16-2022	9541 Weston Rd	Aroclor 1260	Groundwater	NV	<0.1	ug/l

Legend	
Exceeds one Criteria	
DL > Criteria	
Criteria 1	Table 7 Residential, coarse textured

Appendix E

Laboratory Certificates of Analysis



eNGLOBE

Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Nan Du
Invoice to: EnGlobe Corp.
PO#:

Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644
Temperature (C): 16
Custody Seal:

Page 1 of 56

Dear Nan Du:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Sample Comment Summary

Sample ID: 1606034	BH5-1	OCPs surrogate recovery is unavailable due to matrix interference.
Sample ID: 1606035	Dup-5	OCPs surrogate recovery is unavailable due to matrix interference.

Report Comments:

Addrine Thomas, Inorganics Supervisor

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated

Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <http://www.cala.ca/scopes/2602.pdf>

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Nan Du
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

O.Reg 153-T1-All Other Soils

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria
Inorganics				
BH10-1	Electrical Conductivity	2.81	mS/cm	STD 0.57
BH10-1	Sodium Adsorption Ratio	40.0		STD 2.4
BH1-1	Electrical Conductivity	2.19	mS/cm	STD 0.57
BH1-1	Sodium Adsorption Ratio	37.8		STD 2.4
BH11-1	Electrical Conductivity	7.04	mS/cm	STD 0.57
BH11-1	Sodium Adsorption Ratio	162		STD 2.4
BH1-2	Electrical Conductivity	3.32	mS/cm	STD 0.57
BH1-2	Sodium Adsorption Ratio	17.0		STD 2.4
BH12-1	Electrical Conductivity	4.11	mS/cm	STD 0.57
BH12-1	Sodium Adsorption Ratio	58.8		STD 2.4
BH12-2	Electrical Conductivity	8.50	mS/cm	STD 0.57
BH12-2	Sodium Adsorption Ratio	126		STD 2.4
BH2-1	Electrical Conductivity	4.18	mS/cm	STD 0.57
BH2-1	Sodium Adsorption Ratio	81.8		STD 2.4
BH4-1	Electrical Conductivity	3.19	mS/cm	STD 0.57
BH4-1	Sodium Adsorption Ratio	68.4		STD 2.4
BH5-1	Electrical Conductivity	2.03	mS/cm	STD 0.57
BH5-1	Sodium Adsorption Ratio	30.1		STD 2.4
BH7-1	Electrical Conductivity	6.39	mS/cm	STD 0.57
BH7-1	Sodium Adsorption Ratio	111		STD 2.4
BH8-1	Electrical Conductivity	3.38	mS/cm	STD 0.57
BH8-1	Sodium Adsorption Ratio	12.2		STD 2.4
BH8-2	Electrical Conductivity	1.66	mS/cm	STD 0.57
BH8-2	Sodium Adsorption Ratio	6.36		STD 2.4
BH9-1	Electrical Conductivity	3.76	mS/cm	STD 0.57
BH9-1	Sodium Adsorption Ratio	79.4		STD 2.4
BH9-2	Electrical Conductivity	5.88	mS/cm	STD 0.57
BH9-2	Sodium Adsorption Ratio	147		STD 2.4
Volatiles				
BH11-7	Methyl Ethyl Ketone	1.1	ug/g	STD 0.5
BH12-8	Methyl Ethyl Ketone	1.3	ug/g	STD 0.5
BH1-5	Methyl Ethyl Ketone	0.81	ug/g	STD 0.5
BH2-6	Methyl Ethyl Ketone	0.72	ug/g	STD 0.5
BH8-7	Methyl Ethyl Ketone	1.1	ug/g	STD 0.5
BH9-3	Methyl Ethyl Ketone	0.87	ug/g	STD 0.5
Dup-4	Methyl Ethyl Ketone	1.2	ug/g	STD 0.5

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: EnGlobe Corp. (Toronto)
 1821 Albion Road, Unit 7
 Toronto, ON
 M9W 5W8
 Attention: Mr. Nan Du
 PO#:
 Invoice to: EnGlobe Corp.

Report Number: 1970181
 Date Submitted: 2022-01-17
 Date Reported: 2022-01-26
 Project: 02112512.000
 COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1606026	Soil153	1606027	Soil153	1606028	Soil153
PHC's F1	415896	10	ug/g	STD 25	2022-01-14	BH1-3	2022-01-14	BH1-5	2022-01-14	BH2-1
PHC's F1-BTEX	415903	10	ug/g		<10		<10		<10	
PHC's F2	415889	2	ug/g	STD 10	<2		<2			
	416046	2	ug/g	STD 10					<2	
PHC's F2-Naph	416051	2	ug/g						<2	
PHC's F3	415889	20	ug/g	STD 240	<20		<20			
	416046	20	ug/g	STD 240					20	
PHC's F3-PAH	416052	20	ug/g						20	
PHC's F4	415889	20	ug/g	STD 120	<20		<20			
	416046	20	ug/g	STD 120					<20	

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1606029	Soil153	1606030	Soil153	1606032	Soil153
PHC's F1	415896	10	ug/g	STD 25	2022-01-14	BH2-6	2022-01-14	Dup-4	2022-01-14	BH4-2
PHC's F1-BTEX	415903	10	ug/g		<10		<10		<10	
PHC's F2	415889	2	ug/g	STD 10	<2		<2		<2	
PHC's F3	415889	20	ug/g	STD 240	<20		<20		<20	
PHC's F4	415889	20	ug/g	STD 120	<20		<20		<20	

Results relate only to the parameters tested on the samples submitted.
 Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: EnGlobe Corp. (Toronto)
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Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Hydrocarbons

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606036
Soil153
2022-01-14
BH5-3

1606037
Soil153
2022-01-14
BH5-9

Analyte Batch No MRL Units Guideline

PHC's F1	415896	10	ug/g	STD 25	<10	<10
PHC's F1-BTEX	415903	10	ug/g		<10	<10
PHC's F2	415889	2	ug/g	STD 10	<2	<2
PHC's F3	415889	20	ug/g	STD 240	<20	<20
PHC's F4	415889	20	ug/g	STD 120	<20	<20

Hydrocarbons

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606040
Soil153
2022-01-14
BH7-3

1606041
Soil153
2022-01-14
Dup-3

1606042
Soil153
2022-01-14
BH7-6

Analyte Batch No MRL Units Guideline

PHC's F1	415896	10	ug/g	STD 25	<10	<10	<10
PHC's F1-BTEX	415903	10	ug/g		<10	<10	<10
PHC's F2	415889	2	ug/g	STD 10	<2	<2	<2
PHC's F3	415889	20	ug/g	STD 240	<20	<20	<20
PHC's F4	415889	20	ug/g	STD 120	<20	<20	<20

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Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Nan Du
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Hydrocarbons

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1606045 Soil153 2022-01-13 BH8-7	1606048 Soil153 2022-01-13 BH9-3
Analyte	Batch No	MRL	Units	Guideline			
PHC's F1	415896	10	ug/g	STD 25		<10	<10
PHC's F1-BTEX	415903	10	ug/g			<10	<10
PHC's F2	415996	2	ug/g	STD 10		<2	<2
PHC's F3	415996	20	ug/g	STD 240		<20	<20
PHC's F4	415996	20	ug/g	STD 120		<20	<20

Hydrocarbons

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1606049 Soil153 2022-01-13 BH9-9	1606051 Soil153 2022-01-13 BH10-2
Analyte	Batch No	MRL	Units	Guideline			
PHC's F1	415896	10	ug/g	STD 25		<10	<10
PHC's F1-BTEX	415903	10	ug/g			<10	<10
PHC's F2	415959	2	ug/g	STD 10			<2
	416045	2	ug/g	STD 10		2	
PHC's F3	415959	20	ug/g	STD 240			<20
	416045	20	ug/g	STD 240		100	
PHC's F4	415959	20	ug/g	STD 120			<20
	416045	20	ug/g	STD 120		<20	

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Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1606054	Soil153	1606055	Soil153	1606057	Soil153
					2022-01-13		2022-01-13		2022-01-13	2022-01-13
					BH11-2		BH11-7		BH12-2	BH12-8
PHC's F1	415896	10	ug/g	STD 25	<10		<10		<10	<10
PHC's F1-BTEX	415903	10	ug/g		<10		<10		<10	<10
PHC's F2	415959	2	ug/g	STD 10	<2		<2		<2	<2
PHC's F3	415959	20	ug/g	STD 240	30		<20		<20	<20
PHC's F4	415959	20	ug/g	STD 120	<20		<20		<20	<20

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1606024	Soil153	1606025	Soil153	1606028	Soil153
					2022-01-14		2022-01-14		2022-01-14	
					BH1-1		BH1-2		BH2-1	
Antimony	415846	1	ug/g	STD 1.3	<1		<1			
	416113	1	ug/g	STD 1.3					<1	
Arsenic	415846	1	ug/g	STD 18	2		4			
	416113	1	ug/g	STD 18					2	
Barium	415846	1	ug/g	STD 220	46		65			
	416113	1	ug/g	STD 220					57	
Beryllium	415846	1	ug/g	STD 2.5	<1		<1			
	416113	1	ug/g	STD 2.5					<1	
Boron (Hot Water Soluble)	415918	0.5	ug/g		<0.5					
Boron (total)	415846	5	ug/g	STD 36	<5		<5			
	416113	5	ug/g	STD 36					15	
Cadmium	415846	0.4	ug/g	STD 1.2	<0.4		<0.4			
	416113	0.4	ug/g	STD 1.2					<0.4	

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Metals

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606024 Soil153	1606025 Soil153	1606028 Soil153
2022-01-14	2022-01-14	2022-01-14
BH1-1	BH1-2	BH2-1

Analyte	Batch No	MRL	Units	Guideline			
Chromium Total	415846	1	ug/g	STD 70	20	28	
	416113	1	ug/g	STD 70			12
Chromium VI	415899	0.20	ug/g	STD 0.66	<0.20		
Cobalt	415846	1	ug/g	STD 21	5	8	
	416113	1	ug/g	STD 21			2
Copper	415846	1	ug/g	STD 92	16	20	
	416113	1	ug/g	STD 92			5
Lead	415846	1	ug/g	STD 120	14	12	
	416113	1	ug/g	STD 120			8
Mercury	415846	0.1	ug/g	STD 0.27	<0.1		
Molybdenum	415846	1	ug/g	STD 2	<1	<1	
	416113	1	ug/g	STD 2			<1
Nickel	415846	1	ug/g	STD 82	14	23	
	416113	1	ug/g	STD 82			5
Selenium	415895	0.5	ug/g	STD 1.5	<0.5	0.7	
	416113	0.5	ug/g	STD 1.5			<0.5
Silver	415846	0.2	ug/g	STD 0.5	<0.2	<0.2	
	416113	0.2	ug/g	STD 0.5			<0.2
Thallium	415846	1	ug/g	STD 1	<1	<1	
	416113	1	ug/g	STD 1			<1
Uranium	415846	0.5	ug/g	STD 2.5	<0.5	<0.5	
	416113	0.5	ug/g	STD 2.5			<0.5
Vanadium	415846	2	ug/g	STD 86	20	31	

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Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1606024 Soil153 2022-01-14 BH1-1	1606025 Soil153 2022-01-14 BH1-2	1606028 Soil153 2022-01-14 BH2-1
Vanadium	416113	2	ug/g	STD 86				8
Zinc	415846	2	ug/g	STD 290		44	62	
	416113	2	ug/g	STD 290				10

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.
Antimony	415846	1	ug/g	STD 1.3	1606031 Soil153 2022-01-14 BH4-1
Arsenic	415846	1	ug/g	STD 18	2
Barium	415846	1	ug/g	STD 220	29
Beryllium	415846	1	ug/g	STD 2.5	<1
Boron (total)	415846	5	ug/g	STD 36	<5
Cadmium	415846	0.4	ug/g	STD 1.2	<0.4
Chromium Total	415846	1	ug/g	STD 70	18
Cobalt	415846	1	ug/g	STD 21	4
Copper	415846	1	ug/g	STD 92	14
Lead	415846	1	ug/g	STD 120	15
Molybdenum	415846	1	ug/g	STD 2	<1
Nickel	415846	1	ug/g	STD 82	12
Selenium	415895	0.5	ug/g	STD 1.5	<0.5
Silver	415846	0.2	ug/g	STD 0.5	<0.2
Thallium	415846	1	ug/g	STD 1	<1
Uranium	415846	0.5	ug/g	STD 2.5	<0.5

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Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Metals

Lab I.D. 1606031
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-14
Sampling Time
Sample I.D. BH4-1

Analyte Batch No MRL Units Guideline

Vanadium	415846	2	ug/g	STD 86	20
Zinc	415846	2	ug/g	STD 290	44

Metals

Lab I.D. 1606034
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-14
Sampling Time
Sample I.D. BH5-1

Analyte Batch No MRL Units Guideline

Antimony	415846	1	ug/g	STD 1.3	<1	<1
Arsenic	415846	1	ug/g	STD 18	3	3
Barium	415846	1	ug/g	STD 220	51	63
Beryllium	415846	1	ug/g	STD 2.5	<1	<1
Boron (total)	415846	5	ug/g	STD 36	<5	5
Cadmium	415846	0.4	ug/g	STD 1.2	<0.4	<0.4
Chromium Total	415846	1	ug/g	STD 70	20	20
Cobalt	415846	1	ug/g	STD 21	6	7
Copper	415846	1	ug/g	STD 92	16	18
Lead	415846	1	ug/g	STD 120	14	11
Molybdenum	415846	1	ug/g	STD 2	<1	<1
Nickel	415846	1	ug/g	STD 82	15	17
Selenium	415895	0.5	ug/g	STD 1.5	0.6	<0.5
Silver	415846	0.2	ug/g	STD 0.5	<0.2	<0.2
Thallium	415846	1	ug/g	STD 1	<1	<1
Uranium	415846	0.5	ug/g	STD 2.5	<0.5	<0.5
Vanadium	415846	2	ug/g	STD 86	24	28

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Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Metals

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606034
Soil153
2022-01-14
BH5-1

1606038
Soil153
2022-01-14
BH7-1

Analyte Batch No MRL Units Guideline

Zinc	415846	2	ug/g	STD 290	52	48
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Metals

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606043
Soil153
2022-01-13
BH8-1

Analyte Batch No MRL Units Guideline

Antimony	415846	1	ug/g	STD 1.3	<1
Arsenic	415846	1	ug/g	STD 18	3
Barium	415846	1	ug/g	STD 220	39
Beryllium	415846	1	ug/g	STD 2.5	<1
Boron (total)	415846	5	ug/g	STD 36	5
Cadmium	415846	0.4	ug/g	STD 1.2	<0.4
Chromium Total	415846	1	ug/g	STD 70	16
Cobalt	415846	1	ug/g	STD 21	7
Copper	415846	1	ug/g	STD 92	16
Lead	415846	1	ug/g	STD 120	9
Molybdenum	415846	1	ug/g	STD 2	<1
Nickel	415846	1	ug/g	STD 82	16
Selenium	415895	0.5	ug/g	STD 1.5	0.6
Silver	415846	0.2	ug/g	STD 0.5	<0.2
Thallium	415846	1	ug/g	STD 1	<1
Uranium	415846	0.5	ug/g	STD 2.5	<0.5
Vanadium	415846	2	ug/g	STD 86	24
Zinc	415846	2	ug/g	STD 290	47

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Metals

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606044 Soil153	1606046 Soil153	1606047 Soil153
2022-01-13	2022-01-13	2022-01-13
BH8-2	BH9-1	BH9-2

Analyte	Batch No	MRL	Units	Guideline
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Antimony	415846	1	ug/g	STD 1.3	<1	<1	<1
Arsenic	415846	1	ug/g	STD 18	2	2	3
Barium	415846	1	ug/g	STD 220	20	21	38
Beryllium	415846	1	ug/g	STD 2.5	<1	<1	<1
Boron (Hot Water Soluble)	415918	0.5	ug/g		<0.5	<0.5	
Boron (total)	415846	5	ug/g	STD 36	<5	<5	<5
Cadmium	415846	0.4	ug/g	STD 1.2	<0.4	<0.4	<0.4
Chromium Total	415846	1	ug/g	STD 70	11	10	14
Chromium VI	415899	0.20	ug/g	STD 0.66	<0.20	<0.20	
Cobalt	415846	1	ug/g	STD 21	4	3	6
Copper	415846	1	ug/g	STD 92	11	12	15
Lead	415846	1	ug/g	STD 120	4	115	6
Mercury	415846	0.1	ug/g	STD 0.27	<0.1	<0.1	
Molybdenum	415846	1	ug/g	STD 2	<1	<1	<1
Nickel	415846	1	ug/g	STD 82	9	8	14
Selenium	415895	0.5	ug/g	STD 1.5	0.6	<0.5	0.6
Silver	415846	0.2	ug/g	STD 0.5	<0.2	<0.2	<0.2
Thallium	415846	1	ug/g	STD 1	<1	<1	<1
Uranium	415846	0.5	ug/g	STD 2.5	<0.5	<0.5	<0.5
Vanadium	415846	2	ug/g	STD 86	18	14	21
Zinc	415846	2	ug/g	STD 290	21	56	31

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Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Metals

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606050 Soil153	1606052 Soil153	1606053 Soil153
2022-01-13	2022-01-13	2022-01-13
BH10-1	BH11-1	Dup-1

Analyte	Batch No	MRL	Units	Guideline
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Antimony	415846	1	ug/g	STD 1.3	<1	<1	<1
Arsenic	415846	1	ug/g	STD 18	3	3	4
Barium	415846	1	ug/g	STD 220	63	53	75
Beryllium	415846	1	ug/g	STD 2.5	<1	<1	<1
Boron (total)	415846	5	ug/g	STD 36	<5	<5	<5
Cadmium	415846	0.4	ug/g	STD 1.2	<0.4	<0.4	<0.4
Chromium Total	415846	1	ug/g	STD 70	21	30	20
Cobalt	415846	1	ug/g	STD 21	7	6	7
Copper	415846	1	ug/g	STD 92	17	16	17
Lead	415846	1	ug/g	STD 120	13	17	21
Molybdenum	415846	1	ug/g	STD 2	<1	<1	<1
Nickel	415846	1	ug/g	STD 82	16	19	16
Selenium	415895	0.5	ug/g	STD 1.5	0.7	0.6	0.6
Silver	415846	0.2	ug/g	STD 0.5	<0.2	<0.2	<0.2
Thallium	415846	1	ug/g	STD 1	<1	<1	<1
Uranium	415846	0.5	ug/g	STD 2.5	0.6	<0.5	<0.5
Vanadium	415846	2	ug/g	STD 86	27	26	27
Zinc	415846	2	ug/g	STD 290	58	56	64

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Metals

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606056
Soil153

2022-01-13

BH12-1

1606057
Soil153

2022-01-13

BH12-2

Analyte	Batch No	MRL	Units	Guideline		
Antimony	415846	1	ug/g	STD 1.3	<1	<1
Arsenic	415846	1	ug/g	STD 18	4	4
Barium	415846	1	ug/g	STD 220	84	65
Beryllium	415846	1	ug/g	STD 2.5	<1	<1
Boron (Hot Water Soluble)	415918	0.5	ug/g		<0.5	
Boron (total)	415846	5	ug/g	STD 36	<5	<5
Cadmium	415846	0.4	ug/g	STD 1.2	<0.4	<0.4
Chromium Total	415846	1	ug/g	STD 70	27	22
Chromium VI	415899	0.20	ug/g	STD 0.66	<0.20	
Cobalt	415846	1	ug/g	STD 21	8	9
Copper	415846	1	ug/g	STD 92	21	21
Lead	415846	1	ug/g	STD 120	46	10
Mercury	415846	0.1	ug/g	STD 0.27	<0.1	
Molybdenum	415846	1	ug/g	STD 2	<1	<1
Nickel	415846	1	ug/g	STD 82	20	21
Selenium	415895	0.5	ug/g	STD 1.5	0.9	0.9
Silver	415846	0.2	ug/g	STD 0.5	<0.2	<0.2
Thallium	415846	1	ug/g	STD 1	<1	<1
Uranium	415846	0.5	ug/g	STD 2.5	<0.5	<0.5
Vanadium	415846	2	ug/g	STD 86	33	29
Zinc	415846	2	ug/g	STD 290	63	47

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 COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

OCP/PCB

Lab I.D.
 Sample Matrix
 Sample Type
 Sample Date
 Sampling Time
 Sample I.D.

