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PHASE TWO ENVIRONMENTAL SITE ASSESSMENT



2093, 2097, 2101 OLD LAKESHORE ROAD & 2096, 2100 LAKESHORE ROAD, BURLINGTON, ONTARIO

Prepared for:

Core FSC Lakeshore Limited & Core FSC Lakeshore GP Inc.

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GLOSSARY OF ACRONYMS

APEC:	Area of Potential Environmental Concern
asl:	Above Sea Level
AST:	Aboveground Storage Tank
bgs:	Below Ground Surface
BTEX:	Benzene, Toluene, Ethylbenzene and Xylene
CALA:	Canadian Association for Laboratory Accreditation
CCME:	Canadian Council of Ministers of the Environment
COC:	Contaminant of Concern
CPC:	Contaminant of Potential Concern
CrVI:	Hexavalent Chromium (Chromium 6)
CSM:	Conceptual Site Model
DO:	Dissolved Oxygen
EC:	Electrical Conductivity
EPA:	Environmental Protection Act
ESA:	Environmental Site Assessment
FIP:	Fire Insurance Plan
Hg:	Mercury
LDPE:	Light Density Polyethylene
MECP:	Ministry of the Environment, Conservation and Parks
MNRF:	Ministry of Natural Resources and Forestry
NAPL:	Non-aqueous Phase Liquid
ORP:	Oxidation/Reduction Potential
PAH:	Polycyclic Aromatic (Polyaromatic) Hydrocarbons
PCA:	Potentially Contaminating Activity
PCB:	Polychlorinated Biphenyls
PHC (F1-F4):	Petroleum Hydrocarbons (Fractions 1 to 4)
ppm:	Parts per Million
PVC:	Polyvinyl Chloride
QA/QC:	Quality Assurance/Quality Control
RA:	Risk Assessment
RSC:	Record of Site Condition
SAR:	Sodium Adsorption Ratio
SCS:	Site Condition Standard
USDA:	Unites States Department of Agriculture
UST:	Underground Storage Tank
VOC:	Volatile Organic Compound

1. EXECUTIVE SUMMARY

Fisher Environmental Ltd. (Fisher) was retained by Core FSC Lakeshore Limited & Core FSC Lakeshore GP Inc. to conduct a Phase Two ESA at the property municipally addressed as 2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario, herein referred to as the 'Site' or 'Phase Two Property'.

The Site is occupied by four (4) commercial and/or residential buildings. 2096 Lakeshore Road consists of a one (1) storey residential building that is unoccupied. 2100 Lakeshore Road is undeveloped, however historically a residential building was present. 2093 Old Lakeshore Road consists of a two (2) storey residential building and one (1) parking garage. 2097 Old Lakeshore Road consists of a two (2) storey mixed commercial and residential use building. The ground floor is occupied by a salon and spa, Waters Edge, and the second floor is occupied by a residential tenant. 2101 Old Lakeshore Road consists of a two (2) storey commercial building occupied by a restaurant, The Carriage House. The Site has been used for residential and commercial purposes, and it is our understanding that a redevelopment is proposed consisting of a twenty seven (27) storey mixed use commercial and residential building with five (5) levels of underground parking.

The Site is bound by Lakeshore Road to the north and Old Lakeshore Road to the south, approximately 360 m northeast of the intersection of Lakeshore Road and Brant Street. A commercial building utilized as sales and presentation centre for a proposed residential redevelopment is adjacent to the east, and a public parking lot is adjacent to the west. The total Site area is 0.3357 hectares.

Off-site PCAs within the Phase One Study Area that may contribute to an APEC on-site were identified. Additionally, on-site PCAs have been identified. The following PCAs and their locations were identified to contribute to an APEC: (a) PCA-10: Commercial Autobody Shops, off-site at 2092 Old Lakeshore Road (20 m south) and at 2119 Old Lakeshore Road (40 m east); (b) PCA-28: Gasoline and Associated Products Storage in Fixed Tanks, on-site at current buildings and off-site at 2092 Old Lakeshore Road (20 m south), 2119 Old Lakeshore Road (40 m east), 2072 Lakeshore Road (50 m west) and 2042 Lakeshore Road (120 m west); (c) PCA-30: Importation of Fill Materials of Unknown Quality, on-site at majority of Site; and (d) PCA-55: Transformer Manufacturing, Processing and Use, off-site at 2119 Old Lakeshore Road (40 m east).

The field investigation portion of the Phase Two ESA was performed from October 31, 2017 to November 24, 2017 and from February 1, 2019 to March 28, 2019. Additional boreholes for the purposes of contaminants delineation in soil were drilled from April 29, 2019 to April 30, 2019. In total, thirty four (34) boreholes were advanced, seventeen (17) of which were completed as groundwater monitoring wells.

At least one (1) soil sample from each borehole, for a total of sixty eight (68) soil samples, including eight (8) duplicates, were submitted to the laboratory for analysis of Metals, Hydride-Forming Metals, PHCs (F1-F4) and BTEX, VOCs (I), PAHs, PCBs, ORPs (Hg, pH, EC and/or SAR). A total of twenty nine (29) groundwater samples, including six (6) duplicates and six (6) trip blanks, were submitted to the laboratory for analysis of Metals, Hydride-Forming Metals, PHCs (F1-F4) and BTEX, VOCs (I), PAHs, PCBs, ORPs (Hg and/or CrVI).

One (1) groundwater sample was obtained from an existing monitoring well, installed as part of a geotechnical investigation, which was screened along a water-bearing fractured layer within the underlying bedrock. The well was screened from 9.19 m bgs to 12.19 m bgs. The purpose of a limited investigation within the first encountered fractured rock aquifer, i.e. one (1) sampling location, was to obtain a baseline quality of groundwater with regards to naturally occurring CPCs in the bedrock.

The soil samples recovered from the boreholes generally consisted of sandy silt/clayey silt or granular fill materials, underlain by silty clay/clayey silt overburden. Weathered shale bedrock was underlying the silty clay/clayey silt overburden.

Fill Materials

The fill materials noted during boreholes drilling generally consisted of sandy silt/clayey silt or granular fill materials, except at the locations of MW103 and MW104, where they consisted of brown to red sand and silt, trace gravel, to a maximum depth of 0.9 m bgs. No fill materials were encountered in BH203, MW216, BH224, and BH225.

Unit I: Native Overburden (Aquifer)

The fill materials were underlain by the overburden consisting of reddish brown clayey silt till, extending to maximum depth of 4.88 m bgs. The native overburden was first encountered at a depth of 0.61 m bgs. The maximum encountered depth of the native overburden is 4.27 m.

Unit II: Bedrock (Aquitard)

The overburden was underlain by red weathered shale bedrock, which was encountered at 2.13 m bgs or deeper.

Groundwater elevations varied from 78.90 m asl in MW108 to 81.11 m asl in MW213. Based on the field measurements the groundwater flow direction was determined to have three (3) major components: an east/southeast component at the eastern portion of the Site that naturally follows the declining grade elevation along Lakeshore Road from west to east; a south/southwest component towards Lake Ontario, that is approximately 50 m south of the Site, at the southern portion of the Site; and a northwest component at the northwestern portion of the Site.

The localized shallow groundwater flow direction may be influenced by variations in vertical and horizontal stratigraphy, depth of wells' screened intervals, well trauma, and/or seasonal variations. Two (2) groundwater monitoring wells were dry (MW107 and MW109).

Based on the analytical results, several exceedances of the applicable MECP Table 3 SCS in the soil were identified. The exceedances in soil are summarized below:

BH202 (0.00-0.60 m bgs)

Cadmium: 4.9 ppm vs 1.2 ppm

Lead: 744 ppm vs 120 ppm

Zinc: 4,341 ppm vs 340 ppm

EC: 1.83 mS/cm vs 0.7 mS/cm

BH203 (0.00-0.60 m bgs)

Cadmium: 1.4 ppm vs 1.2 ppm

Zinc: 549 ppm vs 340 ppm

EC: 0.83 mS/cm vs 0.7 mS/cm

BH204 (0.00-0.60 m bgs)

Lead: 222 ppm vs 120 ppm

Zinc: 392 ppm vs 340 ppm

BH205 (0.00-0.60 m bgs)

Lead: 210 ppm vs 120 ppm

BH206 (0.00-0.60 m bgs)

Lead: 248 ppm vs 120 ppm

Zinc: 430 ppm vs 340 ppm

BH207 (0.00-0.60 m bgs)

Lead: 162 ppm vs 120 ppm

EC: 1.6 mS/cm vs 0.7 mS/cm

SAR: 8.1 vs 5

BH209 (0.00-0.60 m bgs)

EC: 3.2 mS/cm vs 0.7 mS/cm

BH210 (0.00-0.60 m bgs)

Fluoranthene: 1.4 ppm vs 0.69 ppm

Benzo[a]pyrene: 0.54 ppm vs 0.3 ppm

MW211 (0.00-0.60 m bgs)

EC: 2.3 mS/cm vs 0.7 mS/cm

SAR: 10 vs 5

MW212 (0.00-0.60 m bgs)

Lead: 211 ppm vs 120 ppm

MW213 (0.00-0.60 m bgs)

Fluoranthene: 2.1 ppm vs 0.69 ppm

Benzo[a]pyrene: 0.48 ppm vs 0.3 ppm

MW214 (0.00-0.60 m bgs)

Lead: 331 ppm vs 120 ppm

Zinc: 367 ppm vs 340 ppm

MW217 (0.00-0.60 m bgs)

Lead: 203 ppm vs 120 ppm

BH222 (0.00-0.60 m bgs)

EC: 0.8 mS/cm vs 0.7 mS/cm

BH223 (0.00-0.60 m bgs)

EC: 1.1 mS/cm vs 0.7 mS/cm

BH223 (0.00-0.60 m bgs) Duplicate

EC: 1 mS/cm vs 0.7 mS/cm

In accordance with Ontario Regulation 153/04, as amended, Section 48, the average of the analytical results from BH224 and BH225, which are within a 1 m radius from MW217, for Lead at the same sampling depth as the identified exceedance, is below the applicable MECP SCS thus it is considered that MW217 has met the applicable MECP SCS for all analyzed parameters.