1606034
 Soil153
 2022-01-14
 BH5-1

1606035
 Soil153
 2022-01-14
 Dup-5

Analyte Batch No MRL Units Guideline

Aldrin	415986	0.006	ug/g	STD 0.05	<0.006	<0.006
Chlordane	415987	0.018	ug/g	STD 0.05	<0.018	<0.018
Chlordane, alpha-	415986	0.006	ug/g		<0.006	<0.006
Chlordane, gamma-	415986	0.006	ug/g		<0.006	<0.006
DDD	415986	0.006	ug/g	STD 0.05	<0.006	<0.006
DDE	415986	0.006	ug/g	STD 0.05	<0.006	<0.006
DDT	415986	0.006	ug/g	STD 1.4	<0.006	<0.006
Dieldrin	415986	0.006	ug/g	STD 0.05	<0.006	<0.006
Endosulfan	415987	0.012	ug/g	STD 0.04	<0.012	<0.012
Endosulfan I	415986	0.006	ug/g		<0.006	<0.006
Endosulfan II	415986	0.006	ug/g		<0.006	<0.006
Endrin	415986	0.006	ug/g	STD 0.04	<0.006	<0.006
Heptachlor	415986	0.006	ug/g	STD 0.05	<0.006	<0.006
Heptachlor Epoxide	415986	0.006	ug/g	STD 0.05	<0.006	<0.006
Hexachlorobenzene	415987	0.006	ug/g	STD 0.01	<0.006	<0.006
Hexachlorobutadiene	415987	0.006	ug/g	STD 0.01	<0.006	<0.006
Hexachlorocyclohexane Gamma-	415986	0.006	ug/g	STD 0.01	<0.006	<0.006
Hexachloroethane	415987	0.006	ug/g	STD 0.01	<0.006	<0.006
Methoxychlor	415986	0.006	ug/g	STD 0.05	<0.006	<0.006

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Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Nan Du
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

PAH

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606024
Soil153
2022-01-14
BH1-1

1606028
Soil153
2022-01-14
BH2-1

Analyte	Batch No	MRL	Units	Guideline		
1+2-methylnaphthalene	415964	0.05	ug/g		<0.05	<0.05
Acenaphthene	415963	0.05	ug/g	STD 0.072	<0.05	<0.05
Acenaphthylene	415963	0.05	ug/g	STD 0.093	<0.05	<0.05
Anthracene	415963	0.05	ug/g	STD 0.16	<0.05	<0.05
Benz[a]anthracene	415963	0.05	ug/g	STD 0.36	<0.05	<0.05
Benzo[a]pyrene	415963	0.05	ug/g	STD 0.3	<0.05	<0.05
Benzo[b]fluoranthene	415963	0.05	ug/g	STD 0.47	<0.05	<0.05
Benzo[ghi]perylene	415963	0.05	ug/g	STD 0.68	<0.05	<0.05
Benzo[k]fluoranthene	415963	0.05	ug/g	STD 0.48	<0.05	<0.05
Chrysene	415963	0.05	ug/g	STD 2.8	<0.05	<0.05
Dibenz[a h]anthracene	415963	0.05	ug/g	STD 0.1	<0.05	<0.05
Fluoranthene	415963	0.05	ug/g	STD 0.56	<0.05	<0.05
Fluorene	415963	0.05	ug/g	STD 0.12	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	415963	0.05	ug/g	STD 0.23	<0.05	<0.05
Methylnaphthalene, 1-	415963	0.05	ug/g	STD 0.59	<0.05	<0.05
Methylnaphthalene, 2-	415963	0.05	ug/g	STD 0.59	<0.05	<0.05
Naphthalene	415963	0.013	ug/g	STD 0.09	<0.013	<0.013
Phenanthrene	415963	0.05	ug/g	STD 0.69	<0.05	0.05
Pyrene	415963	0.05	ug/g	STD 1	<0.05	<0.05

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Nan Du
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

PAH

Lab I.D. 1606031
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-14
Sampling Time
Sample I.D. BH4-1

Analyte	Batch No	MRL	Units	Guideline	
1+2-methylnaphthalene	415964	0.05	ug/g		<0.05
Acenaphthene	415963	0.05	ug/g	STD 0.072	<0.05
Acenaphthylene	415963	0.05	ug/g	STD 0.093	<0.05
Anthracene	415963	0.05	ug/g	STD 0.16	<0.05
Benz[a]anthracene	415963	0.05	ug/g	STD 0.36	<0.05
Benzo[a]pyrene	415963	0.05	ug/g	STD 0.3	<0.05
Benzo[b]fluoranthene	415963	0.05	ug/g	STD 0.47	<0.05
Benzo[ghi]perylene	415963	0.05	ug/g	STD 0.68	<0.05
Benzo[k]fluoranthene	415963	0.05	ug/g	STD 0.48	<0.05
Chrysene	415963	0.05	ug/g	STD 2.8	<0.05
Dibenz[a h]anthracene	415963	0.05	ug/g	STD 0.1	<0.05
Fluoranthene	415963	0.05	ug/g	STD 0.56	<0.05
Fluorene	415963	0.05	ug/g	STD 0.12	<0.05
Indeno[1 2 3-cd]pyrene	415963	0.05	ug/g	STD 0.23	<0.05
Methylnaphthalene, 1-	415963	0.05	ug/g	STD 0.59	<0.05
Methylnaphthalene, 2-	415963	0.05	ug/g	STD 0.59	<0.05
Naphthalene	415963	0.013	ug/g	STD 0.09	<0.013
Phenanthrene	415963	0.05	ug/g	STD 0.69	<0.05
Pyrene	415963	0.05	ug/g	STD 1	<0.05

Results relate only to the parameters tested on the samples submitted.
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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Nan Du
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

PAH

Lab I.D. 1606038
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-14
Sampling Time
Sample I.D. BH7-1

Analyte	Batch No	MRL	Units	Guideline	
1+2-methylnaphthalene	415964	0.05	ug/g		<0.05
Acenaphthene	415963	0.05	ug/g	STD 0.072	<0.05
Acenaphthylene	415963	0.05	ug/g	STD 0.093	<0.05
Anthracene	415963	0.05	ug/g	STD 0.16	<0.05
Benz[a]anthracene	415963	0.05	ug/g	STD 0.36	<0.05
Benzo[a]pyrene	415963	0.05	ug/g	STD 0.3	<0.05
Benzo[b]fluoranthene	415963	0.05	ug/g	STD 0.47	<0.05
Benzo[ghi]perylene	415963	0.05	ug/g	STD 0.68	<0.05
Benzo[k]fluoranthene	415963	0.05	ug/g	STD 0.48	<0.05
Chrysene	415963	0.05	ug/g	STD 2.8	<0.05
Dibenz[a h]anthracene	415963	0.05	ug/g	STD 0.1	<0.05
Fluoranthene	415963	0.05	ug/g	STD 0.56	<0.05
Fluorene	415963	0.05	ug/g	STD 0.12	<0.05
Indeno[1 2 3-cd]pyrene	415963	0.05	ug/g	STD 0.23	<0.05
Methylnaphthalene, 1-	415963	0.05	ug/g	STD 0.59	<0.05
Methylnaphthalene, 2-	415963	0.05	ug/g	STD 0.59	<0.05
Naphthalene	415963	0.013	ug/g	STD 0.09	<0.013
Phenanthrene	415963	0.05	ug/g	STD 0.69	<0.05
Pyrene	415963	0.05	ug/g	STD 1	<0.05

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Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Nan Du
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

PAH

Lab I.D. 1606039
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-14
Sampling Time
Sample I.D. Dup-2

Analyte	Batch No	MRL	Units	Guideline	
1+2-methylnaphthalene	415964	0.05	ug/g		<0.05
Acenaphthene	415963	0.05	ug/g	STD 0.072	<0.05
Acenaphthylene	415963	0.05	ug/g	STD 0.093	<0.05
Anthracene	415963	0.05	ug/g	STD 0.16	<0.05
Benz[a]anthracene	415963	0.05	ug/g	STD 0.36	<0.05
Benzo[a]pyrene	415963	0.05	ug/g	STD 0.3	<0.05
Benzo[b]fluoranthene	415963	0.05	ug/g	STD 0.47	<0.05
Benzo[ghi]perylene	415963	0.05	ug/g	STD 0.68	<0.05
Benzo[k]fluoranthene	415963	0.05	ug/g	STD 0.48	<0.05
Chrysene	415963	0.05	ug/g	STD 2.8	<0.05
Dibenz[a h]anthracene	415963	0.05	ug/g	STD 0.1	<0.05
Fluoranthene	415963	0.05	ug/g	STD 0.56	<0.05
Fluorene	415963	0.05	ug/g	STD 0.12	<0.05
Indeno[1 2 3-cd]pyrene	415963	0.05	ug/g	STD 0.23	<0.05
Methylnaphthalene, 1-	415963	0.05	ug/g	STD 0.59	<0.05
Methylnaphthalene, 2-	415963	0.05	ug/g	STD 0.59	<0.05
Naphthalene	415963	0.013	ug/g	STD 0.09	<0.013
Phenanthrene	415963	0.05	ug/g	STD 0.69	<0.05
Pyrene	415963	0.05	ug/g	STD 1	<0.05

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Client: EnGlobe Corp. (Toronto)
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Toronto, ON
M9W 5W8
Attention: Mr. Nan Du
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

PAH

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606044
Soil153
2022-01-13
BH8-2

1606047
Soil153
2022-01-13
BH9-2

Analyte Batch No MRL Units Guideline

1+2-methylnaphthalene	415964	0.05	ug/g		<0.05	<0.05
Acenaphthene	415963	0.05	ug/g	STD 0.072	<0.05	<0.05
Acenaphthylene	415963	0.05	ug/g	STD 0.093	<0.05	<0.05
Anthracene	415963	0.05	ug/g	STD 0.16	<0.05	<0.05
Benz[a]anthracene	415963	0.05	ug/g	STD 0.36	<0.05	<0.05
Benzo[a]pyrene	415963	0.05	ug/g	STD 0.3	<0.05	<0.05
Benzo[b]fluoranthene	415963	0.05	ug/g	STD 0.47	<0.05	<0.05
Benzo[ghi]perylene	415963	0.05	ug/g	STD 0.68	<0.05	<0.05
Benzo[k]fluoranthene	415963	0.05	ug/g	STD 0.48	<0.05	<0.05
Chrysene	415963	0.05	ug/g	STD 2.8	<0.05	<0.05
Dibenz[a h]anthracene	415963	0.05	ug/g	STD 0.1	<0.05	<0.05
Fluoranthene	415963	0.05	ug/g	STD 0.56	<0.05	<0.05
Fluorene	415963	0.05	ug/g	STD 0.12	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	415963	0.05	ug/g	STD 0.23	<0.05	<0.05
Methylnaphthalene, 1-	415963	0.05	ug/g	STD 0.59	<0.05	<0.05
Methylnaphthalene, 2-	415963	0.05	ug/g	STD 0.59	<0.05	<0.05
Naphthalene	415963	0.013	ug/g	STD 0.09	<0.013	<0.013
Phenanthrene	415963	0.05	ug/g	STD 0.69	<0.05	<0.05
Pyrene	415963	0.05	ug/g	STD 1	<0.05	<0.05

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Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Nan Du
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

PAH

Lab I.D. 1606056
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-13
Sampling Time
Sample I.D. BH12-1

Analyte	Batch No	MRL	Units	Guideline	
1+2-methylnaphthalene	415964	0.05	ug/g		<0.05
Acenaphthene	415963	0.05	ug/g	STD 0.072	<0.05
Acenaphthylene	415963	0.05	ug/g	STD 0.093	<0.05
Anthracene	415963	0.05	ug/g	STD 0.16	<0.05
Benz[a]anthracene	415963	0.05	ug/g	STD 0.36	<0.05
Benzo[a]pyrene	415963	0.05	ug/g	STD 0.3	<0.05
Benzo[b]fluoranthene	415963	0.05	ug/g	STD 0.47	<0.05
Benzo[ghi]perylene	415963	0.05	ug/g	STD 0.68	<0.05
Benzo[k]fluoranthene	415963	0.05	ug/g	STD 0.48	<0.05
Chrysene	415963	0.05	ug/g	STD 2.8	<0.05
Dibenz[a h]anthracene	415963	0.05	ug/g	STD 0.1	<0.05
Fluoranthene	415963	0.05	ug/g	STD 0.56	<0.05
Fluorene	415963	0.05	ug/g	STD 0.12	<0.05
Indeno[1 2 3-cd]pyrene	415963	0.05	ug/g	STD 0.23	<0.05
Methylnaphthalene, 1-	415963	0.05	ug/g	STD 0.59	<0.05
Methylnaphthalene, 2-	415963	0.05	ug/g	STD 0.59	<0.05
Naphthalene	415963	0.013	ug/g	STD 0.09	<0.013
Phenanthrene	415963	0.05	ug/g	STD 0.69	<0.05
Pyrene	415963	0.05	ug/g	STD 1	<0.05

Results relate only to the parameters tested on the samples submitted.
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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Nan Du
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606026 Soil153	1606027 Soil153	1606028 Soil153
2022-01-14	2022-01-14	2022-01-14
BH1-3	BH1-5	BH2-1

Analyte	Batch No	MRL	Units	Guideline
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Acetone	415831	0.50	ug/g	STD 0.5		<0.50	
Benzene	415831	0.0068	ug/g	STD 0.02	<0.0068	<0.0068	<0.0068
Bromodichloromethane	415831	0.05	ug/g	STD 0.05		<0.05	
Bromoform	415831	0.05	ug/g	STD 0.05		<0.05	
Bromomethane	415831	0.05	ug/g	STD 0.05		<0.05	
Carbon Tetrachloride	415831	0.05	ug/g	STD 0.05		<0.05	
Chlorobenzene	415831	0.05	ug/g	STD 0.05		<0.05	
Chloroform	415831	0.05	ug/g	STD 0.05		<0.05	
Dibromochloromethane	415831	0.05	ug/g	STD 0.05		<0.05	
Dichlorobenzene, 1,2-	415831	0.05	ug/g	STD 0.05		<0.05	
Dichlorobenzene, 1,3-	415831	0.05	ug/g	STD 0.05		<0.05	
Dichlorobenzene, 1,4-	415831	0.05	ug/g	STD 0.05		<0.05	
Dichlorodifluoromethane	415831	0.05	ug/g	STD 0.05		<0.05	
Dichloroethane, 1,1-	415831	0.05	ug/g	STD 0.05		<0.05	
Dichloroethane, 1,2-	415831	0.05	ug/g	STD 0.05		<0.05	
Dichloroethylene, 1,1-	415831	0.05	ug/g	STD 0.05		<0.05	
Dichloroethylene, 1,2-cis-	415831	0.05	ug/g	STD 0.05		<0.05	
Dichloroethylene, 1,2-trans-	415831	0.05	ug/g	STD 0.05		<0.05	
Dichloropropane, 1,2-	415831	0.05	ug/g	STD 0.05		<0.05	
Dichloropropene,1,3-	415831	0.05	ug/g	STD 0.05		<0.05	
Dichloropropene,1,3-cis-	415831	0.05	ug/g			<0.05	
Dichloropropene,1,3-trans-	415831	0.05	ug/g			<0.05	
Ethylbenzene	415831	0.018	ug/g	STD 0.05	<0.018	<0.018	<0.018

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Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
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Invoice to: EnGlobe Corp.

Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606026 Soil153	1606027 Soil153	1606028 Soil153
2022-01-14	2022-01-14	2022-01-14
BH1-3	BH1-5	BH2-1

Analyte	Batch No	MRL	Units	Guideline
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Ethylene dibromide	415831	0.05	ug/g	STD 0.05		<0.05	
Hexane (n)	415831	0.05	ug/g	STD 0.05		<0.05	
Methyl Ethyl Ketone	415831	0.50	ug/g	STD 0.5		0.81*	
Methyl Isobutyl Ketone	415831	0.50	ug/g	STD 0.5		<0.50	
Methyl tert-Butyl Ether (MTBE)	415831	0.05	ug/g	STD 0.05		<0.05	
Methylene Chloride	415831	0.05	ug/g	STD 0.05		<0.05	
Styrene	415831	0.05	ug/g	STD 0.05		<0.05	
Tetrachloroethane, 1,1,1,2-	415831	0.05	ug/g	STD 0.05		<0.05	
Tetrachloroethane, 1,1,2,2-	415831	0.05	ug/g	STD 0.05		<0.05	
Tetrachloroethylene	415831	0.05	ug/g	STD 0.05		<0.05	
Toluene	415831	0.08	ug/g	STD 0.2	<0.08	<0.08	<0.08
Trichloroethane, 1,1,1-	415831	0.05	ug/g	STD 0.05		<0.05	
Trichloroethane, 1,1,2-	415831	0.05	ug/g	STD 0.05		<0.05	
Trichloroethylene	415831	0.01	ug/g	STD 0.05		<0.01	
Trichlorofluoromethane	415831	0.05	ug/g	STD 0.25		<0.05	
Vinyl Chloride	415831	0.02	ug/g	STD 0.02		<0.02	
Xylene Mixture	415902	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05
Xylene, m/p-	415831	0.05	ug/g		<0.05	<0.05	<0.05
Xylene, o-	415831	0.05	ug/g		<0.05	<0.05	<0.05

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Nan Du
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606029 Soil153	1606030 Soil153	1606032 Soil153	1606033 Soil153
2022-01-14	2022-01-14	2022-01-14	2022-01-14
BH2-6	Dup-4	BH4-2	BH4-9

Analyte Batch No MRL Units Guideline

Acetone	415831	0.50	ug/g	STD 0.5	<0.50	<0.50		
Benzene	415831	0.0068	ug/g	STD 0.02	<0.0068	<0.0068	<0.0068	<0.0068
Bromodichloromethane	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Bromoform	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Bromomethane	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Carbon Tetrachloride	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Chlorobenzene	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Chloroform	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Dibromochloromethane	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Dichlorobenzene, 1,2-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Dichlorobenzene, 1,3-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Dichlorobenzene, 1,4-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Dichlorodifluoromethane	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Dichloroethane, 1,1-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Dichloroethane, 1,2-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Dichloroethylene, 1,1-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Dichloroethylene, 1,2-cis-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Dichloroethylene, 1,2-trans-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Dichloropropane, 1,2-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Dichloropropene, 1,3-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Dichloropropene, 1,3-cis-	415831	0.05	ug/g		<0.05	<0.05		
Dichloropropene, 1,3-trans-	415831	0.05	ug/g		<0.05	<0.05		
Ethylbenzene	415831	0.018	ug/g	STD 0.05	<0.018	<0.018	<0.018	<0.018

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

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COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606029 Soil153	1606030 Soil153	1606032 Soil153	1606033 Soil153
2022-01-14	2022-01-14	2022-01-14	2022-01-14
BH2-6	Dup-4	BH4-2	BH4-9

Analyte Batch No MRL Units Guideline

Ethylene dibromide	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Hexane (n)	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Methyl Ethyl Ketone	415831	0.50	ug/g	STD 0.5	0.72*	1.2*		
Methyl Isobutyl Ketone	415831	0.50	ug/g	STD 0.5	<0.50	<0.50		
Methyl tert-Butyl Ether (MTBE)	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Methylene Chloride	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Styrene	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Tetrachloroethane, 1,1,1,2-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Tetrachloroethane, 1,1,2,2-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Tetrachloroethylene	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Toluene	415831	0.08	ug/g	STD 0.2	<0.08	<0.08	<0.08	<0.08
Trichloroethane, 1,1,1-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Trichloroethane, 1,1,2-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05		
Trichloroethylene	415831	0.01	ug/g	STD 0.05	<0.01	<0.01		
Trichlorofluoromethane	415831	0.05	ug/g	STD 0.25	<0.05	<0.05		
Vinyl Chloride	415831	0.02	ug/g	STD 0.02	<0.02	<0.02		
Xylene Mixture	415902	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Xylene, m/p-	415831	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
Xylene, o-	415831	0.05	ug/g		<0.05	<0.05	<0.05	<0.05