Based on the analytical results, all of the submitted groundwater samples were below the applicable MECP SCS. All trip blank water samples were below the analytical laboratory's detection limits for all analyzed VOC parameters.

Based on the defined lateral and vertical extent of the identified soil exceedances, it is recommended that the surficial heterogeneous impacted fill materials be excavated and disposed off-site to a MECP-licensed waste management facility. Subsequent to the soil removal, confirmatory soil samples are recommended to be collected for laboratory analysis from within the excavated area and from the clean backfill material source prior to backfilling.

2. INTRODUCTION

The EPA defines the Phase Two ESA as an assessment of a property conducted in accordance with the regulations by or under the supervision of a Qualified Person to determine the location and concentration of one (1) or more contaminants in the land or water on, in or under the property.

This definition applies only to Phase Two ESAs prepared in support of the filing of a RSC. The process of filing a RSC in the Environmental Site Registry is regulated by Ontario Regulation 153/04, as amended. The general rules for filing a RSC are found in Part V of the Regulation, while Phase Two ESA rules are mainly found in Parts VI and VIII (sections 22, 32 to 33.8) of the Regulation and Part XII, Schedule E of the Regulation.

2.1. Site Description

The property that is the subject of the present Phase Two ESA is municipally addressed as 2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario, and is herein referred to as the ‘Site’ or ‘Phase Two Property’. The Site is legally described as Part of Lot 6, 7, 8, 9, 10, Block Q, Plan 92, City of Burlington. The PIN for 2093 Old Lakeshore Road is 07061-0011(LT), for 2096 Lakeshore Road is 07061-0010(LT), for 2097 Old Lakeshore Road is 07061-0013(LT), for 2100 Lakeshore Road is 07061-0012(LT), and 2101 Old Lakeshore Road is 07061-0086(LT).

The Site is bound by Lakeshore Road to the north and Old Lakeshore Road to the south, approximately 360 m northeast of the intersection of Lakeshore Road and Brant Street. A commercial building utilized as sales and presentation centre for a proposed residential redevelopment is adjacent to the east and a public parking lot is adjacent to the west. The total Site area is 0.3357 hectares.

2.2. Property Ownership

The current property owner is Core FSC Lakeshore Limited & Core FSC Lakeshore GP Inc. Fisher Environmental Limited (Fisher) received authorization from Bryan Nykoliation of Core FSC Lakeshore Limited & Core FSC Lakeshore GP Inc., whose address is 201-287 MacPherson Avenue, Toronto, Ontario M4V 1A4 and can be contacted at 416-966-2673.

2.3. Current and Proposed Property Uses

The Site is occupied by four (4) commercial and/or residential buildings. 2096 Lakeshore Road consists of a one (1) storey residential building that is unoccupied. 2100 Lakeshore Road is undeveloped, however historically a residential building was present. 2093 Old Lakeshore Road consists of a two (2) storey residential building and one (1) parking garage. 2097 Old Lakeshore Road consists of a two (2) storey mixed commercial and residential use building. The ground floor is occupied by a salon and spa, Waters Edge, and the second floor is occupied by a residential tenant. 2101 Old Lakeshore Road consists of a two (2) storey commercial building occupied by a restaurant, The Carriage House.

The Site has been used for residential and commercial purposes, and it is our understanding that a redevelopment is proposed consisting of a twenty seven (27) storey mixed use commercial and residential building with five (5) levels of underground parking.

It is recommended that the Phase Two Property maintains its current mixed residential and commercial use until the results of the Phase Two ESA or a potential subsequent Site Remediation would indicate compliance of the Site with the current applicable MECP SCS, and permit filing of a RSC with the Environmental Site Registry.

As specified under section 168.3.1 of the EPA, filing of a RSC with the Environmental Site Registry is mandatory when there is a change (in all or in part of the property) from an industrial, commercial or community property use to residential, institutional, parkland or agricultural or other property use, with the exceptions prescribed by the amended Ontario Regulation 153/04.

2.4. Applicable Site Condition Standards

The concentration of each CPC on, in or under the Phase Two Property must not exceed the applicable SCS for the contaminant, unless there are property specific standards developed through a RA conducted for the Phase Two Property.

The MECP presents soil, groundwater and sediment standards in the document “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the EPA”, dated April 15, 2011. These standards are soil, groundwater and sediment effect-based criteria which have been developed to protect against potential adverse effects or the likelihood of adverse effects to human health, ecosystem health and the natural environment resulting from contamination due to human activities. They are levels at and below which no further remedial response actions would be required based upon the potential risk of harm posed by these contaminants.

2.4.1. Soil Texture

As specified by Ontario Regulation 153/04, “coarse textured soil is defined as material having more than 50 percent (by mass) of particles that are 75 μm or larger in mean diameter”. “Materials having more than 50 percent (by mass) of particles that are smaller than 75 μm in mean diameter are medium and fine textured soils”. “When at least 1/3 of the soil at the property, measured by volume, consists of coarse textured soil, the standard for coarse textured soil shall apply. In any other case, the standard for medium and fine textured soil may be applied”.

From Fisher’s previous Geotechnical Investigation (Project FE-P 17-8421 dated November 1, 2017) conducted at the Site, three (3) representative soil samples were submitted for grain size distribution and hydrometer analysis to ALS Global. The soil samples were obtained from overburden soils across the Site. Analytical results indicate that the ratio of fine-textured soils (silt and clay) account for 82% to 88% of total soils. Laboratory results of the grain size distribution and hydrometer analysis are attached in Appendix C.

Considering the soil types encountered at the boreholes locations, as classified in the USDA Soil Survey Manual, and the distribution of boreholes across the Site, the applicable SCS have been applied as if the soil is medium to fine textured.

2.4.2. Groundwater Use

Details regarding the conditions to be met for the utilization of a non-potable groundwater standard are in Section 35(3) of Ontario Regulation 153/04, as amended. The Site and properties within a 250 m boundary from the property boundaries of the Site are supplied with water sourced from a surface water body from the municipality. Additionally, well records from Fisher’s previous Phase One ESA (Project FE-P 17-8409 dated October 6, 2017) indicated that no domestic wells were within the 250 m boundary.

On April 9, 2019, written notice of intention to utilize non-potable groundwater SCS were submitted to the Region of Halton and the City of Burlington city clerks’ offices. A response from the Region of Halton received on April 23, 2019 indicated that Halton Region does not object to the intention to apply non-potable groundwater use criteria. No correspondence has been received from the City of Burlington by the release date of this report. A copy of the letter is attached in Appendix D.

2.4.3. Selection of Applicable Site Condition Standard

For the purpose of this Phase Two ESA, the applicable MECP SCS were identified as Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition, Residential/Parkland/Institutional Property Use for soil samples, and All Types of Property Use for groundwater samples, medium to fine textured soil condition. The criteria values are presented with the results of analysis in the Certificates of Analysis attached in Appendix C.

3. BACKGROUND INFORMATION

The specific objectives of a background information review are to develop an understanding of the general physical setting of the Phase Two Property and to verify the extent, validity and reliability of data gathered during previous investigations carried out at the site, if available. The information detailed below in Section 3.1 is taken, summarized, and updated as required from Fisher's previous Phase One ESA (Project FE-P 17-8409 dated October 6, 2017).

3.1. Physical Setting

3.1.1. Water Bodies and Areas of Natural Significance within the Phase One Study Area

Table 1: Water Bodies and Areas of Natural Significance

Water Bodies	
Source:	Google Earth
Regional Conditions:	The Site is located approximately 50 m north of Lake Ontario, the nearest open water body
Phase One Study Area Conditions:	No water body, or part of it, was noted on or within 30 m of the Phase Two Property boundaries
Areas of Natural Significance	
Source:	MNRF
Phase One Study Area Conditions:	According to the Regional Topographic Map, which includes natural heritage information, no provincial or federal conservation or natural heritage area was located in the phase one study area

3.1.2. Topography and Surface Water Drainage on the Phase Two Property

Table 2: Topography and Surface Water Drainage

Topography and Drainage	
Source:	Google Earth, MNRF, Topography Survey
Regional Conditions:	Based on grade elevation values obtained from Google Earth and MNRF, the surrounding area slopes eastward, in the east-west direction along Lakeshore Road from 82 m asl at the intersection with Elizabeth Street to 79 m asl at the intersection with Torrance Street. Grade elevations in the north-south direction slopes southward, from 82 m asl at the intersection of Martha Street and The Waterfront Trail to 76 m asl at the edge of Lake Ontario
Phase Two Property Conditions:	The Site area is flat, generally level with surrounding properties, and has an average elevation of approximately 81 m asl. Surface runoff from the roof of the buildings and gravel covered areas drains to unpaved areas on Site that percolate towards the water table, or to storm sewers located along Lakeshore Road and Old Lakeshore Road

3.2. Past Investigations

Information provided by previous reports may be relied on in planning, conducting or supervising the present Phase Two ESA if all of the following requirements are met:

(a) the date the last work (on all of the planning the site investigation, conducting the site investigation and reviewing and evaluating the information gathered through the site investigation required for the Phase Two ESA that is the subject of this report was done) is no later than eighteen (18) months before the submission of the RSC or the commencement of the RA;

(b) the phase one CSM included in the previous investigation accurately reflects the environmental condition of the Phase Two Property prior to any actions taken to reduce the concentration of contaminants;

(c) in the professional opinion of the qualified person conducting the present Phase Two ESA, there is no new or materially changed APEC at the Phase Two Property;

(d) the previous Phase One ESA meets all other requirements of Part VII and Schedule D of Ontario Regulation 153/04 for a Phase One ESA, including the requirements for a Phase One ESA report;

(d) the previous Phase Two ESA meets all other requirements of Part VIII and Schedule E of Ontario Regulation 153/04 for a Phase Two ESA, including the requirements for a Phase Two ESA report; and

(e) the report is a single document

3.2.1. Summary of Previous Investigations of the Phase Two Property

Fisher's previous Phase One ESA report was reviewed and utilized for planning the site investigation for the present Phase Two ESA and is summarized below.