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Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	1606036
					Sample Matrix	Soil153
					Sample Type	1606037
					Sample Date	Soil153
					Sampling Time	2022-01-14
					Sample I.D.	2022-01-14
						BH5-3
						BH5-9
Benzene	415831	0.0068	ug/g	STD 0.02	<0.0068	<0.0068
Ethylbenzene	415831	0.018	ug/g	STD 0.05	<0.018	<0.018
Toluene	415831	0.08	ug/g	STD 0.2	<0.08	<0.08
Xylene Mixture	415902	0.05	ug/g	STD 0.05	<0.05	<0.05
Xylene, m/p-	415831	0.05	ug/g		<0.05	<0.05
Xylene, o-	415831	0.05	ug/g		<0.05	<0.05

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	1606040	1606041	1606042
					Sample Matrix	Soil153	Soil153	Soil153
					Sample Type	2022-01-14	2022-01-14	2022-01-14
					Sample Date			
					Sampling Time	BH7-3	Dup-3	BH7-6
					Sample I.D.			
Benzene	415831	0.0068	ug/g	STD 0.02	<0.0068	<0.0068	<0.0068	<0.0068
Ethylbenzene	415831	0.018	ug/g	STD 0.05	<0.018	<0.018	<0.018	<0.018
Toluene	415831	0.08	ug/g	STD 0.2	<0.08	<0.08	<0.08	<0.08
Xylene Mixture	415902	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Xylene, m/p-	415831	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
Xylene, o-	415831	0.05	ug/g		<0.05	<0.05	<0.05	<0.05

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational
Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim
Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial
Water Quality Guideline, IPWQO = Interim Provincial Water Quality
Objective, TDR = Typical Desired Range

Client: EnGlobe Corp. (Toronto)
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Date Submitted: 2022-01-17
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Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606045
Soil153
2022-01-13
BH8-7

1606048
Soil153
2022-01-13
BH9-3

Analyte Batch No MRL Units Guideline

Acetone	415831	0.50	ug/g	STD 0.5	<0.50	<0.50
Benzene	415831	0.0068	ug/g	STD 0.02	<0.0068	<0.0068
Bromodichloromethane	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Bromoform	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Bromomethane	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Carbon Tetrachloride	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Chlorobenzene	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Chloroform	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Dibromochloromethane	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Dichlorodifluoromethane	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Dichloroethane, 1,1-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Dichloroethane, 1,2-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Dichloroethylene, 1,1-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Dichloroethylene, 1,2-cis-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Dichloroethylene, 1,2-trans-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Dichloropropane, 1,2-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Dichloropropene, 1,3-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Dichloropropene, 1,3-cis-	415831	0.05	ug/g		<0.05	<0.05
Dichloropropene, 1,3-trans-	415831	0.05	ug/g		<0.05	<0.05
Ethylbenzene	415831	0.018	ug/g	STD 0.05	<0.018	<0.018

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Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606045
Soil153
2022-01-13
BH8-7

1606048
Soil153
2022-01-13
BH9-3

Analyte	Batch No	MRL	Units	Guideline		
Ethylene dibromide	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Hexane (n)	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Methyl Ethyl Ketone	415831	0.50	ug/g	STD 0.5	1.1*	0.87*
Methyl Isobutyl Ketone	415831	0.50	ug/g	STD 0.5	<0.50	<0.50
Methyl tert-Butyl Ether (MTBE)	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Methylene Chloride	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Styrene	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Tetrachloroethane, 1,1,2,2-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Tetrachloroethylene	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Toluene	415831	0.08	ug/g	STD 0.2	<0.08	<0.08
Trichloroethane, 1,1,1-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Trichloroethane, 1,1,2-	415831	0.05	ug/g	STD 0.05	<0.05	<0.05
Trichloroethylene	415831	0.01	ug/g	STD 0.05	<0.01	<0.01
Trichlorofluoromethane	415831	0.05	ug/g	STD 0.25	<0.05	<0.05
Vinyl Chloride	415831	0.02	ug/g	STD 0.02	<0.02	<0.02
Xylene Mixture	415902	0.05	ug/g	STD 0.05	<0.05	<0.05
Xylene, m/p-	415831	0.05	ug/g		<0.05	<0.05
Xylene, o-	415831	0.05	ug/g		<0.05	<0.05

Results relate only to the parameters tested on the samples submitted.
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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: EnGlobe Corp. (Toronto)
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COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	1606049
					Sample Matrix	Soil153
					Sample Type	1606051
					Sample Date	Soil153
					Sampling Time	2022-01-13
					Sample I.D.	2022-01-13
						BH9-9
						BH10-2
Benzene	415831	0.0068	ug/g	STD 0.02	<0.0068	<0.0068
Ethylbenzene	415831	0.018	ug/g	STD 0.05	<0.018	<0.018
Toluene	415831	0.08	ug/g	STD 0.2	<0.08	<0.08
Xylene Mixture	415902	0.05	ug/g	STD 0.05	<0.05	<0.05
Xylene, m/p-	415831	0.05	ug/g		<0.05	<0.05
Xylene, o-	415831	0.05	ug/g		<0.05	<0.05

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	1606054	1606055	1606057	1606058
					Sample Matrix	Soil153	Soil153	Soil153	Soil153
					Sample Type	2022-01-13	2022-01-13	2022-01-13	2022-01-13
					Sample Date	BH11-2	BH11-7	BH12-2	BH12-8
					Sampling Time				
					Sample I.D.				
Acetone	415831	0.50	ug/g	STD 0.5		<0.50			<0.50
Benzene	415831	0.0068	ug/g	STD 0.02	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068
Bromodichloromethane	415831	0.05	ug/g	STD 0.05		<0.05			<0.05
Bromoform	415831	0.05	ug/g	STD 0.05		<0.05			<0.05
Bromomethane	415831	0.05	ug/g	STD 0.05		<0.05			<0.05
Carbon Tetrachloride	415831	0.05	ug/g	STD 0.05		<0.05			<0.05
Chlorobenzene	415831	0.05	ug/g	STD 0.05		<0.05			<0.05
Chloroform	415831	0.05	ug/g	STD 0.05		<0.05			<0.05
Dibromochloromethane	415831	0.05	ug/g	STD 0.05		<0.05			<0.05
Dichlorobenzene, 1,2-	415831	0.05	ug/g	STD 0.05		<0.05			<0.05
Dichlorobenzene, 1,3-	415831	0.05	ug/g	STD 0.05		<0.05			<0.05
Dichlorobenzene, 1,4-	415831	0.05	ug/g	STD 0.05		<0.05			<0.05
Dichlorodifluoromethane	415831	0.05	ug/g	STD 0.05		<0.05			<0.05

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

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Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim
Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial
Water Quality Guideline, IPWQO = Interim Provincial Water Quality
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Volatiles

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606054 Soil153	1606055 Soil153	1606057 Soil153	1606058 Soil153
2022-01-13	2022-01-13	2022-01-13	2022-01-13
BH11-2	BH11-7	BH12-2	BH12-8

Analyte	Batch No	MRL	Units	Guideline				
Dichloroethane, 1,1-	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Dichloroethane, 1,2-	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Dichloroethylene, 1,1-	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Dichloroethylene, 1,2-cis-	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Dichloroethylene, 1,2-trans-	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Dichloropropane, 1,2-	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Dichloropropene, 1,3-	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Dichloropropene, 1,3-cis-	415831	0.05	ug/g			<0.05		<0.05
Dichloropropene, 1,3-trans-	415831	0.05	ug/g			<0.05		<0.05
Ethylbenzene	415831	0.018	ug/g	STD 0.05	<0.018	<0.018	<0.018	<0.018
Ethylene dibromide	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Hexane (n)	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Methyl Ethyl Ketone	415831	0.50	ug/g	STD 0.5		1.1*		1.3*
Methyl Isobutyl Ketone	415831	0.50	ug/g	STD 0.5		<0.50		<0.50
Methyl tert-Butyl Ether (MTBE)	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Methylene Chloride	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Styrene	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Tetrachloroethane, 1,1,1,2-	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Tetrachloroethane, 1,1,2,2-	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Tetrachloroethylene	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Toluene	415831	0.08	ug/g	STD 0.2	<0.08	<0.08	<0.08	<0.08
Trichloroethane, 1,1,1-	415831	0.05	ug/g	STD 0.05		<0.05		<0.05
Trichloroethane, 1,1,2-	415831	0.05	ug/g	STD 0.05		<0.05		<0.05

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Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1606054 Soil153	1606055 Soil153	1606057 Soil153	1606058 Soil153
						2022-01-13	2022-01-13	2022-01-13	2022-01-13
						BH11-2	BH11-7	BH12-2	BH12-8
Analyte	Batch No	MRL	Units	Guideline					
Trichloroethylene	415831	0.01	ug/g	STD 0.05			<0.01		<0.01
Trichlorofluoromethane	415831	0.05	ug/g	STD 0.25			<0.05		<0.05
Vinyl Chloride	415831	0.02	ug/g	STD 0.02			<0.02		<0.02
Xylene Mixture	415902	0.05	ug/g	STD 0.05		<0.05	<0.05	<0.05	<0.05
Xylene, m/p-	415831	0.05	ug/g			<0.05	<0.05	<0.05	<0.05
Xylene, o-	415831	0.05	ug/g			<0.05	<0.05	<0.05	<0.05

Inorganics

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1606024 Soil153	1606025 Soil153	1606028 Soil153
						2022-01-14	2022-01-14	2022-01-14
						BH1-1	BH1-2	BH2-1
Analyte	Batch No	MRL	Units	Guideline				
Cyanide (CN-)	415841	0.005	ug/g	STD 0.051		<0.005		
Electrical Conductivity	415909	0.05	mS/cm	STD 0.57		2.19*	3.32*	4.18*
pH - CaCl2	415894	2.00				7.76		
Sodium Adsorption Ratio	415914	0.01		STD 2.4		37.8*	17.0*	81.8*

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Inorganics

Lab I.D. 1606031
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-14
Sampling Time
Sample I.D. BH4-1

Analyte Batch No MRL Units Guideline

Electrical Conductivity	415909	0.05	mS/cm	STD 0.57	3.19*
Sodium Adsorption Ratio	415914	0.01		STD 2.4	68.4*

Inorganics

Lab I.D. 1606034
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-14
Sampling Time
Sample I.D. BH5-1

Analyte Batch No MRL Units Guideline

Electrical Conductivity	415909	0.05	mS/cm	STD 0.57		6.39*
	416102	0.05	mS/cm	STD 0.57	2.03*	
Sodium Adsorption Ratio	415914	0.01		STD 2.4		111*
	416111	0.01		STD 2.4	30.1*	

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Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Inorganics

Lab I.D. 1606043
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-13
Sampling Time
Sample I.D. BH8-1

Analyte Batch No MRL Units Guideline

Electrical Conductivity	415909	0.05	mS/cm	STD 0.57	3.38*
Sodium Adsorption Ratio	415914	0.01		STD 2.4	12.2*

Inorganics

Lab I.D. 1606044 1606046 1606047
Sample Matrix Soil153 Soil153 Soil153
Sample Type
Sample Date 2022-01-13 2022-01-13 2022-01-13
Sampling Time
Sample I.D. BH8-2 BH9-1 BH9-2

Analyte Batch No MRL Units Guideline

Cyanide (CN-)	415841	0.005	ug/g	STD 0.051	<0.005	<0.005	
Electrical Conductivity	415909	0.05	mS/cm	STD 0.57	1.66*	3.76*	5.88*
pH - CaCl2	415894	2.00			7.69	7.75	
Sodium Adsorption Ratio	415914	0.01		STD 2.4	6.36*	79.4*	147*

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Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Inorganics

Lab I.D.	1606050	1606052
Sample Matrix	Soil153	Soil153
Sample Type		
Sample Date	2022-01-13	2022-01-13
Sampling Time		
Sample I.D.	BH10-1	BH11-1

Analyte	Batch No	MRL	Units	Guideline
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Electrical Conductivity	415909	0.05	mS/cm	STD 0.57	2.81*	7.04*
Sodium Adsorption Ratio	415914	0.01		STD 2.4	40.0*	162*

Inorganics

Lab I.D.	1606056	1606057
Sample Matrix	Soil153	Soil153
Sample Type		
Sample Date	2022-01-13	2022-01-13
Sampling Time		
Sample I.D.	BH12-1	BH12-2

Analyte	Batch No	MRL	Units	Guideline
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Cyanide (CN-)	415841	0.005	ug/g	STD 0.051	<0.005	
Electrical Conductivity	415909	0.05	mS/cm	STD 0.57	4.11*	8.50*
pH - CaCl2	415894	2.00			7.68	
Sodium Adsorption Ratio	415914	0.01		STD 2.4	58.8*	126*

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Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Moisture

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop					1606026	1606027	1606028	
Moisture	Analyte	Batch No	MRL	Units	Lab I.D.	1606026	1606027	1606028
					Sample Matrix	Soil153	Soil153	Soil153
					Sample Type			
					Sample Date	2022-01-14	2022-01-14	2022-01-14
					Sampling Time			
				Sample I.D.	BH1-3	BH1-5	BH2-1	
Moisture-Humidite	415889	0.1	%		14.4	14.2		
	416046	0.1	%				9.9	

Moisture

<u>Moisture</u>					Lab I.D.	1606029	1606030	1606032	1606033
					Sample Matrix	Soil153	Soil153	Soil153	Soil153
					Sample Type				
					Sample Date	2022-01-14	2022-01-14	2022-01-14	2022-01-14
					Sample I.D.	BH2-6	Dup-4	BH4-2	BH4-9
Analyte	Batch No	MRL	Units	Guideline					
Moisture-Humidite	415889	0.1	%		16.2	15.8	11.5	16.3	

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Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Moisture

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606036
Soil153
2022-01-14
BH5-3

1606037
Soil153
2022-01-14
BH5-9

Analyte Batch No MRL Units Guideline

Moisture-Humidite	415889	0.1	%		14.6	13.8
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Moisture

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606040 Soil153 2022-01-14 BH7-3	1606041 Soil153 2022-01-14 Dup-3	1606042 Soil153 2022-01-14 BH7-6
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Analyte Batch No MRL Units Guideline

Moisture-Humidite	415889	0.1	%		12.4	12.8	15.5
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Moisture

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606045
Soil153
2022-01-13
2022-01-13
BH8-7
BH9-3

1606048
Soil153
2022-01-13
2022-01-13
BH9-3

Analyte

Batch No

MRL

Units

Guideline

Moisture-Humidite

415996

0.1

%

14.0

9.7

Moisture

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606049
Soil153
2022-01-13
2022-01-13
BH9-9
BH10-2

1606051
Soil153
2022-01-13
2022-01-13
BH10-2

Analyte

Batch No

MRL

Units

Guideline

Moisture-Humidite

415959

0.1

%

17.3

416045

0.1

%

16.1

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Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Moisture

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606054 Soil153	1606055 Soil153	1606057 Soil153	1606058 Soil153
2022-01-13	2022-01-13	2022-01-13	2022-01-13
BH11-2	BH11-7	BH12-2	BH12-8

Analyte	Batch No	MRL	Units	Guideline
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Moisture-Humidite	415959	0.1	%	14.1	11.8	15.9	9.7
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PCBs

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606047 Soil153
2022-01-13
BH9-2

Analyte	Batch No	MRL	Units	Guideline
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Aroclor 1242	416122	0.02	ug/g	<0.02
Aroclor 1248	416122	0.02	ug/g	<0.02
Aroclor 1254	416122	0.02	ug/g	<0.02
Aroclor 1260	416122	0.02	ug/g	<0.02
Polychlorinated Biphenyls	416122	0.02	ug/g	STD 0.3

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Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

PCB Surrogate

Lab I.D.	1606034	1606035
Sample Matrix	Soil153	Soil153
Sample Type		
Sample Date	2022-01-14	2022-01-14
Sampling Time		
Sample I.D.	BH5-1	Dup-5

Analyte	Batch No	MRL	Units	Guideline
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Decachlorobiphenyl	416010	0	%	N/A	N/A
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PCB Surrogate

Lab I.D.	1606047
Sample Matrix	Soil153
Sample Type	
Sample Date	2022-01-13
Sampling Time	
Sample I.D.	BH9-2

Analyte	Batch No	MRL	Units	Guideline
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Decachlorobiphenyl	416124	0	%	84
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PHC Surrogate

<u>PHC Surrogate</u>					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1606026 Soil153 2022-01-14 BH1-3	1606027 Soil153 2022-01-14 BH1-5	1606028 Soil153 2022-01-14 BH2-1
Analyte	Batch No	MRL	Units	Guideline				
Alpha-androstrane	415889	0	%		82	61		
	416046	0	%					83

PHC Surrogate

<u>PHC Surrogate</u>					Lab I.D.	1606029	1606030	1606032	1606033
					Sample Matrix	Soil153	Soil153	Soil153	Soil153
					Sample Type	2022-01-14	2022-01-14	2022-01-14	2022-01-14
					Sample Date				
					Sampling Time				
					Sample I.D.	BH2-6	Dup-4	BH4-2	BH4-9
Analyte	Batch No	MRL	Units	Guideline					
Alpha-androstrane	415889	0	%			89	73	68	99

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PHC Surrogate

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	
					BH5-3	BH5-9
Analyte	Batch No	MRL	Units	Guideline		
Alpha-androstrane	415889	0	%		71	67

PHC Surrogate

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.		
					BH7-3	Dup-3	BH7-6
Analyte	Batch No	MRL	Units	Guideline			
Alpha-androstrane	415889	0	%		91	81	81

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PHC Surrogate

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606045
Soil153
2022-01-13
BH8-7

1606048
Soil153
2022-01-13
BH9-3

Analyte Batch No MRL Units Guideline

Alpha-androstrane	415996	0	%		87	80
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PHC Surrogate

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606049
Soil153
2022-01-13
BH9-9

1606051
Soil153
2022-01-13
BH10-2

Analyte Batch No MRL Units Guideline

Alpha-androstrane	415959	0	%			81
	416045	0	%		78	

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PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1606054	Soil153	1606055	Soil153	1606057	Soil153
					2022-01-13		2022-01-13		2022-01-13	2022-01-13
					BH11-2		BH11-7		BH12-2	BH12-8
Alpha-androstrane	415959	0	%		79		64		77	74

VOCs Surrogates

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1606026	Soil153	1606027	Soil153	1606028	Soil153
					2022-01-14		2022-01-14		2022-01-14	
					BH1-3		BH1-5		BH2-1	
1,2-dichloroethane-d4	415831	0	%				113			
4-bromofluorobenzene	415831	0	%				76			
Toluene-d8	415831	0	%		100		117		104	

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VOCs Surrogates

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop					Lab I.D.	1606029	1606030	1606032	1606033
<u>VOCs Surrogates</u>					Sample Matrix	Soil153	Soil153	Soil153	Soil153
					Sample Type				
					Sample Date	2022-01-14	2022-01-14	2022-01-14	2022-01-14
					Sampling Time				
					Sample I.D.	BH2-6	Dup-4	BH4-2	BH4-9
Analyte	Batch No	MRL	Units	Guideline					
1,2-dichloroethane-d4	415831	0	%		111	111			
4-bromofluorobenzene	415831	0	%		76	77			
Toluene-d8	415831	0	%		115	120	104	99	

VOCs Surrogates

<u>VOCs Surrogates</u>					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1606036 Soil153 2022-01-14 BH5-3	1606037 Soil153 2022-01-14 BH5-9
Analyte	Batch No	MRL	Units	Guideline			
Toluene-d8	415831	0	%			102	104

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Nan Du
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

VOCs Surrogates

<u>Surrogates</u>					Lab I.D.	1606040	1606041	1606042
Analyte	Batch No	MRL	Units	Guideline	Sample Matrix	Soil153	Soil153	Soil153
					Sample Type			
					Sample Date	2022-01-14	2022-01-14	2022-01-14
					Sampling Time			
					Sample I.D.	BH7-3	Dup-3	BH7-6
Toluene-d8	415831	0	%		103	99	105	

VOCs Surrogates

<u>Surrogates</u>					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1606045 Soil153 2022-01-13 BH8-7	1606048 Soil153 2022-01-13 BH9-3
Analyte	Batch No	MRL	Units	Guideline			
dichloroethane-d4	415831	0	%		123	110	
omofluorobenzene	415831	0	%		91	79	
Toluene-d8	415831	0	%		126	123	

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Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial
Water Quality Guideline, IPWQO = Interim Provincial Water Quality
Objective, TDR = Typical Desired Range

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VOCs Surrogates

<u>Surrogates</u>					Lab I.D.	1606049	1606051
Analyte	Batch No	MRL	Units	Guideline	Sample Matrix	Soil153	Soil153
					Sample Type		
					Sample Date	2022-01-13	2022-01-13
					Sampling Time		
					Sample I.D.	BH9-9	BH10-2
Toluene-d8	415831	0	%			107	103