Table 3: Previous Reports

Report Title	Phase One Environmental Site Assessment, 2093, 2097, 2101 Old Lakeshore Road & 2096, 2100 Lakeshore Road, Burlington, Ontario, Project 17-8409				
Prepared By	Fisher Environmental Ltd.	**Prepared For**	Core FSC Lakeshore Limited & Core FSC Lakeshore GP Inc.	**Dated**	October 6, 2017

Scope and Conclusions

The Phase One ESA was conducted in accordance with Part VII and Schedule D of the Ontario Regulation 153/04 (RSC – Part XV.1 of the EPA), as amended as of July 1, 2011.

Four (4) APECs were identified at the Site, as follows:

APEC A – All Site area	PCA-30: Importation of Fill Materials of Unknown Quality
APEC B – Area along the south boundary of the Site	PCA-28: Gasoline and Associated Products Storage in Fixed Tanks PCA-10: Commercial Autobody Shops
APEC C – Area along the west boundary and southwest portion	PCA-28: Gasoline and Associated Products Storage in Fixed Tanks
APEC D – Area along the east boundary and southeast portion	PCA-28: Gasoline and Associated Products Storage in Fixed Tanks PCA-10: Commercial Autobody Shops PCA-55: Transformer Manufacturing, Processing and Use

The APECs were determined by a number of findings, as follows:

APEC A *The APEC is associated with the potential deposition of fill materials of questionable quality during the historical property development activities, which include the construction of the original dwellings before 1931 and the paving of on-site properties during the 1970s and 1980s, as inferred from the reviewed aerial photographs.*

APEC B *The APEC is associated with the historic operation of a commercial autobody shop and fuel storage tank south of the Site. The property addressed 2092 Old Lakeshore Road was listed in the 1971 FIP with auto service operations, and with a fuel UST. Although the property is down-gradient from the Site based on the groundwater flow direction (south), its proximity to the Site (20 m) may impact subsurface conditions.*

APEC C *The APEC is associated with the historic operation of fuel service stations west of the Site. 2072 and 2042 Lakeshore Road properties were historically occupied by fuel service stations from before 1966 to at least 1989, as determined by the city directories and aerial photographs. 2042 Lakeshore Road was also a historical waste generator for light fuels and oil skimmings and sludges, according to the ERIS Report.*

APEC D *The APEC is associated with the historic operation of a commercial autobody shop and fuel service station east of the Site. The property addressed 2119 Old Lakeshore Road was listed in the 1971 FIP with auto service operations, and with a fuel UST. 2119 Old Lakeshore Road was also historically occupied by a fuel service station from before 1966 to at least 1979, as determined by the city directories and aerial photographs. A 99 L transformer oil spill to land was reported in 1996 in the Ontario Spills database at 2119 Old Lakeshore Road.*

Based on the findings of the subject Phase One ESA, it was concluded a Phase Two ESA was required to address the above PCAs and associated APECs. In order to verify the existence of CPCs in the soil and/or groundwater at the Site, a total of nine (9) boreholes, all equipped with monitoring wells, were recommended within the identified APECs to determine the location and concentration of CPCs in the land or water on, in or under the Site

3.2.2. Reliability of Information or Data Provided in Previous Investigations

Table 4: Reliability of Information from Previous Report

Report Title/Date	Information/Data Used	Reliability of Information/Data
Phase One Environmental Site Assessment, 2093, 2097, 2101 Old Lakeshore Road & 2096, 2100 Lakeshore Road, Burlington, Ontario, October 6, 2017	The locations and descriptions of the APECs, identification of the PCAs and CPCs, and the CSM, including all information utilized to prepare the CSM, were used as part of the current investigation	All information and data used from the previous report met the requirements of Part VII and Schedule D of Ontario Regulation 153/04 for a Phase One ESA

4. SCOPE OF THE INVESTIGATION

The specific objectives of the site investigation component of the Phase Two ESA are:

- To determine what applicable SCS apply to the Phase Two Property;
- To confirm if contaminants are present on the Phase Two Property, and if so, their type, location and concentration, by investigating and characterizing soil, groundwater and sediment, and further investigating and characterizing applicable media following any remediation

The scope of the current Phase Two ESA is in support of filing of a RSC, and it consisted of the following general tasks:

- A ***Background Information Review*** of previous environmental work that has been conducted within the study area to assist in identifying APECs where possible contamination may exist;
- ***Development of a Sampling and Analysis Plan*** that focused on the design of the subsurface investigation at APECs identified in previous reports, including a QA/QC program, data quality objectives, standard operating procedures, and a description of physical constraints that limit the ability to conduct sampling and analysis;
- An ***Intrusive Investigation Program*** that included soil and groundwater sampling in areas previously identified as having the greatest likelihood for contamination;
- ***Review and Evaluation*** of the Phase Two ESA field investigation and any previous intrusive investigations which are relied upon;
- An ***Analytical Program*** that targeted CPCs, incorporated analyses from a CALA accredited laboratory and comparison of analytical results to the applicable SCS as presented in the MECP's Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the EPA, April 15, 2011;
- Incorporating field, laboratory and overall project ***QA/QC*** policies and procedures; and
- ***Reporting*** which summarized the overall findings of the Phase Two ESA and provided conclusions and recommendations for future work to support the filing of a RSC.

4.1. Overview of Site Investigation

Fisher conducted the field portion of the Phase Two ESA at the Site from October 31 to November 24, 2017 and from February 1, 2019 to March 28, 2019 to confirm if contaminants are present on the Phase Two Property at concentrations greater than the applicable SCS and if so, their type, location and concentration, and to assess applicable remedial and risk management options for the Site, if required.

At the completion of the current Phase Two ESA, it was determined that, upon comparing concentrations of analyzed parameters, which constitute the CPCs in the soil and groundwater samples collected from the Site, to Table 3 SCS as presented in the MECP's Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the EPA, April 15, 2011, some exceedances in the soil samples were identified. Additional delineation boreholes were drilled from April 29, 2019 to April 30, 2019.

4.2. Media Investigated

Schedule E of the Regulation contains both generic requirements (applicable to all media: soil, groundwater or sediment, which may be investigated) and specific requirements (for example, those applicable when soil vapour investigations are being undertaken for the purposes of a RA).

The rationale for determining the investigated media in the current Phase Two ESA has been based on information obtained from Fisher's previous Phase One ESA (Project 17-8409, October 6, 2017) and the Phase One CSM, as referenced in Sections 4.2.1. and 4.3. To address the identified APECs, the investigation has been limited to on-site fill materials, overburden soils and the first encountered aquifer.

4.2.1. Rationale for Groundwater and Sediment Investigation

A Phase Two ESA must include the investigation, sampling and analysis of groundwater on, in or under the Phase Two Property where:

- The property is an enhanced investigation property;
- There is no soil on, in or under the property and an investigation, sampling and analysis of soil already undertaken does not meet the requirements and objectives of a Phase Two ESA;
- There is no soil on, in or under the property and no investigation, sampling and analysis of soil has been undertaken; or,
- It is advisable to do so in order to achieve the Phase Two ESA objectives or other provisions of the Regulation and Schedules.

The on-site and/or off-site PCAs, transport pathways and CPCs identified in the Phase One CSM have indicated the potential for soil and/or groundwater impacts in, on or under the Phase Two Property.

4.2.2. Overview of Soil, Groundwater and Sediment Field Investigation

The field investigation portion of the Phase Two ESA was performed from October 31, 2017 to November 24, 2017 and from February 1, 2019 to March 28, 2019. Additional boreholes for the purposes of delineation were drilled from April 29, 2019 to April 30, 2019. The initial rationale for the investigation, as outlined in the sampling and analysis plan, was based on Fisher's previous Phase One ESA (Project 17-8409, October 6, 2017). The rationale for the additional delineation borehole investigation was based on the analytical results from the field investigations conducted up to March 28, 2019.

At least one (1) soil sample from each borehole, for a total of sixty eight (68) soil samples, including eight (8) duplicates, were submitted to the laboratory for analysis of metals, PHCs (F1-F4) and BTEX, VOCs, PAHs, PCBs, Hg, pH, EC, and/or SAR. A total of twenty nine (29) groundwater samples, including six (6) duplicates and six (6) trip blanks were submitted to the laboratory for analysis of metals, PHCs (F1-F4) and BTEX, VOCs, PAHs, PCBs, Hg, and/or CrVI.

Based on the analytical results, several exceedances in the soil were identified. The exceedances in soil are summarized below:

<u>BH202 (0.00-0.60 m bgs)</u>

Cadmium: 4.9 ppm vs 1.2 ppm

Lead: 744 ppm vs 120 ppm

Zinc: 4,341 ppm vs 340 ppm

EC: 1.83 mS/cm vs 0.7 mS/cm

<u>BH203 (0.00-0.60 m bgs)</u>

Cadmium: 1.4 ppm vs 1.2 ppm

Zinc: 549 ppm vs 340 ppm

EC: 0.83 mS/cm vs 0.7 mS/cm

<u>BH204 (0.00-0.60 m bgs)</u>

Lead: 222 ppm vs 120 ppm

Zinc: 392 ppm vs 340 ppm

<u>BH205 (0.00-0.60 m bgs)</u>

Lead: 210 ppm vs 120 ppm

<u>BH206 (0.00-0.60 m bgs)</u>

Lead: 248 ppm vs 120 ppm

Zinc: 430 ppm vs 340 ppm

BH207 (0.00-0.60 m bgs)

Lead: 162 ppm vs 120 ppm

EC: 1.6 mS/cm vs 0.7 mS/cm

SAR: 8.1 vs 5

BH209 (0.00-0.60 m bgs)

EC: 3.2 mS/cm vs 0.7 mS/cm

BH210 (0.00-0.60 m bgs)

Fluoranthene: 1.4 ppm vs 0.69 ppm

Benzo[a]pyrene: 0.54 ppm vs 0.3 ppm

MW211 (0.00-0.60 m bgs)

EC: 2.3 mS/cm vs 0.7 mS/cm

SAR: 10 vs 5

MW212 (0.00-0.60 m bgs)

Lead: 211 ppm vs 120 ppm

MW213 (0.00-0.60 m bgs)

Fluoranthene: 2.1 ppm vs 0.69 ppm

Benzo[a]pyrene: 0.48 ppm vs 0.3 ppm

MW214 (0.00-0.60 m bgs)

Lead: 331 ppm vs 120 ppm

Zinc: 367 ppm vs 340 ppm

MW217 (0.00-0.60 m bgs)

Lead: 203 ppm vs 120 ppm

BH222 (0.00-0.60 m bgs)

EC: 0.8 mS/cm vs 0.7 mS/cm

BH223 (0.00-0.60 m bgs)

EC: 1.1 mS/cm vs 0.7 mS/cm

BH223 (0.00-0.60 m bgs) Duplicate

EC: 1 mS/cm vs 0.7 mS/cm

In accordance with Ontario Regulation 153/04, as amended, Section 48, the average of the analytical results from BH224 and BH225, which are within a 1 m radius from MW217, for Lead at the same sampling depth as the identified exceedance, is below the applicable MECP SCS thus it is considered that MW217 has met the applicable MECP SCS for all analyzed parameters.

Based on the analytical results, all of the submitted groundwater samples were below the applicable MECP SCS. All trip blank water samples were below the analytical laboratory's detection limits for all analyzed VOC parameters.

4.3. Phase One Conceptual Site Model

The Phase One CSM summarized below synthesizes relevant information gathered during the phase one study area evaluation, co-relates the Site features and geological/hydrogeological conditions in the area with on-site and/or off-site PCAs, and identifies release mechanisms, transport pathways, human and ecological receptors within phase one study area, exposure points and routes of exposure that may contribute to APECs on, in or under Phase Two Property.

Table 5: Phase One CSM

Areas where PCAs have occurred in the phase one study area:	PCA-10: Commercial Autobody Shops, off-site at 2092 Old Lakeshore Road (20 m south) and 2119 Old Lakeshore Road (40 m east); PCA-28: Gasoline and Associated Products Storage in Fixed Tanks, on-site at current buildings and off-site at 2092 Old Lakeshore Road (20 m south), 2119 Old Lakeshore Road (40 m east), 2072 Lakeshore Road (50 m west) and 2042 Lakeshore Road (120 m west); PCA-30: Importation of Fill Materials of Unknown Quality, on-site at majority of Site; PCA-55: Transformer Manufacturing, Processing and Use, off-site at 2119 Old Lakeshore Road (40 m east)
Surface and subsurface structures that may affect contaminant distribution and transport:	T-1: off-site underground utility mains along Lakeshore Road and Old Lakeshore Road; T-2: on-site underground utilities; T-3: on-site building foundations
Geological and hydrogeological interpretations:	
Considering that the surficial geology of the native soils is primarily clay to silt till, and that the regional hydrogeologic conditions indicate a typical range of hydraulic conductivity for these soils to be 10^{-5} – 10^{-7} cm/sec, it is expected that, if petroleum products or solvents have escaped into surface and/or subsurface soil and groundwater, potentially limited horizontal migration of contaminants may have occurred due to the low hydraulic conductivity within the aquifer. Due to the relatively shallow overburden and the nature of the bedrock (shale), groundwater is likely situated at the base of the overburden and at the top of the bedrock within the fractured shale. This groundwater would likely represent the first encountered aquifer and be the most susceptible to contaminants from on-site and off-site PCAs	

Uncertainty or absence of information:
This phase one CSM represents the current understanding of the Site in terms of the relevant potentially contaminating sources, subsurface materials and processes, serves as the basis for further Site characterization, and will ultimately support the evaluation of various remedial alternatives, if necessary. Because of the limited intrusive and/or non-intrusive investigations data in the phase one study area, the CSM can only provide an approximation to the real world. At the early stages of the CSM development, it is possible that several realizations will be tenable however, as more monitoring and other data become available, the subsequent CSMs should provide a more detailed picture of fluid flow and material transport, and transformation processes

4.4. Deviations from Sampling and Analysis Plan

There were no major deviations from the sampling and analysis plan for the Phase Two ESA. Certain locations were marginally altered during the field investigation based on conditions encountered on-site (i.e.- snow and/or ice mounds).

4.5. Impediments

Minor physical impediments associated with drilling rig access were encountered, e.g. trees, parked cars and uneven surface, during the field investigation which required only a marginal adjustment of borehole locations.

5. INVESTIGATION METHOD

The investigation methodology was completed in accordance with Parts VI and VIII (sections 22, 32 to 33.8) and Part XII, Schedule E, of Ontario Regulation 153/04, as amended.

5.1. General

Prior to commencing any field activities, borehole locations were cleared of underground utilities through the services of a private utility locates company as well as through the public utility locates service.

Borehole drilling was conducted utilizing a truck-mounted and track-mounted drilling rigs equipped with solid stem auger sampling equipment and a hydraulically powered portable direct push or solid stem auger drilling rig to assess the soil conditions. Fisher personnel logged the subsurface conditions encountered within each of the boreholes at the time of the field work. Soil samples from within the boreholes were recovered at regular depth intervals by driving a split spoon sampler or by a direct push continuous sampler, using standard sampling procedures in accordance with ASTM D1586. Soil samples were visually classified and tested in the field for headspace vapour readings using a 10.6 eV lamp Mini Rae 2000 PID calibrated to 100 ppm Isobutylene.

A minimum of one (1) soil sample recovered from each of the thirty four (34) advanced boreholes was submitted to Fisher Environmental Laboratories of Markham, Ontario. In total, sixty eight (68) soil samples were submitted. Sampling depths were based on the nature of the CPCs.

The groundwater conditions, where encountered, were recorded at the time of boreholes' drilling and at completion of each borehole. A groundwater monitoring well comprising of a 52 mm inside diameter PVC pipe was installed in seventeen (17) boreholes drilled at the Site. The portion below and/or intersecting the groundwater table was constructed of a similar diameter machine-slotted screen to permit future measurement of water levels and the collection of groundwater samples.

Each newly installed monitoring well was monitored to determine the depth to the groundwater table and presence/absence of free phase product within the monitoring well. Prior to sampling, the sampled monitoring wells were developed to remove any water or fluids used during boreholes drilling, and any fine grained material from around the screened interval, by pumping out up to ten (10) well casing volumes of groundwater using dedicated LDPE tubing and a submersible pump. After each well development operation, the submersible pump was washed with an Alconox solution and rinsed with distilled water. The development and sampling methodology followed at each of the newly installed monitoring well locations was in accordance to the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the EPA, specifically using a Low Flow Purging and Sampling procedure (USEPA EQASOP-GW 001). The flow rate varied until the water level has stabilized to ensure the sampling of "fresh" formation water. Indicator field parameters such as Temperature, pH, Specific Conductance, ORP, DO and Turbidity were measured during purging activities at each well. Once the indicator field parameters have stabilized, groundwater samples have been taken upstream of the flow-through cell (to prevent cross-contamination).

Groundwater samples were collected from seventeen (17) newly installed monitoring wells, and one (1) existing monitoring well, and submitted to Fisher Environmental Laboratories for analysis of metals, PHCs (F1-F4) and BTEX, VOCs, PAHs, PCBs, Hg, and/or CrVI and submitted to ALS Global for analysis of CrVI.

QA/QC samples were collected and analyzed during the field program as follows:

- Six (6) QA/QC field duplicate soil samples were collected;
- Six (6) QA/QC field duplicate groundwater samples were collected;
- Six (6) trip blank water samples were analyzed for VOCs.

5.2. Drilling and Excavating

5.2.1. Borehole Drilling

Borehole drilling was conducted by Terra Firma Environmental Services of Toronto, Ontario. The thirty four (34) boreholes advanced at the Site were completed using a truck-mounted and track-mounted drilling rigs equipped with solid stem auger sampling equipment and a hydraulically powered portable direct push or solid stem auger drilling rig to assess the soil conditions, and were completed to depths of up to 5.33 m below grade.

The solid stem auger or direct push drilling procedure was used when advancing boreholes into the surface and intermediate overburden depths. Each solid stem auger section is typically 1.52 m (5 ft) in length and has a 114.3 mm (4.5 in.) outside diameter. The augers were connected together with bolts and have no interior communication channels. The augers were advanced to the required sampling depth, spun to remove all soil cuttings from within the borehole and then removed to make room for the split spoon sampler. The direct push drilling rig applies static weight and hammer percussion to a rod string in order to advance the probing and sampling rods with each sampling rod typically 0.91 m (3 ft) in length.

To minimize cross-contamination, the augers were cleaned with a high-pressure washer, then rinsed with potable water prior to advancing the depth of the borehole, and between borehole locations.

5.2.2. Test Pits Excavation

No test pits were excavated as part of the Phase Two ESA.

5.3. Soil Sampling

Soil sampling at the Site was conducted as outlined in the Sampling and Analysis Plans (included in Appendix A of this report) designed on the basis of the information obtained from Fisher's previous Phase One ESA (Project FE-P 17-8409 dated October 6, 2017) and the Phase One CSM, and the analytical results from the Phase Two ESA prior to delineation.

5.3.1. Description of Soil Sampling Equipment

Soil samples were collected during the boreholes drilling program in part by means of a 50 mm diameter spoon sampler driven 610 mm into subsoil by a standard size 65 kg hammer, falling 760 mm, collecting soil samples at 0.76 m (2.5 ft) intervals and at stratigraphic boundaries to completion depths. Samples were collected at 0.76 m (2.5 ft) intervals using a 0.61 m (2.0 ft) split-barrel sampler, hence 0.15 m (0.5 ft) of soil from each interval remained un-sampled. Soil samples were also in part collected by means of a direct push drilling rig that applies static weight and hammer percussion to a rod string in order to advance the probing and sampling rods with each sampling rod typically 0.91 m (3 ft) in length. The single use sampling sleeve in the sampling rod is 0.91 m (3 ft) in length.