VOCs Surrogates

<u>Surrogates</u>					Lab I.D.	1606054	1606055	1606057	1606058
					Sample Matrix	Soil153	Soil153	Soil153	Soil153
					Sample Type				
					Sample Date	2022-01-13	2022-01-13	2022-01-13	2022-01-13
					Sampling Time				
					Sample I.D.	BH11-2	BH11-7	BH12-2	BH12-8
Analyte	Batch No	MRL	Units	Guideline					
dichloroethane-d4	415831	0	%				125		125
omofluorobenzene	415831	0	%				79		77
Toluene-d8	415831	0	%			104	117	104	122

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
415831	Tetrachloroethane, 1,1,1,2-	<0.05 ug/g	89	60-130	90	50-140	0	0-50
415831	Trichloroethane, 1,1,1-	<0.05 ug/g	93	60-130	98	50-140	0	0-50
415831	Tetrachloroethane, 1,1,2,2-	<0.05 ug/g	97	60-130	91	50-140	0	0-30
415831	Trichloroethane, 1,1,2-	<0.05 ug/g	94	60-130	90	50-140	0	0-50
415831	Dichloroethane, 1,1-	<0.05 ug/g	95	60-130	101	50-140	0	0-50
415831	Dichloroethylene, 1,1-	<0.05 ug/g	96	60-130	101	50-140	0	0-50
415831	Dichlorobenzene, 1,2-	<0.05 ug/g	90	60-130	93	50-140	0	0-50
415831	Dichloroethane, 1,2-	<0.05 ug/g	98	60-130	95	50-140	0	0-50
415831	Dichloropropane, 1,2-	<0.05 ug/g	92	60-130	95	50-140	0	0-50
415831	Dichlorobenzene, 1,3-	<0.05 ug/g	89	60-130	94	50-140	0	0-50
415831	Dichloropropene, 1,3-	<0.05 ug/g						
415831	Dichlorobenzene, 1,4-	<0.05 ug/g	90	60-130	95	50-140	0	0-50
415831	Acetone	<0.50 ug/g	104	60-130	108	50-140	0	0-50
415831	Benzene	<0.0068	94	60-130	100	50-140	0	0-50
415831	Bromodichloromethane	<0.05 ug/g	92	60-130	92	50-140	0	0-50
415831	Bromoform	<0.05 ug/g	88	60-130	80	50-140	0	0-50
415831	Bromomethane	<0.05 ug/g	109	60-130	99	50-140	0	0-50
415831	Dichloroethylene, 1,2-cis-	<0.05 ug/g	93	60-130	98	50-140	0	0-50
415831	Dichloropropene, 1,3-cis-	<0.05 ug/g	84	60-130	89	50-140	0	0-50
415831	Carbon Tetrachloride	<0.05 ug/g	91	60-130	94	50-140	0	0-50
415831	Chloroform	<0.05 ug/g	94	60-130	97	50-140	0	0-50
415831	Dibromochloromethane	<0.05 ug/g	90	60-130	86	50-140	0	0-50
415831	Dichlorodifluoromethane	<0.05 ug/g	108	60-130	113	50-140	0	0-50
415831	Methylene Chloride	<0.05 ug/g	112	60-130	117	50-140	0	0-50
415831	Ethylbenzene	<0.018 ug/g	95	60-130	101	50-140	0	0-50
415831	Ethylene dibromide	<0.05 ug/g	90	60-130	86	50-140	0	0-50
415831	Hexane (n)	<0.05 ug/g	101	60-130	103	50-140	0	0-50
415831	Xylene, m/p-	<0.05 ug/g	98	60-130	105	50-140	0	0-50
415831	Methyl Ethyl Ketone	<0.50 ug/g	82	60-130	118	50-140	0	0-50
415831	Methyl Isobutyl Ketone	<0.50 ug/g	84	60-130	90	50-140	0	0-50
415831	Methyl tert-Butyl Ether (MTBE)	<0.05 ug/g	96	60-130	95	50-140	0	0-50
415831	Chlorobenzene	<0.05 ug/g	91	60-130	95	50-140	0	0-50

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Project: 02112512.000
COC #: 883644

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
415831	Xylene, o-	<0.05 ug/g	92	60-130	98	50-140	0	0-50
415831	Styrene	<0.05 ug/g	90	60-130	93	50-140	0	0-50
415831	Dichloroethylene, 1,2-trans-	<0.05 ug/g	95	60-130	102	50-140	0	0-50
415831	Dichloropropene, 1,3-trans-	<0.05 ug/g	87	60-130	84	50-140	0	0-50
415831	Tetrachloroethylene	<0.05 ug/g	85	60-130	90	50-140	0	0-50
415831	Toluene	<0.08 ug/g	94	60-130	100	50-140	0	0-50
415831	Trichloroethylene	<0.01 ug/g	89	60-130	96	50-140	0	0-50
415831	Trichlorofluoromethane	<0.05 ug/g	96	60-130	90	50-140	0	0-50
415831	Vinyl Chloride	<0.02 ug/g	96	60-130	110	50-140	0	0-50
415841	Cyanide (CN-)	<0.005 ug/g	103	75-125	106	70-130	0	0-20
415846	Silver	<0.2 ug/g	95	70-130	97	70-130	0	0-20
415846	Arsenic	<1 ug/g	93	70-130	98	70-130	0	0-20
415846	Boron (total)	<5 ug/g	102	70-130	83	70-130	0	0-20
415846	Barium	<1 ug/g	92	70-130		70-130	15	0-20
415846	Beryllium	<1 ug/g	103	70-130	95	70-130	0	0-20
415846	Cadmium	<0.4 ug/g	101	70-130	102	70-130	0	0-20
415846	Cobalt	<1 ug/g	99	70-130	100	70-130	1	0-20
415846	Chromium Total	<1 ug/g	99	70-130	133	70-130	4	0-20
415846	Copper	<1 ug/g	105	70-130	106	70-130	2	0-20
415846	Mercury	<0.1 ug/g	100	70-130	82	70-130	0	0-20
415846	Molybdenum	<1 ug/g	94	70-130	95	70-130	0	0-20
415846	Nickel	<1 ug/g	103	70-130	111	70-130	1	0-20
415846	Lead	<1 ug/g	95	70-130	88	70-130	5	0-20
415846	Antimony	<1 ug/g	75	70-130	95	70-130	0	0-20
415846	Thallium	<1 ug/g	93	70-130	85	70-130	0	0-20
415846	Uranium	<0.5 ug/g	99	70-130	96	70-130	0	0-20
415846	Vanadium	<2 ug/g	97	70-130	142	70-130	1	0-20
415846	Zinc	<2 ug/g	107	70-130	120	70-130	2	0-20
415889	PHC's F2	<2 ug/g	96	80-120	108	60-140		0-30
415889	PHC's F3	<20 ug/g	96	80-120	108	60-140		0-30
415889	PHC's F4	<20 ug/g	96	80-120	108	60-140		0-30
415889	Moisture-Humidite	<0.1 %	100	80-120				
415894	pH - CaCl2	6.30	100	90-110			0	

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COC #: 883644

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
415895	Selenium	<0.5 ug/g	112	70-130	117	70-130	0	0-20
415896	PHC's F1	<10 ug/g	100	80-120	104	60-140	0	0-30
415899	Chromium VI	<0.20 ug/g	104	80-120	92	70-130	0	0-35
415902	Xylene Mixture							
415903	PHC's F1-BTEX							
415909	Electrical Conductivity	<0.05	97	90-110			4	0-10
415914	Sodium Adsorption Ratio	<0.01					1	
415918	Boron (Hot Water Soluble)	<0.5 ug/g	96	70-130	95	75-125	0	0-30
415959	PHC's F2	<2 ug/g	94	80-120	98	60-140	0	0-30
415959	PHC's F3	<20 ug/g	92	80-120	98	60-140	0	0-30
415959	PHC's F4	<20 ug/g	92	80-120	98	60-140	0	0-30
415959	Moisture-Humidite	<0.1 %	100	80-120			1	
415963	Methylnaphthalene, 1-	<0.05 ug/g	105	50-140	79	50-140	0	0-40
415963	Methylnaphthalene, 2-	<0.05 ug/g	115	50-140	80	50-140	0	0-40
415963	Acenaphthene	<0.05 ug/g	106	50-140	82	50-140	0	0-40
415963	Acenaphthylene	0.07 ug/g	101	50-140	84	50-140	0	0-40
415963	Anthracene	<0.05 ug/g	111	50-140	86	50-140	0	0-40
415963	Benz[a]anthracene	<0.05 ug/g	118	50-140	89	50-140	0	0-40
415963	Benzo[a]pyrene	<0.05 ug/g	102	50-140	88	50-140	0	0-40
415963	Benzo[b]fluoranthene	<0.05 ug/g	116	50-140	93	50-140	0	0-40
415963	Benzo[ghi]perylene	<0.05 ug/g	90	50-140	85	50-140	0	0-40
415963	Benzo[k]fluoranthene	<0.05 ug/g	106	50-140	78		0	0-40
415963	Chrysene	<0.05 ug/g	119	50-140	88	50-140	0	0-40
415963	Dibenz[a h]anthracene	<0.05 ug/g	86	50-140	90	50-140	0	0-40
415963	Fluoranthene	<0.05 ug/g	118	50-140	102	50-140	0	0-40
415963	Fluorene	<0.05 ug/g	110	50-140	81	50-140	0	0-40
415963	Indeno[1 2 3-cd]pyrene	<0.05 ug/g	85	50-140	83	50-140	0	0-40
415963	Naphthalene	0.020 ug/g	90	50-140	68	50-140	0	0-40
415963	Phenanthrene	<0.05 ug/g	112	50-140	92	50-140	0	0-40
415963	Pyrene	<0.05 ug/g	118	50-140	103	50-140	0	0-40
415964	1+2-methylnaphthalene							
415986	Chlordane, alpha-	<0.006 ug/g	64	50-140		50-140		0-30
415986	Aldrin	<0.006 ug/g	63	50-140		50-140		0-30

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415986	Dieldrin	<0.006 ug/g	63	50-140		50-140		0-30
415986	Endosulfan I	<0.006 ug/g	64	50-140		50-140		0-30
415986	Endosulfan II	<0.006 ug/g	64	50-140		50-140		0-30
415986	Endrin	<0.006 ug/g	64	50-140		50-140		0-30
415986	Hexachlorocyclohexane Gamma-	<0.006 ug/g	62	50-140		50-140		0-30
415986	Chlordane, gamma-	<0.006 ug/g	65	50-140		50-140		0-30
415986	Heptachlor	<0.006 ug/g	63	50-140		50-140		0-30
415986	Heptachlor Epoxide	<0.006 ug/g	65	50-140		50-140		0-30
415986	Methoxychlor	<0.006 ug/g	68	50-140		50-140		0-30
415986	DDD	<0.006 ug/g	64	50-140		50-140		0-30
415986	DDE	<0.006 ug/g	66	50-140		50-140		0-30
415986	DDT	<0.006 ug/g	65	50-140		50-140		0-30
415987	Chlordane	<0.018 ug/g						
415987	Endosulfan	<0.012 ug/g						
415987	Hexachlorobenzene	<0.006 ug/g	102	50-140		50-140		0-30
415987	Hexachlorobutadiene	<0.006 ug/g	95	50-140		50-140		0-30
415987	Hexachloroethane	<0.006 ug/g	93	50-140		50-140		0-30
415996	PHC's F2	<2 ug/g	87	80-120	74	60-140	0	0-30
415996	PHC's F3	<20 ug/g	88	80-120	74	60-140	0	0-30
415996	PHC's F4	<20 ug/g	88	80-120	74	60-140	0	0-30
415996	Moisture-Humidite	<0.1 %	100	80-120			11	
416045	PHC's F2	<2 ug/g	109	80-120	106	60-140	0	0-30
416045	PHC's F3	<20 ug/g	108	80-120	106	60-140	0	0-30
416045	PHC's F4	<20 ug/g	108	80-120	106	60-140	0	0-30
416045	Moisture-Humidite	<0.1 %	100	80-120			2	
416046	PHC's F2	<2 ug/g	101	80-120	84	60-140	0	0-30
416046	PHC's F3	<20 ug/g	100	80-120	84	60-140	0	0-30
416046	PHC's F4	<20 ug/g	100	80-120	84	60-140	0	0-30
416046	Moisture-Humidite	<0.1 %	100	80-120			7	
416051	PHC's F2-Napth							
416052	PHC's F3-PAH							
416102	Electrical Conductivity	<0.05	98	90-110			0	0-10
416111	Sodium Adsorption Ratio	<0.01					1	

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Quality Assurance Summary

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416113	Silver	<0.2 ug/g	106	70-130	111	70-130	0	0-20
416113	Arsenic	<1 ug/g	100	70-130	113	70-130	0	0-20
416113	Boron (total)	<5 ug/g	99	70-130	150	70-130	0	0-20
416113	Barium	<1 ug/g	99	70-130	146	70-130	9	0-20
416113	Beryllium	<1 ug/g	102	70-130	99	70-130	0	0-20
416113	Cadmium	<0.4 ug/g	108	70-130	112	70-130	0	0-20
416113	Cobalt	<1 ug/g	101	70-130	111	70-130	0	0-20
416113	Chromium Total	<1 ug/g	103	70-130	175	70-130	15	0-20
416113	Copper	<1 ug/g	99	70-130	102	70-130	7	0-20
416113	Molybdenum	<1 ug/g	97	70-130	109	70-130	0	0-20
416113	Nickel	<1 ug/g	99	70-130	108	70-130	12	0-20
416113	Lead	<1 ug/g	98	70-130	103	70-130	0	0-20
416113	Antimony	<1 ug/g	84	70-130	118	70-130	0	0-20
416113	Selenium	<0.5 ug/g	106	70-130	105	70-130	0	0-20
416113	Thallium	<1 ug/g	98	70-130	99	70-130	0	0-20
416113	Uranium	<0.5 ug/g	102	70-130	111	70-130	0	0-20
416113	Vanadium	<2 ug/g	101	70-130	159	70-130	10	0-20
416113	Zinc	<2 ug/g	103	70-130	107	70-130	12	0-20
416122	Aroclor 1242	<0.02 ug/g	86	60-140	72	60-140	0	0-40
416122	Aroclor 1248	<0.02 ug/g	86	60-140	72	60-140	0	0-40
416122	Aroclor 1254	<0.02 ug/g	86	60-140	72	60-140	0	0-40
416122	Aroclor 1260	<0.02 ug/g	86	60-140	72	60-140	0	0-40
416122	Polychlorinated Biphenyls	<0.02 ug/g	86	60-140	72	60-140	0	0-40

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Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
415831	Tetrachloroethane, 1,1,1,2-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Trichloroethane, 1,1,1-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Tetrachloroethane, 1,1,2,2-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Trichloroethane, 1,1,2-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Dichloroethane, 1,1-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Dichloroethylene, 1,1-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Dichlorobenzene, 1,2-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Dichloroethane, 1,2-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Dichloropropane, 1,2-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Dichlorobenzene, 1,3-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Dichloropropene, 1,3-	GC-MS	2022-01-21	2022-01-21	YH	V 8260B
415831	Dichlorobenzene, 1,4-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Acetone	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Benzene	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Bromodichloromethane	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Bromoform	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Bromomethane	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Dichloroethylene, 1,2-cis-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Dichloropropene, 1,3-cis-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Carbon Tetrachloride	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Chloroform	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Dibromochloromethane	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Dichlorodifluoromethane	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Methylene Chloride	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Ethylbenzene	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Ethylene dibromide	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Hexane (n)	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Xylene, m/p-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Methyl Ethyl Ketone	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Methyl Isobutyl Ketone	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Methyl tert-Butyl Ether (MTBE)	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Chlorobenzene	GC-MS	2022-01-20	2022-01-21	YH	V 8260B

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1821 Albion Road, Unit 7
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M9W 5W8
Attention: Mr. Nan Du
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1970181
Date Submitted: 2022-01-17
Date Reported: 2022-01-26
Project: 02112512.000
COC #: 883644

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
415831	Xylene, o-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Styrene	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Dichloroethylene, 1,2-trans-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Dichloropropene, 1,3-trans-	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Tetrachloroethylene	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Toluene	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Trichloroethylene	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Trichlorofluoromethane	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415831	Vinyl Chloride	GC-MS	2022-01-20	2022-01-21	YH	V 8260B
415841	Cyanide (CN-)	Skalar CN Analyzer	2022-01-21	2022-01-21	Z_S	MOECC E3015
415846	Silver	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Arsenic	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Boron (total)	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Barium	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Beryllium	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Cadmium	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Cobalt	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Chromium Total	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Copper	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Mercury	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Molybdenum	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Nickel	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Lead	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Antimony	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Thallium	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Uranium	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Vanadium	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415846	Zinc	ICAPQ-MS	2022-01-21	2022-01-21	SD	EPA 200.8/6020
415889	PHC's F2	GC/FID	2022-01-20	2022-01-24	R_G	CCME
415889	PHC's F3	GC/FID	2022-01-20	2022-01-24	R_G	CCME
415889	PHC's F4	GC/FID	2022-01-20	2022-01-24	R_G	CCME
415889	Moisture-Humidite	Oven	2022-01-20	2022-01-24	R_G	ASTM 2216
415894	pH - CaCl2	pH Meter	2022-01-24	2022-01-24	MW	Ag Soil

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Report Number: 1970181
Date Submitted: 2022-01-17
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Project: 02112512.000
COC #: 883644

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
415895	Selenium	ICAPQ-MS	2022-01-24	2022-01-24	AaN	EPA 200.8/6020
415896	PHC's F1	GC/FID	2022-01-24	2022-01-24	YH	CCME
415899	Chromium VI	FAA	2022-01-21	2022-01-24	MW	M US EPA 3060A
415902	Xylene Mixture	GC-MS	2022-01-24	2022-01-24	YH	V 8260B
415903	PHC's F1-BTEX	GC/FID	2022-01-24	2022-01-24	YH	CCME
415909	Electrical Conductivity	Electrical Conductivity Meter	2022-01-24	2022-01-24	Z_S	Cond-Soil
415914	Sodium Adsorption Ratio	iCAP OES	2022-01-24	2022-01-24	Z_S	Ag Soil
415918	Boron (Hot Water Soluble)	iCAP OES	2022-01-24	2022-01-24	Z_S	MOECC E3470
415959	PHC's F2	GC/FID	2022-01-24	2022-01-25	R_G	CCME
415959	PHC's F3	GC/FID	2022-01-24	2022-01-25	R_G	CCME
415959	PHC's F4	GC/FID	2022-01-24	2022-01-25	R_G	CCME
415959	Moisture-Humidity	Oven	2022-01-24	2022-01-25	R_G	ASTM 2216
415963	Methylnaphthalene, 1-	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Methylnaphthalene, 2-	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Acenaphthene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Acenaphthylene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Anthracene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Benz[a]anthracene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Benzo[a]pyrene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Benzo[b]fluoranthene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Benzo[ghi]perylene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Benzo[k]fluoranthene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Chrysene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Dibenz[a,h]anthracene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Fluoranthene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Fluorene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Indeno[1,2,3-cd]pyrene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Naphthalene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Phenanthrene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415963	Pyrene	GC-MS	2022-01-24	2022-01-24	C_M	P 8270
415964	1+2-methylnaphthalene	GC-MS	2022-01-25	2022-01-25	C_M	P 8270
415986	Chlordane, alpha-	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415986	Aldrin	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B

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Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
415986	Dieldrin	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415986	Endosulfan I	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415986	Endosulfan II	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415986	Endrin	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415986	Hexachlorocyclohexane Gamma-	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415986	Chlordane, gamma-	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415986	Heptachlor	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415986	Heptachlor Epoxide	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415986	Methoxychlor	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415986	DDD	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415986	DDE	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415986	DDT	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415987	Chlordane	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415987	Endosulfan	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415987	Hexachlorobenzene	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415987	Hexachlorobutadiene	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415987	Hexachloroethane	GC/ECD	2022-01-23	2022-01-25	QL	EPA 8081B
415996	PHC's F2	GC/FID	2022-01-24	2022-01-25	R_G	CCME
415996	PHC's F3	GC/FID	2022-01-24	2022-01-25	R_G	CCME
415996	PHC's F4	GC/FID	2022-01-24	2022-01-25	R_G	CCME
415996	Moisture-Humidite	Oven	2022-01-24	2022-01-25	R_G	ASTM 2216
416045	PHC's F2	GC/FID	2022-01-24	2022-01-26	R_G	CCME
416045	PHC's F3	GC/FID	2022-01-24	2022-01-26	R_G	CCME
416045	PHC's F4	GC/FID	2022-01-24	2022-01-26	R_G	CCME
416045	Moisture-Humidite	Oven	2022-01-24	2022-01-26	R_G	ASTM 2216
416046	PHC's F2	GC/FID	2022-01-24	2022-01-26	R_G	CCME
416046	PHC's F3	GC/FID	2022-01-24	2022-01-26	R_G	CCME
416046	PHC's F4	GC/FID	2022-01-24	2022-01-26	R_G	CCME
416046	Moisture-Humidite	Oven	2022-01-24	2022-01-26	R_G	ASTM 2216
416051	PHC's F2-Napth	GC/FID	2022-01-26	2022-01-26	R_G	CCME
416052	PHC's F3-PAH	GC/FID	2022-01-26	2022-01-26	R_G	CCME
416102	Electrical Conductivity	Electrical Conductivity Meter	2022-01-26	2022-01-26	Z_S	Cond-Soil
416111	Sodium Adsorption Ratio	iCAP OES	2022-01-26	2022-01-26	Z_S	Ag Soil

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COC #: 883644

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
416113	Silver	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Arsenic	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Boron (total)	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Barium	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Beryllium	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Cadmium	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Cobalt	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Chromium Total	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Copper	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Molybdenum	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Nickel	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Lead	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Antimony	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Selenium	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Thallium	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Uranium	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Vanadium	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Zinc	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416122	Aroclor 1242	GC/ECD	2022-01-24	2022-01-25	QL	EPA 8081B/8082A
416122	Aroclor 1248	GC/ECD	2022-01-24	2022-01-25	QL	EPA 8081B/8082A
416122	Aroclor 1254	GC/ECD	2022-01-24	2022-01-25	QL	EPA 8081B/8082A
416122	Aroclor 1260	GC/ECD	2022-01-24	2022-01-25	QL	EPA 8081B/8082A
416122	Polychlorinated Biphenyls	GC/ECD	2022-01-24	2022-01-25	QL	EPA 8081B/8082A

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CWS for Petroleum Hydrocarbons in Soil - Tier 1**Notes:**

1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:
 - nC6 and nC10 response factors within 30% of response factor for toluene;
 - nC10, nC16, and nC34 response factors within 10% of each other;
 - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
 - Linearity is within 15%.
7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.

Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
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PO#:

Report Number: 1970461
Date Submitted: 2022-01-21
Date Reported: 2022-01-28
Project: 02112512.000
COC #: 885363
Temperature (C): 2
Custody Seal:

Page 1 of 27

Dear Nan Du:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Sample Comment Summary

Sample ID: 1606843 BH16-1 OCPs surrogate recovery is unavailable due to matrix interference.
--

Report Comments:

Long Qu, Organics Supervisor

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated

Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <http://www.cala.ca/scopes/2602.pdf>

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

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Date Submitted: 2022-01-21
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Project: 02112512.000
COC #: 885363

O.Reg 153-T1-All Other Soils

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria
Inorganics				
BH15-2	Sodium Adsorption Ratio	6.11		STD 2.4
BH3-1	Electrical Conductivity	3.31	mS/cm	STD 0.57
BH3-1	Sodium Adsorption Ratio	55.8		STD 2.4
BH6-1	Electrical Conductivity	3.95	mS/cm	STD 0.57
BH6-1	Sodium Adsorption Ratio	42.6		STD 2.4

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Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Nan Du
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1970461
Date Submitted: 2022-01-21
Date Reported: 2022-01-28
Project: 02112512.000
COC #: 885363

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Hydrocarbons

Lab I.D. 1606836
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-21
Sampling Time
Sample I.D. BH3-5

1606838
Soil153
2022-01-21
BH6-9

Analyte Batch No MRL Units Guideline

PHC's F1	416120	10	ug/g	STD 25	<10	<10
PHC's F1-BTEX	416121	10	ug/g		<10	<10
PHC's F2	416160	2	ug/g	STD 10	3	7
PHC's F3	416160	20	ug/g	STD 240	<20	60
PHC's F4	416160	20	ug/g	STD 120	<20	<20

Hydrocarbons

Lab I.D. 1606840
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-21
Sampling Time
Sample I.D. BH13-6

Analyte Batch No MRL Units Guideline

PHC's F1	416120	10	ug/g	STD 25	<10
PHC's F1-BTEX	416121	10	ug/g		<10
PHC's F2	416160	2	ug/g	STD 10	4
PHC's F3	416160	20	ug/g	STD 240	<20
PHC's F4	416160	20	ug/g	STD 120	<20

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Hydrocarbons

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1606844 Soil153 2022-01-21 BH16-2	1606845 Soil153 2022-01-21 BH16-6
Analyte	Batch No	MRL	Units	Guideline			
PHC's F1	416120	10	ug/g	STD 25		<10	<10
PHC's F1-BTEX	416121	10	ug/g			<10	<10
PHC's F2	416160	2	ug/g	STD 10		5	7
PHC's F3	416160	20	ug/g	STD 240		<20	30
PHC's F4	416160	20	ug/g	STD 120		<20	<20

Metals

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1606834 Soil153 2022-01-21 BH3-1	1606837 Soil153 2022-01-21 BH6-1
Analyte	Batch No	MRL	Units	Guideline			
Antimony	416113	1	ug/g	STD 1.3		<1	<1
Arsenic	416113	1	ug/g	STD 18		4	4
Barium	416113	1	ug/g	STD 220		94	59
Beryllium	416113	1	ug/g	STD 2.5		<1	<1
Boron (total)	416113	5	ug/g	STD 36		<5	<5
Cadmium	416113	0.4	ug/g	STD 1.2		<0.4	<0.4
Chromium Total	416113	1	ug/g	STD 70		25	27
Cobalt	416113	1	ug/g	STD 21		8	6
Copper	416113	1	ug/g	STD 92		19	14
Lead	416113	1	ug/g	STD 120		8	9
Molybdenum	416113	1	ug/g	STD 2		<1	<1
Nickel	416113	1	ug/g	STD 82		18	18
Selenium	416113	0.5	ug/g	STD 1.5		0.5	<0.5

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Metals

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1606834 Soil153 2022-01-21 BH3-1	1606837 Soil153 2022-01-21 BH6-1
Analyte	Batch No	MRL	Units	Guideline			
Silver	416113	0.2	ug/g	STD 0.5	<0.2	<0.2	
Thallium	416113	1	ug/g	STD 1	<1	<1	
Uranium	416113	0.5	ug/g	STD 2.5	<0.5	<0.5	
Vanadium	416113	2	ug/g	STD 86	35	29	
Zinc	416113	2	ug/g	STD 290	42	42	

Metals

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1606839 Soil153 2022-01-21 BH13-1	1606841 Soil153 2022-01-21 BH15-1	1606842 Soil153 2022-01-21 BH15-2	1606843 Soil153 2022-01-21 BH16-1
Analyte	Batch No	MRL	Units	Guideline					
Antimony	416113	1	ug/g	STD 1.3	<1	<1	<1	<1	
Arsenic	416113	1	ug/g	STD 18	2	2	2	3	
Barium	416113	1	ug/g	STD 220	23	46	54	59	
Beryllium	416113	1	ug/g	STD 2.5	<1	<1	<1	<1	
(Hot Water Soluble)	416128	0.5	ug/g			<0.5			
Boron (total)	416113	5	ug/g	STD 36	<5	<5	5	<5	
Cadmium	416113	0.4	ug/g	STD 1.2	<0.4	<0.4	<0.4	<0.4	
Chromium Total	416113	1	ug/g	STD 70	14	16	16	20	
Chromium VI	416275	0.20	ug/g	STD 0.66		0.21			
Cobalt	416113	1	ug/g	STD 21	3	4	6	5	
Copper	416113	1	ug/g	STD 92	5	12	12	14	
Lead	416113	1	ug/g	STD 120	6	11	5	13	
Mercury	416113	0.1	ug/g	STD 0.27		<0.1			
Molybdenum	416113	1	ug/g	STD 2	<1	<1	<1	<1	

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Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1606839	Soil153	1606841	1606842	1606843	1606843
					2022-01-21		2022-01-21	2022-01-21	2022-01-21	
					BH13-1		BH15-1	BH15-2	BH16-1	
Nickel	416113	1	ug/g	STD 82	8		10	12	13	
Selenium	416113	0.5	ug/g	STD 1.5	<0.5		<0.5	<0.5	<0.5	
Silver	416113	0.2	ug/g	STD 0.5	<0.2		<0.2	<0.2	<0.2	
Thallium	416113	1	ug/g	STD 1	<1		<1	<1	<1	
Uranium	416113	0.5	ug/g	STD 2.5	<0.5		<0.5	<0.5	<0.5	
Vanadium	416113	2	ug/g	STD 86	17		21	24	25	
Zinc	416113	2	ug/g	STD 290	18		34	26	48	

OCP/PCB

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1606843	Soil153	1606843	1606843	1606843	1606843
					2022-01-21		2022-01-21	2022-01-21	2022-01-21	
					BH16-1					
Aldrin	416232	0.002	ug/g	STD 0.05	<0.002					
Chlordane	416232	0.006	ug/g	STD 0.05	<0.006					
Chlordane, alpha-	416232	0.002	ug/g		<0.002					
Chlordane, gamma-	416232	0.002	ug/g		<0.002					
DDD	416232	0.002	ug/g	STD 0.05	<0.002					
DDE	416232	0.002	ug/g	STD 0.05	<0.002					
DDT	416232	0.002	ug/g	STD 1.4	<0.002					
Dieldrin	416232	0.002	ug/g	STD 0.05	<0.002					
Endosulfan	416232	0.004	ug/g	STD 0.04	<0.004					
Endosulfan I	416232	0.002	ug/g		<0.002					
Endosulfan II	416232	0.002	ug/g		<0.002					
Endrin	416232	0.002	ug/g	STD 0.04	<0.002					

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OCP/PCB

Lab I.D. 1606843
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-21
Sampling Time
Sample I.D. BH16-1

Analyte	Batch No	MRL	Units	Guideline	
Heptachlor	416232	0.002	ug/g	STD 0.05	<0.002
Heptachlor Epoxide	416232	0.002	ug/g	STD 0.05	<0.002
Hexachlorobenzene	416232	0.002	ug/g	STD 0.01	<0.002
Hexachlorobutadiene	416232	0.002	ug/g	STD 0.01	<0.002
Hexachlorocyclohexane Gamma-	416232	0.002	ug/g	STD 0.01	<0.002
Hexachloroethane	416232	0.002	ug/g	STD 0.01	<0.002
Methoxychlor	416232	0.002	ug/g	STD 0.05	<0.002

PAH

Lab I.D. 1606837
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-21
Sampling Time
Sample I.D. BH6-1

Analyte	Batch No	MRL	Units	Guideline	
1+2-methylnaphthalene	416170	0.05	ug/g		<0.05
Acenaphthene	415963	0.05	ug/g	STD 0.072	<0.05
Acenaphthylene	415963	0.05	ug/g	STD 0.093	<0.05
Anthracene	415963	0.05	ug/g	STD 0.16	<0.05
Benz[a]anthracene	415963	0.05	ug/g	STD 0.36	<0.05
Benzo[a]pyrene	415963	0.05	ug/g	STD 0.3	<0.05
Benzo[b]fluoranthene	415963	0.05	ug/g	STD 0.47	<0.05
Benzo[ghi]perylene	415963	0.05	ug/g	STD 0.68	<0.05
Benzo[k]fluoranthene	415963	0.05	ug/g	STD 0.48	<0.05
Chrysene	415963	0.05	ug/g	STD 2.8	<0.05
Dibenz[a h]anthracene	415963	0.05	ug/g	STD 0.1	<0.05
Fluoranthene	415963	0.05	ug/g	STD 0.56	<0.05

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COC #: 885363

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

PAH

Lab I.D. 1606837
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-21
Sampling Time
Sample I.D. BH6-1

Analyte Batch No MRL Units Guideline

Fluorene	415963	0.05	ug/g	STD 0.12	<0.05
Indeno[1 2 3-cd]pyrene	415963	0.05	ug/g	STD 0.23	<0.05
Methlynaphthalene, 1-	415963	0.05	ug/g	STD 0.59	<0.05
Methlynaphthalene, 2-	415963	0.05	ug/g	STD 0.59	<0.05
Naphthalene	415963	0.013	ug/g	STD 0.09	<0.013
Phenanthrene	415963	0.05	ug/g	STD 0.69	<0.05
Pyrene	415963	0.05	ug/g	STD 1	<0.05

Volatiles

Lab I.D. 1606836
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-21
Sampling Time
Sample I.D. BH3-5

Analyte Batch No MRL Units Guideline

Benzene	416116	0.0068	ug/g	STD 0.02	<0.0068	<0.0068
Ethylbenzene	416116	0.018	ug/g	STD 0.05	<0.018	<0.018
Toluene	416116	0.08	ug/g	STD 0.2	<0.08	<0.08
Xylene Mixture	416119	0.05	ug/g	STD 0.05	<0.05	<0.05
Xylene, m/p-	416116	0.05	ug/g		<0.05	<0.05
Xylene, o-	416116	0.05	ug/g		<0.05	<0.05

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Volatiles

Lab I.D. 1606840
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-21
Sampling Time
Sample I.D. BH13-6

Analyte	Batch No	MRL	Units	Guideline	
Benzene	416116	0.0068	ug/g	STD 0.02	<0.0068
Ethylbenzene	416116	0.018	ug/g	STD 0.05	<0.018
Toluene	416116	0.08	ug/g	STD 0.2	<0.08
Xylene Mixture	416119	0.05	ug/g	STD 0.05	<0.05
Xylene, m/p-	416116	0.05	ug/g		<0.05
Xylene, o-	416116	0.05	ug/g		<0.05

Volatiles

Lab I.D. 1606844
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-21
Sampling Time
Sample I.D. BH16-2

Analyte	Batch No	MRL	Units	Guideline	1606845 Soil153 2022-01-21 BH16-6	1606845 Soil153 2022-01-21 BH16-6
Acetone	416116	0.50	ug/g	STD 0.5		<0.50
Benzene	416116	0.0068	ug/g	STD 0.02	<0.0068	<0.0068
Bromodichloromethane	416116	0.05	ug/g	STD 0.05		<0.05
Bromoform	416116	0.05	ug/g	STD 0.05		<0.05
Bromomethane	416116	0.05	ug/g	STD 0.05		<0.05
Carbon Tetrachloride	416116	0.05	ug/g	STD 0.05		<0.05
Chlorobenzene	416116	0.05	ug/g	STD 0.05		<0.05
Chloroform	416116	0.05	ug/g	STD 0.05		<0.05
Dibromochloromethane	416116	0.05	ug/g	STD 0.05		<0.05
Dichlorobenzene, 1,2-	416116	0.05	ug/g	STD 0.05		<0.05
Dichlorobenzene, 1,3-	416116	0.05	ug/g	STD 0.05		<0.05
Dichlorobenzene, 1,4-	416116	0.05	ug/g	STD 0.05		<0.05
Dichlorodifluoromethane	416116	0.05	ug/g	STD 0.05		<0.05

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Water Quality Guideline, IPWQO = Interim Provincial Water Quality
Objective, TDR = Typical Desired Range

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Volatiles

Lab I.D.	1606844	1606845
Sample Matrix	Soil153	Soil153
Sample Type		
Sample Date	2022-01-21	2022-01-21
Sampling Time		
Sample I.D.	BH16-2	BH16-6

Analyte	Batch No	MRL	Units	Guideline		
Dichloroethane, 1,1-	416116	0.05	ug/g	STD 0.05		<0.05
Dichloroethane, 1,2-	416116	0.05	ug/g	STD 0.05		<0.05
Dichloroethylene, 1,1-	416116	0.05	ug/g	STD 0.05		<0.05
Dichloroethylene, 1,2-cis-	416116	0.05	ug/g	STD 0.05		<0.05
Dichloroethylene, 1,2-trans-	416116	0.05	ug/g	STD 0.05		<0.05
Dichloropropane, 1,2-	416116	0.05	ug/g	STD 0.05		<0.05
Dichloropropene,1,3-	416116	0.05	ug/g	STD 0.05		<0.05
Dichloropropene,1,3-cis-	416116	0.05	ug/g			<0.05
Dichloropropene,1,3-trans-	416116	0.05	ug/g			<0.05
Ethylbenzene	416116	0.018	ug/g	STD 0.05	<0.018	<0.018
Ethylene dibromide	416116	0.05	ug/g	STD 0.05		<0.05
Hexane (n)	416116	0.05	ug/g	STD 0.05		<0.05
Methyl Ethyl Ketone	416116	0.50	ug/g	STD 0.5		<0.50
Methyl Isobutyl Ketone	416116	0.50	ug/g	STD 0.5		<0.50
Methyl tert-Butyl Ether (MTBE)	416116	0.05	ug/g	STD 0.05		<0.05
Methylene Chloride	416116	0.05	ug/g	STD 0.05		<0.05
Styrene	416116	0.05	ug/g	STD 0.05		<0.05
Tetrachloroethane, 1,1,1,2-	416116	0.05	ug/g	STD 0.05		<0.05
Tetrachloroethane, 1,1,2,2-	416116	0.05	ug/g	STD 0.05		<0.05
Tetrachloroethylene	416116	0.05	ug/g	STD 0.05		<0.05
Toluene	416116	0.08	ug/g	STD 0.2	<0.08	<0.08
Trichloroethane, 1,1,1-	416116	0.05	ug/g	STD 0.05		<0.05
Trichloroethane, 1,1,2-	416116	0.05	ug/g	STD 0.05		<0.05

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Volatiles

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606844
Soil153
2022-01-21
BH16-2

1606845
Soil153
2022-01-21
BH16-6

Analyte Batch No MRL Units Guideline

Trichloroethylene	416116	0.01	ug/g	STD 0.05		<0.01
Trichlorofluoromethane	416116	0.05	ug/g	STD 0.25		<0.05
Vinyl Chloride	416116	0.02	ug/g	STD 0.02		<0.02
Xylene Mixture	416119	0.05	ug/g	STD 0.05	<0.05	<0.05
Xylene, m/p-	416116	0.05	ug/g		<0.05	<0.05
Xylene, o-	416116	0.05	ug/g		<0.05	<0.05

Inorganics

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1606834
Soil153
2022-01-21
BH3-1

1606836
Soil153
2022-01-21
BH3-5

1606837
Soil153
2022-01-21
BH6-1

Analyte Batch No MRL Units Guideline

Electrical Conductivity	416272	0.05	mS/cm	STD 0.57	3.31*		3.95*
pH - CaCl2	416090	2.00				7.52	
Sodium Adsorption Ratio	416286	0.01		STD 2.4	55.8*		42.6*

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Report Number: 1970461
Date Submitted: 2022-01-21
Date Reported: 2022-01-28
Project: 02112512.000
COC #: 885363

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Inorganics

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1606839	Soil153	1606840	1606841	1606842	1606843
					Soil153		Soil153	Soil153	Soil153	Soil153
					2022-01-21		2022-01-21	2022-01-21	2022-01-21	2022-01-21
					BH13-1		BH13-6	BH15-1	BH15-2	BH16-1
Cyanide (CN-)	416131	0.005	ug/g	STD 0.051				<0.005		
Electrical Conductivity	416272	0.05	mS/cm	STD 0.57	0.34			0.42	0.42	0.40
pH - CaCl2	416090	2.00					7.57	7.51		
Sodium Adsorption Ratio	416286	0.01		STD 2.4	1.18			1.35	6.11*	0.89

Moisture

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1606836	Soil153	1606838	Soil153		
					2022-01-21		2022-01-21			
					BH3-5		BH6-9			
Moisture-Humidite	416160	0.1	%		5.0		12.2			

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
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M9W 5W8
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Moisture

Lab I.D. 1606840
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-21
Sampling Time
Sample I.D. BH13-6

Analyte Batch No MRL Units Guideline

Moisture-Humidite	416160	0.1	%		4.6
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Moisture