At the time of sampling, the split-barrel sampler was fitted to the sampling rods and lowered into the borehole. The dead weight of the sampler, rods, anvil, and drive weight were left to rest on the bottom of the borehole. The split spoon was driven in the soil by imparting recurring blows with the standard size hammer. Once the entire length of the sampler had been advanced, or once sampler refusal was encountered, the sampler was returned to the surface and opened.

Subsurface conditions encountered in the boreholes, including soil type, moisture content, soil colour and visual indications of environmental impacts, if applicable, were logged at the time of the field program. A representative portion of each recovered soil sample was immediately placed in laboratory supplied sample containers. The remaining portion of the soil sample was put into a re-sealable bag to be used for field screening of combustible soil vapour concentrations. New disposable latex gloves and stainless steel trowel were used during each sampling event to remove the soil cores from the sampler and to transfer the samples into laboratory supplied containers and re-sealable bags. Single use hermetic samplers were utilized to collect soil samples for the analysis of PHC (F1) and/or VOCs.

All of the recovered soil samples were analyzed in the field for combustible vapour concentrations using a MiniRae 2000 PID equipped with a 10.6 eV lamp and calibrated to 100 ppm Isobutylene.

5.3.2. Geological Description of Soil and Sediment Samples

The soil samples recovered from the boreholes generally consisted of sandy silt/clayey silt or granular fill materials, underlain by silty clay/clayey silt overburden. Weathered shale bedrock was underlying the silty clay/clayey silt overburden. No sediment samples were taken as part of the Phase Two ESA.

5.4. Field Screening Measurements

Soil samples were first screened in the field using a MiniRae 2000 PID. PIDs are used for applications where high sensitivity is needed to monitor ppm levels of VOCs. The MiniRae 2000 PID has a measurement accuracy range of ±2 ppm or 10% of reading between 0 – 2000 ppm, and ±20% of reading for >2000 ppm. It has an internally integrated pump with a flow rate of 450-550 cc/min. Work humidity conditions are from 0% to 95% relative humidity (non-condensing). The MiniRae 2000 is equipped with a 10 in. hydrophobic probe. The probe includes a replaceable water trap filter disk that prevents particulates and water from entering the instruments flow system.

Calibration consists of exposing the instrument to gas samples of known concentration. The combustible and toxic gas samples should have concentrations in approximately the middle of the detection range. The PID is calibrated to an Isobutylene standard.

The MiniRae 2000 was calibrated in the field at the beginning of work each day. The calibration records were recorded each time the MiniRae 2000 was calibrated. This information is useful for establishing a calibration interval and keeping track of individual instrument performance. Each of the recovered soil samples was visually classified and screened in the field for headspace vapour concentration (combustible soil vapour and total organic vapour) using the MiniRae 2000. Selection of samples to be submitted for laboratory analysis was based on the headspace vapour concentration and/or physical evidence of odours/staining. If no odours/staining were noted in the soil samples, the samples with the highest field screening measurement (i.e. highest headspace vapour concentration) were selected for laboratory analysis. If no headspace vapour concentration readings were detected, then the depths at which the CPCs were expected were selected for analysis. In addition, if odours/staining were noted in the soil sample or soil headspace vapour concentrations were elevated, additional soil samples were selected from below the anticipated impacted zone for laboratory analysis for vertical delineation purposes. Soil vapour concentrations were recorded during the soil sampling and the readings are included in the logs of boreholes in Appendix B.

The depth to groundwater and the presence or absence of NAPL was measured in all monitoring wells using a Solinst Oil/Water Interface probe, model 122. The sensor accuracy is 1.0 mm. The manufacturer recommends annual calibration of the interface probe. All field screening methods completed in the field were in accordance with the standard operating procedures.

5.5. Monitoring Wells Installation and Development

Seventeen (17) of the thirty four (34) advanced boreholes were completed as groundwater monitoring wells. A groundwater monitoring well comprising of 51 mm inside diameter flush-threaded, Schedule 40 PVC was utilized to installed the monitoring well. The portion below and/or intersecting the groundwater table was constructed of a similar diameter machine-slotted 0.25 mm (10 slot) screen.

Monitoring wells were constructed using the following procedure:

- The end cap was threaded onto the bottom of the well screen and the well screen was lowered to the bottom of the open borehole by threading together the necessary number of well screen and riser lengths;
- The monitoring well materials were lowered through the open borehole;
- The primary filter pack material consisted of Type 2 silica sand. The size of the filter pack material was selected based on the texture of the formation in which the well was screened and the slot size of the well screen. The filter pack was installed in the annulus between the borehole and the well screen by hand-pouring from the surface;
- The filter pack was placed. The annular space was backfilled with Type 2 silica sand from the bottom of the well to approximately 0.20 m to 0.30 m above the top of the screen;

- A bentonite seal was installed from the top of the filter pack to 0.30 m below grade in each of the boreholes. Unprocessed 9.5 mm (3/8 in.) diameter granular bentonite was installed in lifts of 0.15 m to 0.30 m;
- All of the monitoring wells were finished at 0.10 m below grade, and were fitted with steel flush-mount protectors. The well construction details for each monitoring well are presented in Tables and Figures section, Table 1.

To minimize the potential for cross-contamination during monitoring well installation, the following actions were completed:

- The monitoring wells were designed and assembled following the completion of the drilling activities. The project manager and field personnel reviewed the soil stratigraphy observed in each borehole to ensure that the proposed monitoring well screen did not present a significant pathway for the vertical migration of chemicals (i.e. did not completely cross any confining layers);
- The presence of the bentonite seal reduced the likelihood of any water impacts from the surface reaching the monitoring well annulus;
- Only new monitoring well materials were used; these materials were factory-cleaned and delivered to the site wrapped in plastic;
- New latex or nitrile gloves were worn when handling well screen and riser materials;
- No PVC cements, solvents or lubricants were used in the construction of wells; and
- The top of the monitoring well casing was covered using a PVC slip cap or J-Plug to prevent filter pack sand or bentonite backfill material from entering the well pipe during the well installation activities.

Development is intended to establish good hydraulic connection between the well screen and the surrounding aquifer material, so that any future samples collected at the monitoring well can be considered representative of the subsurface conditions.

The newly installed monitoring wells were developed to remove any water and/or drilling fluids added during drilling/installation, and any fine grained material from around the screened interval, by purging up to ten (10) well casing volumes of groundwater using dedicated LDPE tubing and a submersible pump. The volume of fluid evacuated from each well was measured using a calibrated bucket and the volumes were recorded on standard field forms.

5.6. Field Measurement of Water Quality Parameters

Groundwater sampling in the newly installed monitoring wells was conducted using the Low Flow Purging and Sampling procedure (USEPA EQASOP-GW 001), by means of a Horiba U-52 Flow-Through Cell equipped with sensors that simultaneously measure indicator field parameters such as Temperature, pH, Specific Conductance, ORP, DO and Turbidity.

Measurement principle, range, resolution, repeatability and accuracy for each of the sensors incorporated in the Horiba U-52 Flow-Through Cell are presented below:

Table 6: Water Quality Parameters

Sensor	Measurement Principle	Range	Resolution	Repeatability	Accuracy
pH	Glass electrode method	pH 0 to 14	0.01pH	±0.05pH	±0.1pH
DO	Polarographic method	0 to 50.0 mg/L	0.01 mg/L	±0.1 mg/L	0 to 20 mg/L: ±0.2 mg/L, 20 to 50 mg/L: ±0.5 mg/L
Conductivity	4 AC electrode method	0 to 10 S/m (0 to 100 mS/cm)	0.000 to 0.999 mS/cm: 0.001 1.00 to 9.99 mD/cm: 0.01 10.0 to 99.9 mS/cm: 0.1 0.0 to 99.9 mS/m: 0.1 0.100 to 0.999 S/m: 0.001 1.00 to 9.99 S/m: 0.01	±0.05% F.S.	±1% F.S. (Median of two-point calibration)
Temperature	Thermistor method	-10 to +55°C	0.01°C	±0.10°C (at calibration point)	JIS class B platinum thermometer sensor (±0.3 + 0.005 / 1°C)
Turbidity	LED transmitting light source, 30° forward scattering method	0 to 800 NTU	0.1 NTU	±5% (reading) or ±0.5 NTU whichever is greater	±5% (reading) or ±1 NTU whichever is greater
ORP	Platinum electrode method	-2000 mV to +2000 mV	1 mV	±5 mV	±15 mV

The measurement of Indicator Field Parameters was conducted in accordance with the following procedure:

- 0.17 in. inner diameter HDPE tubing was connected to a 3/16 in. inner diameter silicone tubing that was threaded through a peristaltic pump. The HDPE was lowered into the well and placed at a depth corresponding to the middle of the screened interval of each monitoring well, if plausible, and groundwater was pumped at variable flow rates;
- After the water level has stabilized, the flow-through cell was connected to the HDPE tubing through a "T" connector to monitor the indicator field parameters. When excessive turbidity was encountered with the pump startup, the well was purged for a while without connecting up the flow-through cell, in order to minimize particulate buildup in the cell. Water level drawdown measurements were made using a Solinst Oil/Water Interface probe;
- During well purging, indicator field parameters (turbidity, temperature, specific conductance, pH, ORP, DO) were monitored at a frequency of three (3) or five (5) minute intervals. The pump's flow rate was able to "turn over" at least one (1) flow-through cell volume between measurements for some of the monitoring wells (i.e- for a 250 mL flow-through cell with a flow rate of 50 mL/min, the monitoring frequency was every five (5) minutes);
- Purging was considered complete and sampling began when all the above indicator field parameters have stabilized. Stabilization is considered to be achieved when three (3) consecutive readings are within the following limits:
  - Turbidity (10% for values greater than 5 NTU; if three (3) Turbidity values are less than 5 NTU, consider the values as stabilized),
  - DO (10% for values greater than 0.5 mg/L, if three (3) DO values are less than 0.5 mg/L, consider the values as stabilized),
  - Specific Conductance (3%),
  - Temperature (3%),
  - pH (± 0.1 unit),
  - ORP (± 10 milliVolts);
- All measurements were obtained using the flow-through cell;
- A semi-transparent flow-through cell was used, allowing field personnel to watch for particulate build-up within the cell. This build-up may affect indicator field parameter values measured within the cell.