Lab I.D.	1606844	1606845
Sample Matrix	Soil153	Soil153
Sample Type		
Sample Date	2022-01-21	2022-01-21
Sampling Time		
Sample I.D.	BH16-2	BH16-6

Analyte Batch No MRL Units Guideline

Moisture-Humidite	416160	0.1	%		13.9	9.1
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PCBs

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1606834 Soil153 2022-01-21 BH3-1	1606835 Soil153 2022-01-21 Dup-7
Analyte	Batch No	MRL	Units	Guideline			
Aroclor 1242	416206	0.02	ug/g			<0.02	<0.02
Aroclor 1248	416206	0.02	ug/g			<0.02	<0.02
Aroclor 1254	416206	0.02	ug/g			<0.02	<0.02
Aroclor 1260	416206	0.02	ug/g			<0.02	<0.02
Polychlorinated Biphenyls	416206	0.02	ug/g	STD 0.3		<0.02	<0.02

PCB Surrogate

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1606834 Soil153 2022-01-21 BH3-1	1606835 Soil153 2022-01-21 Dup-7
Analyte	Batch No	MRL	Units	Guideline			
Decachlorobiphenyl	416211	0	%			61	50

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PCB Surrogate

Lab I.D. 1606843
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-21
Sampling Time
Sample I.D. BH16-1

Analyte Batch No MRL Units Guideline

Decachlorobiphenyl	416232	0	%		N/A
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PHC Surrogate

Lab I.D. 1606836	1606838
Sample Matrix Soil153	Soil153
Sample Type	
Sample Date 2022-01-21	2022-01-21
Sampling Time	
Sample I.D. BH3-5	BH6-9

Analyte Batch No MRL Units Guideline

Alpha-androstrane	416160	0	%		64	91
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PHC Surrogate

Lab I.D. 1606840
Sample Matrix Soil153
Sample Type
Sample Date 2022-01-21
Sampling Time
Sample I.D. BH13-6

Analyte Batch No MRL Units Guideline

Alpha-androstrane	416160	0	%	67
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PHC Surrogate

Lab I.D. 1606844	1606845
Sample Matrix Soil153	Soil153
Sample Type	
Sample Date 2022-01-21	2022-01-21
Sampling Time	
Sample I.D. BH16-2	BH16-6

Analyte Batch No MRL Units Guideline

Alpha-androstrane	416160	0	%	77	98
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VOCs Surrogates

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	
					1606836 Soil153	1606838 Soil153
					2022-01-21	2022-01-21
					BH3-5	BH6-9
Analyte	Batch No	MRL	Units	Guideline		
Toluene-d8	416116	0	%		99	98

VOCs Surrogates

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	
					1606840 Soil153	
					2022-01-21	
					BH13-6	
Analyte	Batch No	MRL	Units	Guideline		
Toluene-d8	416116	0	%		98	

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VOCs Surrogates

Lab I.D.	1606844	1606845
Sample Matrix	Soil153	Soil153
Sample Type		
Sample Date	2022-01-21	2022-01-21
Sampling Time		
Sample I.D.	BH16-2	BH16-6

Analyte	Batch No	MRL	Units	Guideline
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1,2-dichloroethane-d4	416116	0	%		127
4-bromofluorobenzene	416116	0	%		81
Toluene-d8	416116	0	%	103	116

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
415963	Methlynaphthalene, 1-	<0.05 ug/g	105	50-140	79	50-140	0	0-40
415963	Methlynaphthalene, 2-	<0.05 ug/g	115	50-140	80	50-140	0	0-40
415963	Acenaphthene	<0.05 ug/g	106	50-140	82	50-140	0	0-40
415963	Acenaphthylene	0.07 ug/g	101	50-140	84	50-140	0	0-40
415963	Anthracene	<0.05 ug/g	111	50-140	86	50-140	0	0-40
415963	Benz[a]anthracene	<0.05 ug/g	118	50-140	89	50-140	0	0-40
415963	Benzo[a]pyrene	<0.05 ug/g	102	50-140	88	50-140	0	0-40
415963	Benzo[b]fluoranthene	<0.05 ug/g	116	50-140	93	50-140	0	0-40
415963	Benzo[ghi]perylene	<0.05 ug/g	90	50-140	85	50-140	0	0-40
415963	Benzo[k]fluoranthene	<0.05 ug/g	106	50-140	78		0	0-40
415963	Chrysene	<0.05 ug/g	119	50-140	88	50-140	0	0-40
415963	Dibenz[a h]anthracene	<0.05 ug/g	86	50-140	90	50-140	0	0-40
415963	Fluoranthene	<0.05 ug/g	118	50-140	102	50-140	0	0-40
415963	Fluorene	<0.05 ug/g	110	50-140	81	50-140	0	0-40
415963	Indeno[1 2 3-cd]pyrene	<0.05 ug/g	85	50-140	83	50-140	0	0-40
415963	Naphthalene	0.020 ug/g	90	50-140	68	50-140	0	0-40
415963	Phenanthrene	<0.05 ug/g	112	50-140	92	50-140	0	0-40
415963	Pyrene	<0.05 ug/g	118	50-140	103	50-140	0	0-40
416090	pH - CaCl2	5.93	100	90-110			0	
416113	Silver	<0.2 ug/g	106	70-130	107	70-130	0	0-20
416113	Arsenic	<1 ug/g	100	70-130	101	70-130	0	0-20
416113	Boron (total)	<5 ug/g	99	70-130	109	70-130	0	0-20
416113	Barium	<1 ug/g	99	70-130	351	70-130	9	0-20
416113	Beryllium	<1 ug/g	102	70-130	90	70-130	0	0-20
416113	Cadmium	<0.4 ug/g	108	70-130	111	70-130	0	0-20
416113	Cobalt	<1 ug/g	101	70-130	104	70-130	0	0-20
416113	Chromium Total	<1 ug/g	103	70-130	195	70-130	15	0-20
416113	Copper	<1 ug/g	99	70-130	111	70-130	7	0-20
416113	Mercury	<0.1 ug/g	90	70-130	84	70-130	0	0-20
416113	Molybdenum	<1 ug/g	97	70-130	97	70-130	0	0-20
416113	Nickel	<1 ug/g	99	70-130	124	70-130	12	0-20
416113	Lead	<1 ug/g	98	70-130	91	70-130	0	0-20

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
416113	Antimony	<1 ug/g	84	70-130	88	70-130	0	0-20
416113	Selenium	<0.5 ug/g	106	70-130	104	70-130	0	0-20
416113	Thallium	<1 ug/g	98	70-130	89	70-130	0	0-20
416113	Uranium	<0.5 ug/g	102	70-130	99	70-130	0	0-20
416113	Vanadium	<2 ug/g	101	70-130	181	70-130	10	0-20
416113	Zinc	<2 ug/g	103	70-130	152	70-130	12	0-20
416116	Tetrachloroethane, 1,1,1,2-	<0.05 ug/g	89	60-130	90	50-140	0	0-50
416116	Trichloroethane, 1,1,1-	<0.05 ug/g	93	60-130	98	50-140	0	0-50
416116	Tetrachloroethane, 1,1,2,2-	<0.05 ug/g	97	60-130	91	50-140	0	0-30
416116	Trichloroethane, 1,1,2-	<0.05 ug/g	94	60-130	90	50-140	0	0-50
416116	Dichloroethane, 1,1-	<0.05 ug/g	95	60-130	101	50-140	0	0-50
416116	Dichloroethylene, 1,1-	<0.05 ug/g	96	60-130	101	50-140	0	0-50
416116	Dichlorobenzene, 1,2-	<0.05 ug/g	90	60-130	93	50-140	0	0-50
416116	Dichloroethane, 1,2-	<0.05 ug/g	98	60-130	95	50-140	0	0-50
416116	Dichloropropane, 1,2-	<0.05 ug/g	92	60-130	95	50-140	0	0-50
416116	Dichlorobenzene, 1,3-	<0.05 ug/g	89	60-130	94	50-140	0	0-50
416116	Dichloropropene, 1,3-	<0.05 ug/g						
416116	Dichlorobenzene, 1,4-	<0.05 ug/g	90	60-130	95	50-140	0	0-50
416116	Acetone	<0.50 ug/g	104	60-130	108	50-140	0	0-50
416116	Benzene	<0.0068	94	60-130	100	50-140	0	0-50
416116	Bromodichloromethane	<0.05 ug/g	92	60-130	92	50-140	0	0-50
416116	Bromoform	<0.05 ug/g	88	60-130	80	50-140	0	0-50
416116	Bromomethane	<0.05 ug/g	109	60-130	99	50-140	0	0-50
416116	Dichloroethylene, 1,2-cis-	<0.05 ug/g	93	60-130	98	50-140	0	0-50
416116	Dichloropropene, 1,3-cis-	<0.05 ug/g	84	60-130	89	50-140	0	0-50
416116	Carbon Tetrachloride	<0.05 ug/g	91	60-130	94	50-140	0	0-50
416116	Chloroform	<0.05 ug/g	94	60-130	97	50-140	0	0-50
416116	Dibromochloromethane	<0.05 ug/g	90	60-130	86	50-140	0	0-50
416116	Dichlorodifluoromethane	<0.05 ug/g	108	60-130	113	50-140	0	0-50
416116	Methylene Chloride	<0.05 ug/g	112	60-130	117	50-140	0	0-50
416116	Ethylbenzene	<0.018 ug/g	95	60-130	101	50-140	0	0-50
416116	Ethylene dibromide	<0.05 ug/g	90	60-130	86	50-140	0	0-50
416116	Hexane (n)	<0.05 ug/g	101	60-130	103	50-140	0	0-50

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416116	Xylene, m/p-	<0.05 ug/g	98	60-130	105	50-140	0	0-50
416116	Methyl Ethyl Ketone	<0.50 ug/g	82	60-130	118	50-140	0	0-50
416116	Methyl Isobutyl Ketone	<0.50 ug/g	84	60-130	90	50-140	0	0-50
416116	Methyl tert-Butyl Ether (MTBE)	<0.05 ug/g	96	60-130	95	50-140	0	0-50
416116	Chlorobenzene	<0.05 ug/g	91	60-130	95	50-140	0	0-50
416116	Xylene, o-	<0.05 ug/g	92	60-130	98	50-140	0	0-50
416116	Styrene	<0.05 ug/g	90	60-130	93	50-140	0	0-50
416116	Dichloroethylene, 1,2-trans-	<0.05 ug/g	95	60-130	102	50-140	0	0-50
416116	Dichloropropene, 1,3-trans-	<0.05 ug/g	87	60-130	84	50-140	0	0-50
416116	Tetrachloroethylene	<0.05 ug/g	85	60-130	90	50-140	0	0-50
416116	Toluene	<0.08 ug/g	94	60-130	100	50-140	0	0-50
416116	Trichloroethylene	<0.01 ug/g	89	60-130	96	50-140	0	0-50
416116	Trichlorofluoromethane	<0.05 ug/g	96	60-130	90	50-140	0	0-50
416116	Vinyl Chloride	<0.02 ug/g	96	60-130	110	50-140	0	0-50
416119	Xylene Mixture							
416120	PHC's F1	<10 ug/g	100	80-120	104	60-140	0	0-30
416121	PHC's F1-BTEX							
416128	Boron (Hot Water Soluble)	<0.5 ug/g	85	70-130	96	75-125	0	0-30
416131	Cyanide (CN-)	<0.005 ug/g	110	75-125	103	70-130	0	0-20
416160	PHC's F2	<2 ug/g	112	80-120	75	60-140	0	0-30
416160	PHC's F3	<20 ug/g	112	80-120	75	60-140	0	0-30
416160	PHC's F4	<20 ug/g	112	80-120	75	60-140	0	0-30
416160	Moisture-Humidite	<0.1 %	100	80-120			7	
416170	1+2-methylnaphthalene							
416206	Aroclor 1242	<0.02 ug/g	86	60-140	72	60-140	0	0-40
416206	Aroclor 1248	<0.02 ug/g	86	60-140	72	60-140	0	0-40
416206	Aroclor 1254	<0.02 ug/g	86	60-140	72	60-140	0	0-40
416206	Aroclor 1260	<0.02 ug/g	86	60-140	72	60-140	0	0-40
416206	Polychlorinated Biphenyls	<0.02 ug/g	86	60-140	72	60-140	0	0-40
416232	Chlordane, alpha-	<0.002 ug/g	64	50-140		50-140		0-40
416232	Aldrin	<0.002 ug/g	63	50-140		50-140		0-40
416232	Chlordane	<0.006 ug/g						
416232	Dieldrin	<0.002 ug/g	63	50-140		50-140		0-40

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416232	Endosulfan	<0.004 ug/g						
416232	Endosulfan I	<0.002 ug/g	64	50-140		50-140		0-40
416232	Endosulfan II	<0.002 ug/g	64	50-140		50-140		0-40
416232	Endrin	<0.002 ug/g	64	50-140		50-140		0-40
416232	Hexachlorocyclohexane Gamma-	<0.002 ug/g	62	50-140		50-140		0-40
416232	Chlordane, gamma-	<0.002 ug/g	65	50-140		50-140		0-40
416232	Heptachlor	<0.002 ug/g	63	50-140		50-140		0-40
416232	Heptachlor Epoxide	<0.002 ug/g	65	50-140		50-140		0-40
416232	Hexachlorobenzene	<0.002 ug/g	102	50-140		50-140		0-40
416232	Hexachlorobutadiene	<0.002 ug/g	95					
416232	Hexachloroethane	<0.002 ug/g	93					
416232	Methoxychlor	<0.002 ug/g	68	50-140		50-140		0-40
416232	DDD	<0.002 ug/g	64	50-140		50-140		0-40
416232	DDE	<0.002 ug/g	66	50-140		50-140		0-40
416232	DDT	<0.002 ug/g	65	50-140		50-140		0-40
416272	Electrical Conductivity	<0.05	99	90-110			1	0-10
416275	Chromium VI	<0.20 ug/g	102	80-120	88	70-130	0	0-35
416286	Sodium Adsorption Ratio	<0.01					2	

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1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Nan Du
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1970461
Date Submitted: 2022-01-21
Date Reported: 2022-01-28
Project: 02112512.000
COC #: 885363

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
415963	Methylnaphthalene, 1-	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Methylnaphthalene, 2-	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Acenaphthene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Acenaphthylene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Anthracene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Benz[a]anthracene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Benzo[a]pyrene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Benzo[b]fluoranthene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Benzo[ghi]perylene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Benzo[k]fluoranthene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Chrysene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Dibenz[a h]anthracene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Fluoranthene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Fluorene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Indeno[1 2 3-cd]pyrene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Naphthalene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Phenanthrene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
415963	Pyrene	GC-MS	2022-01-26	2022-01-26	C_M	P 8270
416090	pH - CaCl2	pH Meter	2022-01-26	2022-01-26	IP	Ag Soil
416113	Silver	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Arsenic	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Boron (total)	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Barium	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Beryllium	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Cadmium	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Cobalt	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Chromium Total	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Copper	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Mercury	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Molybdenum	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Nickel	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Lead	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020

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COC #: 885363

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
416113	Antimony	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Selenium	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Thallium	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Uranium	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Vanadium	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416113	Zinc	ICAPQ-MS	2022-01-26	2022-01-26	SD	EPA 200.8/6020
416116	Tetrachloroethane, 1,1,1,2-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Trichloroethane, 1,1,1-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Tetrachloroethane, 1,1,2,2-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Trichloroethane, 1,1,2-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Dichloroethane, 1,1-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Dichloroethylene, 1,1-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Dichlorobenzene, 1,2-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Dichloroethane, 1,2-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Dichloropropane, 1,2-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Dichlorobenzene, 1,3-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Dichloropropene, 1,3-	GC-MS	2022-01-26	2022-01-26	YH	V 8260B
416116	Dichlorobenzene, 1,4-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Acetone	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Benzene	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Bromodichloromethane	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Bromoform	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Bromomethane	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Dichloroethylene, 1,2-cis-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Dichloropropene, 1,3-cis-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Carbon Tetrachloride	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Chloroform	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Dibromochloromethane	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Dichlorodifluoromethane	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Methylene Chloride	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Ethylbenzene	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Ethylene dibromide	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Hexane (n)	GC-MS	2022-01-25	2022-01-26	YH	V 8260B

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Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
416116	Xylene, m/p-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Methyl Ethyl Ketone	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Methyl Isobutyl Ketone	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Methyl tert-Butyl Ether (MTBE)	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Chlorobenzene	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Xylene, o-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Styrene	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Dichloroethylene, 1,2-trans-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Dichloropropene, 1,3-trans-	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Tetrachloroethylene	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Toluene	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Trichloroethylene	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Trichlorofluoromethane	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416116	Vinyl Chloride	GC-MS	2022-01-25	2022-01-26	YH	V 8260B
416119	Xylene Mixture	GC-MS	2022-01-26	2022-01-26	YH	V 8260B
416120	PHC's F1	GC/FID	2022-01-26	2022-01-26	YH	CCME
416121	PHC's F1-BTEX	GC/FID	2022-01-26	2022-01-26	YH	CCME
416128	Boron (Hot Water Soluble)	iCAP OES	2022-01-26	2022-01-26	Z_S	MOECC E3470
416131	Cyanide (CN-)	Skalar CN Analyzer	2022-01-26	2022-01-26	Z_S	MOECC E3015
416160	PHC's F2	GC/FID	2022-01-24	2022-01-27	R_G	CCME
416160	PHC's F3	GC/FID	2022-01-24	2022-01-27	R_G	CCME
416160	PHC's F4	GC/FID	2022-01-24	2022-01-27	R_G	CCME
416160	Moisture-Humidity	Oven	2022-01-24	2022-01-27	R_G	ASTM 2216
416170	1+2-methylnaphthalene	GC-MS	2022-01-27	2022-01-27	C_M	P 8270
416206	Aroclor 1242	GC/ECD	2022-01-25	2022-01-26	QL	EPA 8081B/8082A
416206	Aroclor 1248	GC/ECD	2022-01-25	2022-01-26	QL	EPA 8081B/8082A
416206	Aroclor 1254	GC/ECD	2022-01-25	2022-01-26	QL	EPA 8081B/8082A
416206	Aroclor 1260	GC/ECD	2022-01-25	2022-01-26	QL	EPA 8081B/8082A
416206	Polychlorinated Biphenyls	GC/ECD	2022-01-25	2022-01-26	QL	EPA 8081B/8082A
416232	Chlordane, alpha-	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	Aldrin	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	Chlordane	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	Dieldrin	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A

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Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
416232	Endosulfan	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	Endosulfan I	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	Endosulfan II	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	Endrin	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	Hexachlorocyclohexane Gamma-	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	Chlordane, gamma-	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	Heptachlor	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	Heptachlor Epoxide	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	Hexachlorobenzene	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	Hexachlorobutadiene	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	Hexachloroethane	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	Methoxychlor	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	DDD	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	DDE	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416232	DDT	GC/ECD	2022-01-27	2022-01-28	QL	EPA 8081B/8082A
416272	Electrical Conductivity	Electrical Conductivity Meter	2022-01-28	2022-01-28	Z_S	Cond-Soil
416275	Chromium VI	FAA	2022-01-28	2022-01-28	MW	M US EPA 3060A
416286	Sodium Adsorption Ratio	iCAP OES	2022-01-28	2022-01-28	Z_S	Ag Soil

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CWS for Petroleum Hydrocarbons in Soil - Tier 1**Notes:**

1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:
 - nC6 and nC10 response factors within 30% of response factor for toluene;
 - nC10, nC16, and nC34 response factors within 10% of each other;
 - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
 - Linearity is within 15%.
7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.

CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES <input type="checkbox"/> NO <input type="checkbox"/>)																																																																																																																																																																																																																				
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Contact: FENG LZ				Contact: Atiqur Rahman				Email: #1: Atiqur.Rahman@englobecorp.com																																																																																																																																																																																																																
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TURN-AROUND TIME (Business Days)				<input type="checkbox"/> 1 Day* (100%) <input type="checkbox"/> 2 Day** (50%) <input type="checkbox"/> 3-5 Days (25%) <input checked="" type="checkbox"/> 5-7 Days (Standard)																																																																																																																																																																																																																				
Please contact Lab in advance to determine rush availability.				*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%. **For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.																																																																																																																																																																																																																				
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CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES <input type="checkbox"/> NO <input type="checkbox"/>)															
Company: Englobe				Company:				Fax:											
Contact: FENG L2				Contact:				Email: #1:											
Address: 3397 American Dr.				Address:				Email: #2:											
Telephone:		Cell: 437.991.6210		Telephone:				PO #:											
Email: #1: FENG.L2@Englobe.com				REGULATION/GUIDELINE REQUIRED <input type="checkbox"/> Sanitary Sewer, City: _____ <input type="checkbox"/> Storm Sewer, City: _____ <input type="checkbox"/> ODWSOG (Use DW CoC if analyzing drinking water) <input type="checkbox"/> PWQO <input checked="" type="checkbox"/> O.Reg 347 <input type="checkbox"/> Other: _____ <input checked="" type="checkbox"/> O. Reg 153 The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full parameter list only Yes <input type="checkbox"/> No <input type="checkbox"/> <input checked="" type="checkbox"/> O. Reg 406 Excess Soils Table # 123.1 Full depth/Strat/Ceiling/mSRLP Lead Mate Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment Category: Surface / Subsurface															
Email: #2:																			
Project:		Quote #:																	
TURN-AROUND TIME (Business Days)																			
<input type="checkbox"/> 1 Day* (100%) <input type="checkbox"/> 2 Day** (50%) <input type="checkbox"/> 3-5 Days (25%) <input checked="" type="checkbox"/> 5-7 Days (Standard)																			
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				O.Reg.153 parameters															
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				PHC F1 - F4 <input type="checkbox"/> BTEX <input type="checkbox"/> VOCs <input type="checkbox"/> PAHs <input type="checkbox"/> PCBs <input type="checkbox"/> Metals + Inorganic <input type="checkbox"/> Metals only <input type="checkbox"/>															
				FC & SAR <input type="checkbox"/> PHC Simult <input type="checkbox"/> mSRLP-metals <input type="checkbox"/> mSRLP-VOCs <input type="checkbox"/> mSRLP-SAR <input type="checkbox"/> Telp <input type="checkbox"/> OCPs <input type="checkbox"/>															
				RN# (Lab Use Only)															
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B45-1		Jan. 14, 2022		1606034															
Dup-5				35															
B45-3				36															
B45-9				37															
B47-1				38															
Dup-2				39															
B47-3				40															
Dup-3				41															
B47-6				42															
PRINT				SIGN				DATE/TIME				TEMP (°C)				COMMENTS:			
Sampled By: FENG L2								Jan 14, 2022 / 20-00											
Relinquished By: Malissa								1/17/22 2:20 pm				15.5							
Received By:																			
												CUSTODY SEAL: <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> No packs submit <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							

CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES <input type="checkbox"/> NO <input 4"="" type="checkbox/>)</th> </tr> </thead> <tbody> <tr> <td colspan="/> Company: <u>Englobe</u> <td colspan="6">Company:</td> <td colspan="6">Fax:</td>												Company:						Fax:																																																																																																																																																																					
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Contact: FENG LZ				Contact:						Email: #1:																	
Address:				Address:						Email: #2:																	
Telephone:		Cell:		Telephone:						PO #:																	
Email: #1:				<div style="text-align: center; background-color: #4a7ebb; color: white; padding: 5px;">REGULATION/GUIDELINE REQUIRED</div> <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <input type="checkbox"/> Sanitary Sewer, City: _____ <input type="checkbox"/> Storm Sewer, City: _____ <input type="checkbox"/> ODWSOG (Use DW CoC if analyzing drinking water) <input type="checkbox"/> PWQO <input checked="" type="checkbox"/> O.Reg 347 <input type="checkbox"/> Other: _____ </div> <div style="width: 35%;"> <input checked="" type="checkbox"/> O. Reg 153 <small>The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full parameter list only</small> Yes <input type="checkbox"/> No <input type="checkbox"/> </div> </div> <div style="margin-top: 10px;"> <input checked="" type="checkbox"/> O. Reg 406 Excess Soils <small>Table # 1-3-1 Full Depth/Strat/Sealing/mSPLP Leachate</small> Type: Corn-Ind / Res-Park / Agri / All Other Category: Surface / Subsurface </div>																							
Email: #2:																											
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Sample ID	Date/Time Collected	PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only																			
BH11-1	Jan. 13, 2022								✓	✓							1606052										
Dup-1									✓								53										
BH11-2		✓	✓														54										
BH11-7		✓	✓	✓													55										
BH12-1					✓		✓						✓				56										
BH12-2		✓	✓					✓	✓								57										
BH12-8		✓	✓	✓													58										
PRINT		SIGN				DATE/TIME				TEMP (°C)		COMMENTS:															
Sampled By: FENG LZ		[Signature]				Jan. 14, 2022/2022				15.5																	
Relinquished By: Malina						1/17/22 2:29 pm																					
Received By:												CUSTODY SEAL: <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No															

CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES <input type="checkbox"/> NO <input type="checkbox"/>)																																																						
Company: Englobe				Company:						Fax:																																																
Contact: FENG LZ				Contact:						Email: #1:																																																
Address: 3397 American Drive				Address:						Email: #2:																																																
Telephone: 437-991-6210		Cell:		Telephone:						PO #:																																																
Email: #1: FENG.Li@Englobecorp.com				REGULATION/GUIDELINE REQUIRED																																																						
Email: #2: Nan.Du@Englobecorp.com				<input type="checkbox"/> Sanitary Sewer, City: _____ <input type="checkbox"/> Storm Sewer, City: _____ <input type="checkbox"/> ODWSOG (Use DW CoC if analyzing drinking water) <input type="checkbox"/> PWQO <input checked="" type="checkbox"/> O.Reg 347 <input type="checkbox"/> Other: _____						<input checked="" type="checkbox"/> O. Reg 153 The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full parameter list only Yes <input type="checkbox"/> No <input type="checkbox"/>																																																
Project: 02112512.000		Quote #: 191077														<input checked="" type="checkbox"/> O. Reg 406 Excess Soils Table # 1-3-1 Full depth/Strat/Ceiling/m/PLP Leachate Type: Cont/Ind/Res-Par/Agri/All Other Category: Surface/Subsurface																																										
TURN-AROUND TIME (Business Days)																																																										
<input type="checkbox"/> 1 Day* (100%) <input type="checkbox"/> 2 Day** (50%) <input type="checkbox"/> 3-5 Days (25%) <input checked="" type="checkbox"/> 5-7 Days (Standard)																																																										
Please contact Lab in advance to determine rush availability. *For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%. **For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.																																																										
The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).				Sample Details																																																						
				Field Filtered --> _____ <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="8" style="background-color: #4F81BD; color: white;">O.Reg.153 parameters</th> <th colspan="4" style="background-color: #4F81BD; color: white;">EC & SAR</th> <th colspan="4" style="background-color: #4F81BD; color: white;">MSLSP- metals</th> <th colspan="4" style="background-color: #4F81BD; color: white;">MSLSP- VOCs</th> <th colspan="4" style="background-color: #4F81BD; color: white;">MSLSP- SVOCs</th> <th colspan="4" style="background-color: #4F81BD; color: white;">TCLP</th> <th colspan="4" style="background-color: #4F81BD; color: white;">PH</th> </tr> <tr> <th>Sample Matrix</th> <th># of Containers</th> <th>PHC F1 - F4</th> <th>BTEX</th> <th>VOCs</th> <th>PAHs</th> <th>PCBs</th> <th>Metals + Inorganic</th> <th>Metals only</th> <th>EC & SAR</th> <th>MSLSP- metals</th> <th>MSLSP- VOCs</th> <th>MSLSP- SVOCs</th> <th>TCLP</th> <th>PH</th> </tr> </thead> </table>												O.Reg.153 parameters								EC & SAR				MSLSP- metals				MSLSP- VOCs				MSLSP- SVOCs				TCLP				PH				Sample Matrix	# of Containers	PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganic	Metals only	EC & SAR	MSLSP- metals
O.Reg.153 parameters								EC & SAR				MSLSP- metals				MSLSP- VOCs				MSLSP- SVOCs				TCLP				PH																														
Sample Matrix	# of Containers	PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganic	Metals only	EC & SAR	MSLSP- metals	MSLSP- VOCs	MSLSP- SVOCs	TCLP	PH																																												
Sample ID	Date/Time Collected	Sample Matrix	# of Containers	PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganic	Metals only	EC & SAR	MSLSP- metals	MSLSP- VOCs	MSLSP- SVOCs	TCLP	PH	RN# (Lab Use Only)																																									
BH3-1	Jan-21-2022	S	2					✓		✓	✓	✓					1606834																																									
BH3-2			1					✓							✓		35																																									
Dup-7			1					✓									35																																									
BH3-5			3	✓	✓										✓		36																																									
BH6-1			2				✓			✓					✓		37																																									
BH6-9			3	✓	✓					✓							38																																									
BH13-1			1							✓	✓						39																																									
BH13-6			3	✓	✓										✓		40																																									
BH15-1			2					✓							✓		41																																									
BH15-2			1							✓	✓						42																																									
PRINT				SIGN				DATE/TIME				TEMP (°C)				COMMENTS:																																										
Sampled By: FENG LZ								Jan-21-2022/17:00				1.5°C																																														
Relinquished By:																																																										
Received By: Victor Gallant																																																										
																Run out of jars/vials. Call lab confirm to use other jars/vials.																																										
																CUSTODY SEAL: <input type="checkbox"/> YES <input type="checkbox"/> NO Ice packs submit <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																																										

CLIENT INFORMATION

Company: Englobe

Contact: FENG L2

Address: 3387 American Drive

Telephone: 437-891-6210

Cell:

Email: #1: FENG.L1@englobecorp.com

Email: #2: Nam.du@englobecorp.com

Project: 02112512.000

Quote #:

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%)

☐ 2 Day** (50%)

☐ 3-5 Days (25%)

☒ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.

*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.

**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

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Sample ID

Date/Time Collected

Sample Matrix

of Containers

PHC F1 - F4

BTEX

VOCS

PAHs

PCBs

Metals + Inorganics

Metals only

EC & SAR

mspy-metals

mspy-VOCS

mspy-SWS

TCLP

mspy-OCs

OCs

BH16-1

Jan-21-2022

S

3

BH16-2

↓

↓

3

✓

✓

BH16-6

↓

↓

3

✓

✓

✓

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐

Company:

Contact:

Address:

Telephone:

Fax:

Email: #1:

Email: #2:

PO #:

REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City:

☐ Storm Sewer, City:

☐ ODWSOG (Use DW CoC if analyzing drinking water)

☐ PWQO

☒ O.Reg 347

☐ Other:

☒ O. Reg 153

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full parameter list only
Yes ☐ No ☐

☒ O. Reg 406 Excess Soils

Table # 1-3-1
Full depth / Strat / Ceiling / mSP / P Leachate
Type: Com / Ind / Res / Park / Agri / All Other
Category: Surface / Subsurface

PRINT

SIGN

DATE/TIME

TEMP (°C)

COMMENTS:

Sampled By: FENG L2

Relinquished By: Victor Gallant

Received By:

u.f.

N.B.

01/21/22 5:08pm

1.5°C

CUSTODY SEAL:

☐ YES ☐ NO

Ice packs submit ☒ Yes ☐ No

Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Feng Li
Invoice to: EnGlobe Corp.
PO#:

Report Number: 1973148
Date Submitted: 2022-03-09
Date Reported: 2022-03-16
Project: 02112512
COC #: 216297
Temperature (C): 7
Custody Seal:

Page 1 of 14

Dear Feng Li:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Sample Comment Summary

Sample ID: 1614025	BHMW15	CI	MRL elevated due to matrix interference (dilution was done). Metals MRLs raised because of matrix interference, sample was diluted.
Sample ID: 1614026	DUP-1	CI	MRL elevated due to matrix interference (dilution was done). Metals MRLs raised because of matrix interference, sample was diluted.

Report Comments:

Addrine Thomas, Inorganics Supervisor

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated

Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <http://www.cala.ca/scopes/2602.pdf>

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Feng Li
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1973148
Date Submitted: 2022-03-09
Date Reported: 2022-03-16
Project: 02112512
COC #: 216297

O.Reg 153-T2-Groundwater-Coarse

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria
Inorganics				
BHMW15	Chloride	4130000	ug/L	STD 790000
DUP-1	Chloride	3950000	ug/L	STD 790000
Metals				
BHMW15	Sodium	2930000	ug/L	STD 490000
DUP-1	Sodium	2850000	ug/L	STD 490000

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

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COC #: 216297

Guideline = O.Reg 153-T2-Groundwater-Coarse

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix
					Sample Type	Sample Date
PHC's F1	418438	20	ug/L	STD 750	1614025	GW153
PHC's F1-BTEX	418441	20	ug/L		2022-03-09	2022-03-09
PHC's F2	418507	20	ug/L	STD 150	BHWM15	DUP-1
PHC's F3	418507	50	ug/L	STD 500		
PHC's F4	418507	50	ug/L	STD 500		

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix
					Sample Type	Sample Date
Antimony	418547	2	ug/L	STD 6	1614025	GW153
Arsenic	418547	5	ug/L	STD 25	2022-03-09	2022-03-09
Barium	418547	50	ug/L	STD 1000	BHWM15	DUP-1
Beryllium	418547	2	ug/L	STD 4		
Boron (total)	418547	50	ug/L	STD 5000		
Cadmium	418547	0.5	ug/L	STD 2.7		
Chromium Total	418547	5	ug/L	STD 50		
Chromium VI	418597	10	ug/L	STD 25		
Cobalt	418547	1	ug/L	STD 3.8		
Copper	418547	5	ug/L	STD 87		
Lead	418547	5	ug/L	STD 10		
Mercury	418548	0.1	ug/L	STD 0.29		
Molybdenum	418547	20	ug/L	STD 70		

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Project: 02112512
COC #: 216297

Guideline = O.Reg 153-T2-Groundwater-Coarse

Metals

Guideline = O.Reg 153-T2-Groundwater-Coarse					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Samole I.D.	1614025	1614026
<u>Metals</u>						GW153	GW153
						2022-03-09	2022-03-09
						BHMW15	DUP-1
Analyte	Batch No	MRL	Units	Guideline			
Nickel	418547	20	ug/L	STD 100	<20	<20	
Selenium	418547	5	ug/L	STD 10	<5	<5	
Silver	418547	0.5	ug/L	STD 1.5	<0.5	<0.5	
Sodium	418389	1000	ug/L	STD 490000	2930000*	2850000*	
Thallium	418547	0.5	ug/L	STD 2	<0.5	<0.5	
Uranium	418547	5	ug/L	STD 20	<5	<5	
Vanadium	418547	5	ug/L	STD 6.2	<5	<5	
Zinc	418547	50	ug/L	STD 1100	<50	<50	

Volatiles

<u>Volatiles</u>					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1614023 GW153 2022-03-09 BHMW8	1614024 GW153 2022-03-09 BHMW9	1614025 GW153 2022-03-09 BHMW15	1614026 GW153 2022-03-09 DUP-1	1614027 GW153 2022-03-09 Trip Blank
Analyte	Batch No	MRL	Units	Guideline						
1,3,5-trimethylbenzene	418435	0.3	ug/L		<0.3	<0.3				<0.3
Acetone	418435	30	ug/L	STD 2700	<30	<30	<30	<30	<30	<30
Benzene	418435	0.5	ug/L	STD 5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	418435	0.3	ug/L	STD 16	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Bromoform	418435	0.4	ug/L	STD 25	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromomethane	418435	0.5	ug/L	STD 0.89	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	418435	0.2	ug/L	STD 0.79	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorobenzene	418435	0.5	ug/L	STD 30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	418435	0.2	ug/L		<0.2	<0.2				<0.2
Chloroform	418435	0.5	ug/L	STD 2.4	<0.5	1.3	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	418435	0.3	ug/L	STD 25	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3

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Invoice to: EnGlobe Corp.

Report Number: 1973148
Date Submitted: 2022-03-09
Date Reported: 2022-03-16
Project: 02112512
COC #: 216297

Guideline = O.Reg 153-T2-Groundwater-Coarse

Volatiles

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1614023 GW153	1614024 GW153	1614025 GW153	1614026 GW153	1614027 GW153
2022-03-09	2022-03-09	2022-03-09	2022-03-09	2022-03-09
BHWM8	BHWM9	BHWM15	DUP-1	Trip Blank

Analyte	Batch No	MRL	Units	Guideline
Dichlorobenzene, 1,2-	418435	0.4	ug/L	STD 3
Dichlorobenzene, 1,3-	418435	0.4	ug/L	STD 59
Dichlorobenzene, 1,4-	418435	0.4	ug/L	STD 1
Dichlorodifluoromethane	418435	0.5	ug/L	STD 590
Dichloroethane, 1,1-	418435	0.4	ug/L	STD 5
Dichloroethane, 1,2-	418435	0.2	ug/L	STD 1.6
Dichloroethylene, 1,1-	418435	0.5	ug/L	STD 1.6
Dichloroethylene, 1,2-cis-	418435	0.4	ug/L	STD 1.6
Dichloroethylene, 1,2-trans-	418435	0.4	ug/L	STD 1.6
Dichloropropane, 1,2-	418435	0.5	ug/L	STD 5
Dichloropropene, 1,3-	418435	0.3	ug/L	STD 0.5
Dichloropropene, 1,3-cis-	418435	0.2	ug/L	
Dichloropropene, 1,3-trans-	418435	0.2	ug/L	
Ethylbenzene	418435	0.5	ug/L	STD 2.4
Ethylene dibromide	418435	0.2	ug/L	STD 0.2
Hexane (n)	418435	5	ug/L	STD 51
Methyl Ethyl Ketone	418435	10	ug/L	STD 1800
Methyl Isobutyl Ketone	418435	10	ug/L	STD 640
Methyl tert-Butyl Ether (MTBE)	418435	2	ug/L	STD 15
Methylene Chloride	418435	4.0	ug/L	STD 50
Styrene	418435	0.5	ug/L	STD 5.4
Tetrachloroethane, 1,1,1,2-	418435	0.5	ug/L	STD 1.1
Tetrachloroethane, 1,1,2,2-	418435	0.5	ug/L	STD 1

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Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Feng Li
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1973148
Date Submitted: 2022-03-09
Date Reported: 2022-03-16
Project: 02112512
COC #: 216297

Guideline = O.Reg 153-T2-Groundwater-Coarse

Volatiles

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1614023 GW153	1614024 GW153	1614025 GW153	1614026 GW153	1614027 GW153
2022-03-09	2022-03-09	2022-03-09	2022-03-09	2022-03-09
BHWM8	BHWM9	BHWM15	DUP-1	Trip Blank

Analyte	Batch No	MRL	Units	Guideline
---------	----------	-----	-------	-----------

Tetrachloroethylene	418435	0.3	ug/L	STD 1.6	<0.3	<0.3	<0.3	<0.3	<0.3
Toluene	418435	0.4	ug/L	STD 24	<0.4	<0.4	<0.4	<0.4	<0.4
Trichloroethane, 1,1,1,-	418435	0.4	ug/L	STD 200	<0.4	<0.4	<0.4	<0.4	<0.4
Trichloroethane, 1,1,2,-	418435	0.4	ug/L	STD 4.7	<0.4	<0.4	<0.4	<0.4	<0.4
Trichloroethylene	418435	0.3	ug/L	STD 1.6	<0.3	<0.3	<0.3	<0.3	<0.3
Trichlorofluoromethane	418435	0.5	ug/L	STD 150	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl Chloride	418435	0.2	ug/L	STD 0.5	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene Mixture	418437	0.5	ug/L	STD 300	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene, m/p-	418435	0.4	ug/L		<0.4	<0.4	<0.4	<0.4	<0.4
Xylene, o-	418435	0.4	ug/L		<0.4	<0.4	<0.4	<0.4	<0.4

Inorganics

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1614025 GW153	1614026 GW153
2022-03-09	2022-03-09
BHWM15	DUP-1

Analyte	Batch No	MRL	Units	Guideline
---------	----------	-----	-------	-----------

Chloride	418426	1000	ug/L	STD 790000	4130000*	
	418481	1000	ug/L	STD 790000		3950000*
Conductivity	418559	5	uS/cm		11800	11800
Cyanide (CN-)	418471	5	ug/L	STD 66	6	8
pH	418559	1.00			7.61	7.65

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Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Feng Li
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1973148
Date Submitted: 2022-03-09
Date Reported: 2022-03-16
Project: 02112512
COC #: 216297