The Horiba U-52 unit was calibrated prior to arriving on the Site for the first time. The calibration records were recorded each time the Horiba U-52 was calibrated.

5.7. Groundwater Sampling

Low Flow Purging and Sampling procedure

Groundwater sampling in the newly installed monitoring wells was conducted using the Low Flow Purging and Sampling procedure (USEPA EQASOP-GW 001). The flow-through cell was connected to a peristaltic pump.

The sampling of groundwater in the wells was conducted in accordance with the following procedure:

- The static groundwater level in the well has been measured before lowering the tubing. The initial water level was recorded on the purge data log sheet;
- The tubing was measured and lowered to the appropriate depth;
- Before starting the pump, water level in the well was measured;
- From the time the pump started, purging continued until the time the samples were collected. The purged water was discharged into a graduated bucket to determine the total volume of groundwater purged. This information was recorded on the purging data log sheet;
- Pump speed was adjusted until there was little or no water level drawdown. The minimal drawdown that has been achieved exceeded 0.3 feet, but remained stable, therefore purging continued. The water level and pumping rate were monitored and recorded every three (3) or five (5) minutes (or as appropriate) during purging. Pumping rate adjustments were recorded (both time and flow rate). Pumping rates were, as needed, reduced to the minimum capabilities of the pump to ensure stabilization of the water level, if plausible. Adjustments were made in the first fifteen (15) minutes of pumping in order to help minimize purging time. During pump start-up, drawdown has exceeded the 0.3 ft target and then "recovered" somewhat as pump flow adjustments were made. The volume of water between the initial water level and the stabilized water level was calculated and added to the volume of the water which occupied the pump's tubing. This combined volume of water was purged from the well after the water level has stabilized before samples were collected;
- The flow rate used to achieve a stable pumping level remained fairly constant while monitoring the indicator parameters for stabilization and while collecting the samples.

Collection of Groundwater Samples

The pump's tubing was disconnected from the "T" connector with a valve and the flow-through cell. The samples were collected directly from the pump's tubing.

VOC samples were collected first and directly into laboratory supplied containers with the appropriate preservatives. All sample containers were filled by allowing the pump discharge to flow gently down the inside of the container with minimal turbulence. Laboratory supplied sample containers with the appropriate preservatives, if required, as required by analytical methods, were used to collect the groundwater samples.

As the analysis of metals was an objective, filtered groundwater samples were collected. A 0.45 µm in-line filter (transparent housing) was used. The filter was pre-rinse with groundwater prior to sample collection. The filtered groundwater samples were immediately placed in laboratory supplied sample containers.

Samples requiring cooling were placed into a cooler with ice or ice packs for delivery to the laboratory. Sampling progressed at the Site from the well that was expected to be least contaminated to the well that was expected to be most contaminated to minimize the potential for cross-contamination. The monitoring equipment was decontaminated between each well. Dedicated sampling HDPE and silicone tubing was used for each monitoring well.

In some instances, the static groundwater level and/or recharge rate within the monitoring well was insufficient to perform the Low Flow Purging and Sampling procedure. In these instances, the groundwater sample was collected in laboratory supplied containers by purging up to three (3) well volumes prior to the collection of the groundwater samples.

5.8. Sediment Sampling

No sediment samples were collected as part of the Phase Two ESA.

5.9. Analytical Testing

Analytical testing during this investigation was carried out by Fisher Environmental Laboratories in Markham, Ontario and ALS Global in Waterloo, Ontario. Both laboratories are accredited by CALA in accordance to ISO/IEC 17025 - 2005 – “General Requirements for the Competence of Testing and Calibration Laboratories” for the analysis of specific parameters for all samples in the scope of work for which SCS have been established under Ontario Regulation 153/04, as amended. The laboratories ensured that analytical samples were, by appearance, representative of the whole sample as collected in the field.

5.10. Residue Management Procedures

Drilling generated wastes of soil and groundwater and purged groundwater from well development and sampling were handled in accordance with applicable laws. Soil cuttings and groundwater were collected in metal drums and stored on-site for future disposal by the property owner.

5.11. Elevation Surveying

Elevation surveying at the newly installed monitoring well locations was conducted on March 25, 2019. Elevation data for all wells is presented in Table 1: Monitoring Wells Construction & Groundwater Levels, included in Tables section of this report, as well as in the attached Borehole Logs (Appendix B).

The surveying equipment used, SLR200H Horizontal Rotary Laser, has an accuracy reading of ±0.003 m. The ground surface elevation data, for the purpose of obtaining a geodetic elevation benchmark value, was obtained from the provided Topographic Survey (Section 12.1 – Site Setting Figures). Elevations are derived from the municipal benchmark 914001 (City of Burlington) with a geodetic elevation of 77.901 m asl.

5.12. Quality Assurance and Quality Control Measures

Soil samples were collected and handled in accordance with accepted industry standards. Sampling, transportation and storage procedures were conducted according to CCME's Guidance Manual on Sampling, Analysis and Data Management for Contaminated Sites and the MECP's Guidance on Sampling and Analytical Methods for use at Contaminated Sites in Ontario, and followed standard chain of custody procedures. All containers used for sampling were provided by the laboratory and were labeled prior to sampling, taking caution not to open the container.

To minimize the potential for cross-contamination between soil samples, the split spoon sampler used to collect soil samples from the boreholes was brushed clean of soil, washed in an Alconox solution and then rinsed with distilled water. All equipment used for sampling was washed with an Alconox solution and rinsed in between samples, and new pair of disposable latex gloves (one (1) per sample) was used during sample collection.

Through each soil sample, the lithology and esthetic evidence of impacts (e.g. debris, staining and odours) were recorded as part of field QC procedures. QA/QC soil and groundwater samples were collected and analyzed during the field program as follows:

- Six (6) QA/QC field duplicate soil samples were collected;
- Six (6) QA/QC field duplicate groundwater samples were collected;
- Six (6) trip blank water samples were analyzed for VOCs

Headspace combustible vapour measurements were taken inside the re-sealable bags using a 10.6 eV lamp Mini Rae 2000 PID calibrated to 100 ppm Isobutylene. The samples were kept out of direct sunlight during field storage. The headspace monitoring was performed on the samples as a preliminary screening for hydrocarbons or VOCs analysis.

6. REVIEW AND EVALUATION

6.1. Geology

Description of the subsurface conditions encountered at the borehole locations conducted as part of the current Phase Two ESA is presented in Appendix B – Log of Boreholes, and Geological Maps of the area are attached in Section 12.1 (Site Setting Figures).

Fill Materials

The fill materials noted during boreholes drilling generally consisted of sandy silt/clayey silt or granular fill materials, except at the locations of MW103 and MW104, where they consisted of brown to red sand and silt, trace gravel, to a maximum depth of 0.9 m bgs. No fill materials were encountered in BH203, MW216, BH224, and BH225.

Unit I: Native Overburden (Aquifer)

The fill materials were underlain by the overburden consisting of reddish brown clayey silt till, extending to maximum depth of 4.88 m bgs. The native overburden was first encountered at a depth of 0.61 m bgs. The maximum encountered depth of the native overburden is 4.27 m.

Unit II: Bedrock (Aquitard)

The overburden was underlain by red weathered shale bedrock, which was encountered at 2.13 m bgs or deeper.

6.1.1. Description and Rationale for Choice of Relevant Aquifers and Aquitards

Investigated Aquifer

Considering the hard clayey silt till encountered at the Site, the depth of the first moist samples, and the fact that all monitoring wells installed above (and partially into) the weathered shale had groundwater while the monitoring wells installed within the shallower overburden were dry (MW107 and MW109), it appears that the first-encountered aquifer is limited to the overburden-weathered shale contact. The vadose zone comprises much of the overburden, which has very low hydraulic conductivity (10^{-6} – 10^{-8} cm/sec), and the portion of the overburden that would constitute the aquifer (based on texture and moisture of soil samples) would have a similarly low conductivity.

Additional aquifers are expected to be present within the bedrock, but it is unlikely that they have been impacted by PCAs identified in Fisher's previous Phase One ESA (Project FE-P 17-8409 dated October 6, 2017). Nevertheless, one (1) groundwater sample was obtained from an existing monitoring well, installed as part of a geotechnical investigation, which was screened along a water-bearing fractured layer within the bedrock. The well was screened from 9.19 m bgs to 12.19 m bgs. The purpose of a limited investigation within the first encountered fractured rock aquifer, i.e. one (1) sampling location, was to obtain a baseline quality of groundwater with regards to naturally occurring CPCs in the weathered shale.

Investigated Aquitard

Considering the weathered shale bedrock is the aquitard, the investigation was primarily limited to overburden soils. Shale has a typical hydraulic conductivity of 10^{-7} – 10^{-11} cm/sec.

6.2. Groundwater Elevations and Flow Direction

Groundwater generally flows from areas of high hydraulic head towards areas of low hydraulic head. To assess the direction of groundwater movement, the hydraulic head is measured at each groundwater monitoring well location. This is accomplished by taking water level measurements and referencing them to a benchmark to determine their elevation. The ground surface elevation data was obtained from the provided Topographic Survey. Water level measurements having higher elevations suggest greater hydraulic head. Conversely, lower elevations of the water table are indicative of a lower hydraulic head.

Groundwater elevations varied from 78.90 m asl in MW108 to 81.11 m asl in MW213. Based on the field measurements the groundwater flow direction was determined to have three (3) major components: an east/southeast component at the eastern portion of the Site that naturally follows the declining grade elevation along Lakeshore Road from west to east; a south/southwest component towards Lake Ontario, that is approximately 50 m south of the Site, at the southern portion of the Site; and a northwest component at the northwestern portion of the Site. The localized shallow groundwater flow direction may be influenced by variations in vertical and horizontal stratigraphy, depth of wells' screened intervals, well trauma, and/or seasonal variations.

6.2.1. Locations and Screened Intervals of Monitoring Wells

Locations of monitoring wells and depth of screened intervals used to determine the groundwater flow directions were selected to:

- Represent upgradient, cross-gradient and downgradient groundwater levels and to investigate potential movement of CPCs within APECs;
- Capture groundwater levels in the first encountered aquifer considering the effect of water table seasonal variability on the concentrations of CPCs;
- Characterize heterogeneous stratigraphic conditions in the first encountered aquifer and their influence on concentrations of CPCs; and
- Depict potential influence of underground structures and utilities on local groundwater flow direction and movement of CPCs.

The screen sections of the wells were maximum 3.05 m long. The construction of the groundwater monitoring wells is illustrated in the borehole logs presented in Appendix B and in the Tables section, Table 1: Monitoring Wells Construction & Groundwater Levels.

6.2.2. Results of Measurements Taken Using an Interface Probe

After water level measurements were obtained using a Solinst Oil/Water Interface meter, a transparent bailer with a bottom valve was also used to collect a fluid sample in order to observe the presence or absence of free flowing product in the monitoring wells. No free flowing product was noted in any of the installed monitoring wells.

6.2.3. Method Used to Calculate Ground Water Elevations

Groundwater level measurements bgs were taken in each monitoring well. Where the collar was not flushed with the grade, groundwater level measurements were taken from the top of the collar and the length of the collar above ground surface was subtracted to obtain groundwater level measurements bgs. Each monitoring well collar flushed with the ground and each ground surface near an above ground collar was tied to a permanent benchmark to determine their elevation.

Groundwater level elevation in each monitoring well was calculated by subtracting the groundwater level measurement bgs from the geodetic elevation of the well collar or of the grade near the above ground collar.

Date and time of measurements, and calculated groundwater elevations in each monitoring well installed in the first encountered aquifer are presented in the Tables section, Table 1: Monitoring Wells Construction & Groundwater Levels.

6.2.4. Interpretation of Groundwater Flow Direction

To assess the direction of groundwater movement, the hydraulic head was measured at each well location. Groundwater generally flows from areas of high hydraulic head towards areas of low hydraulic head. Water level measurements having higher elevations suggest greater hydraulic head. Conversely, lower elevations of the water table are indicative of a lesser hydraulic head.

Considering heterogeneity of the stratigraphic conditions in the first encountered aquifer, interpretation of groundwater flow direction was based on groundwater elevations calculated using all monitoring wells that were installed during the Phase Two ESA that yielded groundwater. Groundwater elevations varied from 78.90 m asl in MW108 to 81.11 m asl in MW213.

Based on the field measurements the groundwater flow direction was determined to have three (3) major components: an east/southeast component at the eastern portion of the Site that naturally follows the declining grade elevation along Lakeshore Road from west to east; a south/southwest component towards Lake Ontario, that is approximately 50 m south of the Site, at the southern portion of the Site; and a northwest component at the northwestern portion of the Site.

The calculated groundwater flow direction in the first encountered aquifer is illustrated in Figure B3, CSM Figures included in Section 12 of this report.

6.3. Hydraulic Gradients

6.3.1. Horizontal Hydraulic Gradient

Horizontal hydraulic gradient is the slope of the water table or potentiometric surface. Distances between monitoring wells were measured on a scaled site plan with monitoring well locations and groundwater flow direction. To determine the horizontal hydraulic gradient all selected monitoring wells were completed in the same aquifer.

Table 7: Horizontal Gradient

Unit:	Unit I: clayey silt till	
Water Level Date:	March 29, 2019	
Direction:	Southeast, MW214 and MW108	Northeast, MW211 and MW106
H_1 (m asl)	80.79	79.66
H_2 (m asl)	78.90	79.43
ΔH (m)	1.89	0.23
ΔL (m)	41	41
Horizontal Gradient	0.046	0.0056

H_1 = geodetic elevation of the groundwater in the upgradient well, (m asl).

H_2 = geodetic elevation of the groundwater in the downgradient well, (m asl).

$\Delta H = H_1 - H_2$, (m).

ΔL = linear distance between the upgradient and downgradient wells, (m).

Horizontal hydraulic gradient = ΔH / ΔL, (m/m).

Minimum horizontal hydraulic gradient was measured between wells MW211 and MW106, and it was determined to be 0.0056. Maximum horizontal hydraulic gradient was measured between wells MW214 and MW108 and it was determined to be 0.046. Average horizontal hydraulic gradient was 0.029.

6.3.2. Vertical Hydraulic Gradient

Vertical hydraulic gradient where the well screen intersects the water table is the difference in the mid-point between the water level and the bottom of the monitoring well screen.

Table 8: Vertical Gradient

Unit:	Unit I: clayey silt till	
Water Level Date:	March 29, 2019	
Well:	MW212 and MW108	MW214 and MW103
H_1 (m asl)	79.04	79.90
H_2 (m asl)	78.26	78.35
ΔH (m)	0.78	1.55
Z_1 (m asl)	78.80	79.36
Z_2 (m asl)	78.03	76.25
ΔZ (m)	0.77	3.11
Vertical Gradient	1.01	0.50

Note: A (+) vertical gradient indicates downward movement.

H_1 = geodetic elevation of the mid-point between the water level and the bottom of the screen intersecting the water table in the shallow well, (m asl).

H_2 = geodetic elevation of the mid-point between the water level and the bottom of the screen intersecting the water table in the deep well, (m asl).

$\Delta H = H_1 - H_2$, (m).

Z_1 = geodetic elevation of the bottom-depth of the shallow well, (m asl).

Z_2 = geodetic elevation of the bottom-depth of the deep well, (m asl).

$\Delta Z = Z_1 - Z_2$, (m).

Vertical hydraulic gradient = $\Delta H / \Delta Z$, (m/m).

Minimum vertical hydraulic gradient was measured between wells MW214 and MW103, and it was determined to be 0.50. Maximum vertical hydraulic gradient was measured between wells MW212 and MW108 and it was determined to be 1.01. Average vertical hydraulic gradient was 0.76.

6.4. Soil Texture

As specified in Ontario Regulation 153/04, as amended, “coarse textured soil is defined as material having more than 50 percent (by mass) of particles that are 75 μm or larger in mean diameter”. “Materials having more than 50 percent (by mass) of particles that are smaller than 75 μm in mean diameter are medium and fine textured soils”. “When at least 1/3 of the soil at the property, measured by volume, consists of coarse textured soil, the standard for coarse textured soil shall apply. In any other case, the standard for medium and fine textured soil may be applied”.

From Fisher’s previous Geotechnical Investigation (Project FE-P 17-8421 dated November 1, 2017) conducted at the Site, three (3) representative soil samples were submitted for grain size distribution and hydrometer analysis to ALS Global. The soil samples were obtained from overburden soils across the Site. Analytical results indicate that the ratio of fine-textured soils (silt and clay) account for 82% to 88% of total soils.

Considering the soil types encountered at the boreholes locations, as classified in the USDA Soil Survey Manual, and the distribution of boreholes across the Site, the applicable SCS have been applied as if the soil is medium and fine textured.

6.5. Soil Field Screening

All soil samples collected at the Site were field screened for the presence of petroleum/solvent-derived vapours using visual, olfactory and combustible vapour measurements considerations. The field observations at each borehole location are provided on the borehole logs in Appendix B. The PID readings did not indicate the presence of significant VOCs concentrations.

6.6. Soil Quality

The laboratory’s Certificates of Analysis are provided in Appendix C of this report. Soil and groundwater analytical results are summarized in Tables provided in Section 11 of this report. All tables include comparison of the results against the applicable MECP Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition, Residential/Parkland/Institutional Property Use for soil samples and All Types of Property Use for groundwater samples, in a medium to fine textured soil condition, as contained in the MECP’s “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the EPA”, April 15, 2011.

A discussion of the laboratory analytical results, CPCs, and comparison of analytical results to the applicable SCS, is provided below.

Metals

Metals parameters in soil at the Site may potentially be associated with the historical on-site importation of fill materials of unknown quality, historical potential on-site use of oil tanks, and historical operation of off-site fuel service stations and commercial autobody shops.

Based on the analytical results, several exceedances in the soil were identified. The exceedances in soil are summarized below:

BH202 (0.00-0.60 m bgs)
Cadmium: 4.9 ppm vs 1.2 ppm
Lead: 744 ppm vs 120 ppm
Zinc: 4,341 ppm vs 340 ppm

BH203 (0.00-0.60 m bgs)
Cadmium: 1.4 ppm vs 1.2 ppm
Zinc: 549 ppm vs 340 ppm

BH204 (0.00-0.60 m bgs)
Lead: 222 ppm vs 120 ppm
Zinc: 392 ppm vs 340 ppm

BH205 (0.00-0.60 m bgs)
Lead: 210 ppm vs 120 ppm

BH206 (0.00-0.60 m bgs)
Lead: 248 ppm vs 120 ppm
Zinc: 430 ppm vs 340 ppm

BH207 (0.00-0.60 m bgs)
Lead: 162 ppm vs 120 ppm

MW212 (0.00-0.60 m bgs)
Lead: 211 ppm vs 120 ppm

MW214 (0.00-0.60 m bgs)
Lead: 331 ppm vs 120 ppm
Zinc: 367 ppm vs 340 ppm

MW217 (0.00-0.60 m bgs)

Lead: 203 ppm vs 120 ppm

In accordance with Ontario Regulation 153/04, as amended, Section 48, the average of the analytical results from BH224 and BH225, which are within a 1 m radius from MW217, for Lead at the same sampling depth as the identified exceedance is below the applicable MECP SCS thus it is considered that MW217 has met the applicable MECP SCS for all analyzed parameters.

VOCs(I)

VOCs in soil at the Site may potentially be associated with the historical potential on-site use of oil tanks, and historical operation of off-site fuel service stations and commercial autobody shops.

The VOCs concentrations in all analyzed soil samples were below the applicable MECP Table 3 SCS.