Guideline = O.Reg 153-T2-Groundwater-Coarse

PHC Surrogate

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1614025 GW153	1614026 GW153
2022-03-09	2022-03-09
BHWM15	DUP-1

Analyte	Batch No	MRL	Units	Guideline
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Alpha-androstrane	418507	0	%	78	82
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VOCs Surrogates

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1614023 GW153	1614024 GW153	1614025 GW153	1614026 GW153	1614027 GW153
2022-03-09	2022-03-09	2022-03-09	2022-03-09	2022-03-09
BHWM8	BHWM9	BHWM15	DUP-1	Trip Blank

Analyte	Batch No	MRL	Units	Guideline
---------	----------	-----	-------	-----------

1,2-dichloroethane-d4	418435	0	%	129	116	112	113	122
4-bromofluorobenzene	418435	0	%	87	87	87	89	92
Toluene-d8	418435	0	%	96	100	95	98	98

Client: EnGlobe Corp. (Toronto)
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Toronto, ON
M9W 5W8
Attention: Mr. Feng Li
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1973148
Date Submitted: 2022-03-09
Date Reported: 2022-03-16
Project: 02112512
COC #: 216297

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
418389	Sodium	<1000 ug/L	105	82-118	100	80-120	1	0-20
418426	Chloride	<50000 ug/L		90-110		80-120	2	0-20
418435	Tetrachloroethane, 1,1,1,2-	<0.5 ug/L	102	60-130	112	50-140	0	0-30
418435	Trichloroethane, 1,1,1-	<0.4 ug/L	94	60-130	113	50-140	0	0-30
418435	Tetrachloroethane, 1,1,2,2-	<0.5 ug/L	104	60-130	111	50-140	0	0-30
418435	Trichloroethane, 1,1,2-	<0.4 ug/L	94	60-130	119	50-140	0	0-30
418435	Dichloroethane, 1,1-	<0.4 ug/L	104	60-130	111	50-140	0	0-30
418435	Dichloroethylene, 1,1-	<0.5 ug/L	89	60-130	101	50-140	0	0-30
418435	Dichlorobenzene, 1,2-	<0.4 ug/L	102	60-130	116	50-140	0	0-30
418435	Dichloroethane, 1,2-	<0.2 ug/L	96	60-130	119	50-140	0	0-30
418435	Dichloropropane, 1,2-	<0.5 ug/L	98	60-130	118	50-140	0	0-30
418435	1,3,5-trimethylbenzene	<0.3 ug/L	104	60-130	107	50-140	0	0-30
418435	Dichlorobenzene, 1,3-	<0.4 ug/L	103	60-130	108	50-140	0	0-30
418435	Dichloropropene, 1,3-	<0.3 ug/L						
418435	Dichlorobenzene, 1,4-	<0.4 ug/L	105	60-130	112	50-140	0	0-30
418435	Acetone	<30 ug/L		60-130	116	50-140	0	0-30
418435	Benzene	<0.5 ug/L	98	60-130	115	50-140	0	0-30
418435	Bromodichloromethane	<0.3 ug/L	91	60-130	117	50-140	0	0-30
418435	Bromoform	<0.4 ug/L	91	60-130	114	50-140	0	0-30
418435	Bromomethane	<0.5 ug/L	118	60-130	100	50-140	0	0-30
418435	Dichloroethylene, 1,2-cis-	<0.4 ug/L	93	60-130	114	50-140	0	0-30
418435	Dichloropropene, 1,3-cis-	<0.2 ug/L	82	60-130	111	50-140	0	0-30
418435	Carbon Tetrachloride	<0.2 ug/L	98	60-130	114	50-140	0	0-30
418435	Chloroethane	<0.2 ug/L	92	60-130	88	50-140	0	0-30
418435	Chloroform	<0.5 ug/L	100	60-130	114	50-140	0	0-30
418435	Dibromochloromethane	<0.3 ug/L	83	60-130	108	50-140	0	0-30
418435	Dichlorodifluoromethane	<0.5 ug/L	115	60-130	100	50-140	0	0-30
418435	Methylene Chloride	<4.0 ug/L	115	60-130	110	50-140	0	0-30
418435	Ethylbenzene	<0.5 ug/L	100	60-130	105	50-140	0	0-30
418435	Ethylene dibromide	<0.2 ug/L	83	60-130	110	50-140	0	0-30
418435	Hexane (n)	<5 ug/L	110	60-130	104	50-140	0	0-30
418435	Xylene, m/p-	<0.4 ug/L	105	60-130	107	50-140	0	0-30

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

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1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Feng Li
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1973148
Date Submitted: 2022-03-09
Date Reported: 2022-03-16
Project: 02112512
COC #: 216297

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
418435	Methyl Ethyl Ketone	<10 ug/L		60-130	118	50-140	0	0-30
418435	Methyl Isobutyl Ketone	<10 ug/L		60-130	100	50-140	0	0-30
418435	Methyl tert-Butyl Ether (MTBE)	<2 ug/L	100	60-130	116	50-140	0	0-30
418435	Chlorobenzene	<0.5 ug/L	96	60-130	112	50-140	0	0-30
418435	Xylene, o-	<0.4 ug/L	94	60-130	98	50-140	0	0-30
418435	Styrene	<0.5 ug/L	92	60-130	106	50-140	0	0-30
418435	Dichloroethylene, 1,2-trans-	<0.4 ug/L	114	60-130	111	50-140	0	0-30
418435	Dichloropropene, 1,3-trans-	<0.2 ug/L	86	60-130	116	50-140	0	0-30
418435	Tetrachloroethylene	<0.3 ug/L	91	60-130	108	50-140	0	0-30
418435	Toluene	<0.4 ug/L	95	60-130	115	50-140	0	0-30
418435	Trichloroethylene	<0.3 ug/L	92	60-130	117	50-140	0	0-30
418435	Trichlorofluoromethane	<0.5 ug/L	101	60-130	108	50-140	0	0-30
418435	Vinyl Chloride	<0.2 ug/L	91	60-130	83	50-140	0	0-30
418437	Xylene Mixture							
418438	PHC's F1	<20 ug/L	106	60-140	101	60-140	0	0-30
418441	PHC's F1-BTEX							
418471	Cyanide (CN-)	<5 ug/L	82	75-125	102	80-120	0	0-20
418481	Chloride	<50000 ug/L		90-110	99	80-120	0	0-20
418507	PHC's F2	<20 ug/L	100	60-140		60-140		0-30
418507	PHC's F3	<50 ug/L	100	60-140		60-140		0-30
418507	PHC's F4	<50 ug/L	100	60-140		60-140		0-30
418547	Silver	<0.5 ug/L	106	80-120	84	70-130	0	0-20
418547	Arsenic	<5 ug/L	98	80-120	101	70-130	0	0-20
418547	Boron (total)	<50 ug/L	106	80-120		80-120	0	0-20
418547	Barium	<50 ug/L	100	80-120		70-130	1	0-20
418547	Beryllium	<2 ug/L	106	80-120	99	70-130	0	0-20
418547	Cadmium	<0.5 ug/L	104	80-120	101	70-130	0	0-20
418547	Cobalt	<1 ug/L	102	80-120	92	70-130	0	0-20
418547	Chromium Total	<5 ug/L	104	80-120	93	70-130	0	0-20
418547	Copper	<5 ug/L	105	80-120	91	70-130	0	0-20
418547	Molybdenum	<20 ug/L	98	80-120	91	70-130	0	0-20
418547	Nickel	<20 ug/L	106	80-120	92	70-130	0	0-20
418547	Lead	<5 ug/L	101	80-120	90	70-130	0	0-20

Results relate only to the parameters tested on the samples submitted.
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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

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Report Number: 1973148
Date Submitted: 2022-03-09
Date Reported: 2022-03-16
Project: 02112512
COC #: 216297

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
418547	Antimony	<2 ug/L	101	80-120	83	70-130	0	0-20
418547	Selenium	<5 ug/L	103	80-120	112	70-130	0	0-20
418547	Thallium	<0.5 ug/L	101	80-120	90	70-130	0	0-20
418547	Uranium	<5 ug/L	99	80-120	92	70-130	0	0-20
418547	Vanadium	<5 ug/L	101	80-120	93	70-130	0	0-20
418547	Zinc	<50 ug/L	107	80-120	109	70-130	0	0-20
418548	Mercury	<0.1 ug/L	104	76-123	104	70-130	0	0-20
418559	Conductivity	<5 uS/cm	99	90-110			1	0-5
418559	pH		98	90-110			0	0-5
418597	Chromium VI	<10 ug/L	99	80-120	100	70-130	0	0-35

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Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
418389	Sodium	ICP-OES	2022-03-11	2022-03-11	Z_S	M SM3120B-3500C
418426	Chloride	IC	2022-03-11	2022-03-14	AaN	SM 4110
418435	Tetrachloroethane, 1,1,1,2-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Trichloroethane, 1,1,1-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Tetrachloroethane, 1,1,2,2-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Trichloroethane, 1,1,2-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Dichloroethane, 1,1-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Dichloroethylene, 1,1-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Dichlorobenzene, 1,2-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Dichloroethane, 1,2-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Dichloropropane, 1,2-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	1,3,5-trimethylbenzene	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Dichlorobenzene, 1,3-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Dichloropropene, 1,3-	GC-MS	2022-03-14	2022-03-14	YH	EPA 8260
418435	Dichlorobenzene, 1,4-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Acetone	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Benzene	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Bromodichloromethane	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Bromoform	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Bromomethane	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Dichloroethylene, 1,2-cis-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Dichloropropene, 1,3-cis-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Carbon Tetrachloride	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Chloroethane	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Chloroform	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Dibromochloromethane	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Dichlorodifluoromethane	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Methylene Chloride	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Ethylbenzene	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Ethylene dibromide	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Hexane (n)	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Xylene, m/p-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260

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Report Number: 1973148
Date Submitted: 2022-03-09
Date Reported: 2022-03-16
Project: 02112512
COC #: 216297

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
418435	Methyl Ethyl Ketone	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Methyl Isobutyl Ketone	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Methyl tert-Butyl Ether (MTBE)	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Chlorobenzene	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Xylene, o-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Styrene	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Dichloroethylene, 1,2-trans-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Dichloropropene, 1,3-trans-	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Tetrachloroethylene	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Toluene	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Trichloroethylene	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Trichlorofluoromethane	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418435	Vinyl Chloride	GC-MS	2022-03-11	2022-03-12	YH	EPA 8260
418437	Xylene Mixture	GC-MS	2022-03-14	2022-03-14	YH	EPA 8260
418438	PHC's F1	GC/FID	2022-03-14	2022-03-14	YH	CCME O.Reg 153/04
418441	PHC's F1-BTEX	GC/FID	2022-03-14	2022-03-14	YH	CCME O.Reg 153/04
418471	Cyanide (CN-)	Skalar CN Analyzer	2022-03-14	2022-03-14	Z_S	SM4500-CNC/MOE E3015
418481	Chloride	IC	2022-03-14	2022-03-14	AaN	SM 4110
418507	PHC's F2	GC/FID	2022-03-15	2022-03-15	R_G	CCME O.Reg 153/04
418507	PHC's F3	GC/FID	2022-03-15	2022-03-15	R_G	CCME O.Reg 153/04
418507	PHC's F4	GC/FID	2022-03-15	2022-03-15	R_G	CCME O.Reg 153/04
418547	Silver	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Arsenic	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Boron (total)	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Barium	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Beryllium	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Cadmium	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Cobalt	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Chromium Total	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Copper	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Molybdenum	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Nickel	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Lead	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8

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Date Submitted: 2022-03-09
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Project: 02112512
COC #: 216297

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
418547	Antimony	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Selenium	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Thallium	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Uranium	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Vanadium	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418547	Zinc	ICAPQ-MS	2022-03-15	2022-03-15	SD	EPA 200.8
418548	Mercury	CV AA	2022-03-15	2022-03-15	AaN	M SM3112B-3500B
418559	Conductivity	Auto Titrator	2022-03-15	2022-03-15	AsA	SM2320,2510,4500H/F
418559	pH	Auto Titrator	2022-03-15	2022-03-15	AsA	SM2320,2510,4500H/F
418597	Chromium VI		2022-03-16	2022-03-16	SKH	SM 3500-Cr B

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COC #: 216297

CWS for Petroleum Hydrocarbons in Soil - Tier 1**Notes:**

1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:
 - nC6 and nC10 response factors within 30% of response factor for toluene;
 - nC10, nC16, and nC34 response factors within 10% of each other;
 - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
 - Linearity is within 15%.
7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 • 380 Vansickle Road, Unit #630, St. Catharines, ON, L2S 0B5 - Telephone: 905-680-8887 • 608 Norris Court, Kingston, ON, K7P 2R9 - Telephone: 613-634-9307

Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Feng Li
Invoice to: EnGlobe Corp.
PO#:

Report Number: 1973411
Date Submitted: 2022-03-16
Date Reported: 2022-03-23
Project: 02112512.000
COC #: 216831
Temperature (C): 7
Custody Seal:

Page 1 of 7

Dear Feng Li:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Long Qu, Organics Supervisor

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated

Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <http://www.cala.ca/scopes/2602.pdf>

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

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Report Number: 1973411
Date Submitted: 2022-03-16
Date Reported: 2022-03-23
Project: 02112512.000
COC #: 216831

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria

Client: EnGlobe Corp. (Toronto)
1821 Albion Road, Unit 7
Toronto, ON
M9W 5W8
Attention: Mr. Feng Li
PO#:
Invoice to: EnGlobe Corp.

Report Number: 1973411
Date Submitted: 2022-03-16
Date Reported: 2022-03-23
Project: 02112512.000
COC #: 216831

Guideline = O.Reg 153-T2-Groundwater-Coarse

PAH

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1614700
GW153
2022-03-16
BHMW15

1614701
GW153
2022-03-16
BHMW21

Analyte	Batch No	MRL	Units	Guideline		
1+2-methylnaphthalene	418927	0.1	ug/L		<0.1	<0.1
Acenaphthene	418725	0.1	ug/L	STD 4.1	<0.1	<0.1
Acenaphthylene	418725	0.1	ug/L	STD 1	<0.1	<0.1
Anthracene	418725	0.1	ug/L	STD 2.4	<0.1	<0.1
Benz[a]anthracene	418725	0.1	ug/L	STD 1	<0.1	<0.1
Benzo[a]pyrene	418725	0.01	ug/L	STD 0.01	<0.01	<0.01
Benzo[b]fluoranthene	418725	0.05	ug/L	STD 0.1	<0.05	<0.05
Benzo[ghi]perylene	418725	0.1	ug/L	STD 0.2	<0.1	<0.1
Benzo[k]fluoranthene	418725	0.05	ug/L	STD 0.1	<0.05	<0.05
Chrysene	418725	0.05	ug/L	STD 0.1	<0.05	<0.05
Dibenz[a h]anthracene	418725	0.1	ug/L	STD 0.2	<0.1	<0.1
Fluoranthene	418725	0.1	ug/L	STD 0.41	<0.1	<0.1
Fluorene	418725	0.1	ug/L	STD 120	<0.1	<0.1
Indeno[1 2 3-cd]pyrene	418725	0.1	ug/L	STD 0.2	<0.1	<0.1
Methylnaphthalene, 1-	418725	0.1	ug/L	STD 3.2	<0.1	<0.1
Methylnaphthalene, 2-	418725	0.1	ug/L	STD 3.2	<0.1	<0.1
Naphthalene	418725	0.1	ug/L	STD 11	<0.1	<0.1
Phenanthrene	418725	0.1	ug/L	STD 1	<0.1	<0.1
Pyrene	418725	0.1	ug/L	STD 4.1	<0.1	<0.1

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

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PCBs

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1614700
GW153
2022-03-16
BHMW15

1614701
GW153
2022-03-16
BHMW21

Analyte **Batch No** **MRL** **Units** **Guideline**

Aroclor 1016	418932	0.1	ug/L		<0.1	<0.1
Aroclor 1242	418932	0.1	ug/L		<0.1	<0.1
Aroclor 1248	418932	0.1	ug/L		<0.1	<0.1
Aroclor 1254	418932	0.1	ug/L		<0.1	<0.1
Aroclor 1260	418932	0.1	ug/L		<0.1	<0.1
Polychlorinated Biphenyls	418932	0.1	ug/L	STD 3	<0.1	<0.1

PCB Surrogate

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1614700
GW153
2022-03-16
BHMW15

1614701
GW153
2022-03-16
BHMW21

Analyte **Batch No** **MRL** **Units** **Guideline**

Decachlorobiphenyl	418937	0	%		65	66
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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
418725	Methlynaphthalene, 1-	<0.1 ug/L	80	50-140		50-140		0-30
418725	Methlynaphthalene, 2-	<0.1 ug/L	80	50-140		50-140		0-30
418725	Acenaphthene	<0.1 ug/L	80	50-140		50-140		0-30
418725	Acenaphthylene	<0.1 ug/L	78	50-140		50-140		0-30
418725	Anthracene	<0.1 ug/L	78	50-140		50-140		0-30
418725	Benz[a]anthracene	<0.1 ug/L	82	50-140		50-140		0-30
418725	Benzo[a]pyrene	<0.01 ug/L	79	50-140		50-140		0-30
418725	Benzo[b]fluoranthene	<0.05 ug/L	77	50-140		50-140		0-30
418725	Benzo[ghi]perylene	<0.1 ug/L	78	50-140		50-140		0-30
418725	Benzo[k]fluoranthene	<0.05 ug/L	68	50-140		50-140		0-30
418725	Chrysene	<0.05 ug/L	83	50-140		50-140		0-30
418725	Dibenz[a h]anthracene	<0.1 ug/L	74	50-140		50-140		0-30
418725	Fluoranthene	<0.1 ug/L	80	50-140		50-140		0-30
418725	Fluorene	<0.1 ug/L	80	50-140		50-140		0-30
418725	Indeno[1 2 3-cd]pyrene	<0.1 ug/L	78	50-140		50-140		0-30
418725	Naphthalene	<0.1 ug/L	78	50-140		50-140		0-30
418725	Phenanthrene	<0.1 ug/L	82	50-140		50-140		0-30
418725	Pyrene	<0.1 ug/L	80	50-140		50-140		0-30
418927	1+2-methylnaphthalene							
418932	Aroclor 1016	<0.1 ug/L	103		N/A		N/A	
418932	Aroclor 1242	<0.1 ug/L	103	60-140	N/A	60-140	N/A	0-30
418932	Aroclor 1248	<0.1 ug/L	103	60-140	N/A	60-140	N/A	0-30
418932	Aroclor 1254	<0.1 ug/L	103	60-140	N/A	60-140	N/A	0-30
418932	Aroclor 1260	<0.1 ug/L	103	60-140	N/A	60-140	N/A	0-30
418932	Polychlorinated Biphenyls	<0.1 ug/L	103	60-140		60-140		0-30

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Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
418725	Methylnaphthalene, 1-	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Methylnaphthalene, 2-	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Acenaphthene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Acenaphthylene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Anthracene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Benz[a]anthracene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Benzo[a]pyrene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Benzo[b]fluoranthene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Benzo[ghi]perylene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Benzo[k]fluoranthene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Chrysene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Dibenz[a,h]anthracene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Fluoranthene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Fluorene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Indeno[1,2,3-cd]pyrene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Naphthalene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Phenanthrene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418725	Pyrene	GC-MS	2022-03-18	2022-03-18	C_M	P 8270
418927	1+2-methylnaphthalene	GC-MS	2022-03-23	2022-03-23	C_M	P 8270
418932	Aroclor 1016	GC/ECD	2022-03-23	2022-03-23	R_G	EPA 8081B
418932	Aroclor 1242	GC/ECD	2022-03-23	2022-03-23	R_G	EPA 8081B
418932	Aroclor 1248	GC/ECD	2022-03-23	2022-03-23	R_G	EPA 8081B
418932	Aroclor 1254	GC/ECD	2022-03-23	2022-03-23	R_G	EPA 8081B
418932	Aroclor 1260	GC/ECD	2022-03-23	2022-03-23	R_G	EPA 8081B
418932	Polychlorinated Biphenyls	GC/ECD	2022-03-23	2022-03-23	R_G	EPA 8081B

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CWS for Petroleum Hydrocarbons in Soil - Tier 1**Notes:**

1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:
 - nC6 and nC10 response factors within 30% of response factor for toluene;
 - nC10, nC16, and nC34 response factors within 10% of each other;
 - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
 - Linearity is within 15%.
7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.

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