PHCs (F1-F4) and BTEX

PHCs (F1-F4) and BTEX in soil at the Site may potentially be associated with the historical on-site importation of fill materials of unknown quality, historical potential on-site use of oil tanks, and historical operation of off-site fuel service stations and commercial autobody shops.

The PHCs (F1-F4) concentrations in all analyzed soil samples were below the applicable MECP Table 3 SCS.

PAHs

PAHs in soil at the Site may potentially be associated with the historical on-site importation of fill materials of unknown quality, historical potential on-site use of oil tanks, and historical operation of off-site fuel service stations and commercial autobody shops.

Based on the analytical results, several exceedances in the soil were identified. The soil exceedances are summarized below:

BH210 (0.00-0.60 m bgs)

Fluoranthene: 1.4 ppm vs 0.69 ppm

Benzo[a]pyrene: 0.54 ppm vs 0.3 ppm

MW213 (0.00-0.60 m bgs)

Fluoranthene: 2.1 ppm vs 0.69 ppm

Benzo[a]pyrene: 0.48 ppm vs 0.3 ppm

PCBs

PCBs in soil at the Site may potentially be associated with the historical on-site importation of fill materials of unknown quality and historical off-site transformer oil spill.

The PCBs concentrations in all analyzed soil samples were below the applicable MECP Table 3 SCS.

Hg

Hg in soil at the Site may potentially be associated with the historical on-site importation of fill materials of unknown quality.

The Hg concentrations in all analyzed soil samples were below the applicable MECP Table 3 SCS.

Inorganic Parameters

Three (3) soil samples tested for pH were within the acceptable range. Forty six (46) soil samples were submitted for EC and SAR analysis. Based on the analytical results, several exceedances in the soil were identified. The soil exceedances are summarized below:

BH202 (0.00-0.60 m bgs)
EC: 1.83 mS/cm vs 0.7 mS/cm

BH203 (0.00-0.60 m bgs)
EC: 0.83 mS/cm vs 0.7 mS/cm

BH207 (0.00-0.60 m bgs)
EC: 1.6 mS/cm vs 0.7 mS/cm
SAR: 8.1 vs 5

BH209 (0.00-0.60 m bgs)
EC: 3.2 mS/cm vs 0.7 mS/cm

MW211 (0.00-0.60 m bgs)
EC: 2.3 mS/cm vs 0.7 mS/cm
SAR: 10 vs 5

BH222 (0.00-0.60 m bgs)
EC: 0.8 mS/cm vs 0.7 mS/cm

BH223 (0.00-0.60 m bgs)

EC: 1.1 mS/cm vs 0.7 mS/cm

BH223 (0.00-0.60 m bgs) Duplicate

EC: 1 mS/cm vs 0.7 mS/cm

6.7. Groundwater Quality

Metals

Metals parameters in groundwater at the Site may potentially be associated with the historical on-site importation of fill materials of unknown quality, historical potential on-site use of oil tanks, and historical operation of off-site fuel service stations and commercial autobody shops.

The Metals concentrations in all analyzed groundwater samples were below the applicable MECP Table 3 SCS.

VOCs(I)

VOCs in groundwater at the Site may potentially be associated with the historical on-site importation of fill materials of unknown quality, historical potential on-site use of oil tanks, and historical operation of off-site fuel service stations and commercial autobody shops.

The VOCs concentrations in all analyzed groundwater samples were below the applicable MECP Table 3 SCS.

PHCs (F1-F4) and BTEX

PHCs (F1-F4) and BTEX in groundwater at the Site may potentially be associated with the historical on-site importation of fill materials of unknown quality, historical potential on-site use of oil tanks, and historical operation of off-site fuel service stations and commercial autobody shops.

The PHCs (F1-F4) concentrations in all analyzed groundwater samples were below the applicable MECP Table 3 SCS.

PAHs

PAHs in groundwater at the Site may potentially be associated with the historical on-site importation of fill materials of unknown quality, historical potential on-site use of oil tanks, and historical operation of off-site fuel service stations and commercial autobody shops.

The PAHs concentrations in all analyzed groundwater samples were below the applicable MECP Table 3 SCS.

PCBs

PCBs in groundwater at the Site may potentially be associated with the historical on-site importation of fill materials of unknown quality and historical off-site transformer oil spill.

The PCBs concentrations in all analyzed groundwater samples were below the applicable MECP Table 3 SCS.

Hg

Hg in groundwater at the Site may potentially be associated with the historical on-site importation of fill materials of unknown quality.

The Hg concentrations in all analyzed groundwater samples were below the applicable MECP Table 3 SCS.

CrVI

CrVI in groundwater at the Site may potentially be associated with the historical off-site operation of a commercial autobody shop.

The CrVI concentrations in all analyzed groundwater samples were below the applicable MECP Table 3 SCS.

6.8. Sediment Quality

No sediment samples were collected as part of the Phase Two ESA.

6.9. Quality Assurance and Quality Control Results

6.9.1. Description of Types of Quality Control Samples Collected

QA/QC soil and groundwater samples were collected and analyzed during the field program as follows:

- Six (6) QA/QC field duplicate soil samples were collected;
- Six (6) QA/QC field duplicate groundwater samples were collected;
- Six (6) trip blank water samples were analyzed for VOCs.

All samples were handled in accordance with the analytical protocol. A chain of custody form was filled out for all samples prior to submitting to the laboratory. The chain of custody documented movement from selection of the sample to receipt at the laboratory and provided sample identification, requested analysis, and condition of samples upon arrival at the laboratory.

QA/QC of the laboratory analysis of soil and groundwater samples was carried out by Fisher Environmental Laboratories and ALS Global to evaluate the accuracy of the analytical data. The results of laboratory's soil and groundwater QA/QC program are reported in the Certificates of Analysis in Appendix C.

The percent recoveries provided by the laboratories for the method blank spikes and matrix spikes were within QC limits, indicating satisfactory laboratory data quality with respect to extraction and analysis. The method blank concentrations were below laboratory method detection limits, which indicates that little to no contamination was introduced to the sample during laboratory processing.

The laboratories completed replicate analysis for all submitted analyses in soil and groundwater. The detected parameter concentrations in the laboratory replicate samples were consistent with the concentrations in the original sample, which indicates acceptable laboratory precision.

The laboratory certificates of analysis contain a complete record of the submission and analysis, including all correspondence between the laboratory and the qualified person or anyone under the supervision and control of the qualified person with respect to the sample collection, chain of custody, handling and analysis including,

(a) the laboratory name, address, contact and phone number;

(b) client name, client contact, address and phone number;

(c) sample identification number for tracking purposes;

(d) sample type and location;

(e) sampling date;

(f) date the sample was received;

(g) date the sample was analyzed;

(h) method identification and method reference as specified in the Analytical Protocol;

(i) chemical parameter measured;

(j) reporting limits, including adjustment for sample size, moisture content or dilution factor;

(k) method specific quality assurance and quality control requirements as specified in the Analytical Protocol;

(l) authorization to release the certificate including,

(i) the name, function, and signature or equivalent of any person authorizing the release, and

(ii) a statement that the results relate only to the items tested and to all the items tested;

(m) certification that the data met all analytical requirements in the Analytical Protocol with, if applicable, a detailed description of and rationale for qualification for required exceptions;

and

(n) all information recorded by the laboratory with respect to the condition of samples brought to the laboratory, including information recorded with respect to,

(i) sample quality, holding time, preservation and storage, and

(ii) sample containers.

Certificates of analysis have been received for each sample submitted for analysis. All certificates of analysis received have been included in full in Appendix C of this report.

6.9.2. Results of Other Quality Assurance/Quality Control Measures Taken During Field Investigation

Borehole Drilling

Borehole locations were cleared for underground utilities through the services of a private utility locates company as well as public utility locates services. No limitations or deviations from the sampling and analysis plan were related to underground utilities or structures have affected the decision-making process.

Soil Sampling

To minimize cross-contamination, the augers were cleaned with a high-pressure washer, then rinsed with potable water prior to advancing the depth of the borehole, and between borehole locations. During the drilling program, the split spoon samplers were cleaned with an Alconox solution using a scrub brush, then rinsed with distilled water between samples.

A representative portion of each recovered soil sample was immediately placed in laboratory supplied sample containers. The remaining portion of the soil sample was placed into re-sealable bags for field screening of combustible soil vapour concentrations. New disposable latex gloves and a cleaned stainless steel trowel were used during each sampling event to remove the soil cores from the sampler and to transfer the samples into re-sealable bags and/or laboratory supplied sample containers. New single use hermetic soil samplers were used to transfer soil to laboratory supplied sample containers for analysis of PHC (F1) and/or VOCs.

Field Screening Measurements

Each of the recovered soil samples were visually classified and screened in the field for headspace vapour concentration (combustible soil vapour and total organic vapour) using a MiniRae 2000 PID. Selection of samples to be submitted for laboratory analysis was based on the headspace vapour concentration and/or physical evidence of odours/staining. If no odours/staining were noted in the soil samples, the samples with the highest field screening measurement (i.e. highest headspace vapour concentration) were selected for laboratory analysis. If no soil vapour concentrations were detected, then the depths at which CPCs were expected were selected for laboratory analysis. In addition, when odours/staining or soil headspace vapour concentrations were elevated, additional soil samples were selected from below the anticipated impacted zone for laboratory analysis, for vertical delineation purposes. Soil vapour concentrations readings taken during the soil sampling were included in the logs of boreholes.

Monitoring Well Installation and Development

The presence of the bentonite seal reduced the likelihood of any water impacts from the surface reaching the monitoring well annulus. Only new monitoring well materials were used; these materials were factory-cleaned and delivered to the site wrapped in plastic. New latex or nitrile gloves were worn when handling well screen and riser materials. No PVC cements, solvents or lubricants were used in the construction of wells.

Prior to sampling, the installed monitoring wells were developed to remove any water and/or drilling fluids added during drilling/installation, and any fine grained material from around the screened interval, by purging up to ten (10) well casing volumes of groundwater using dedicated LDPE tubing and a submersible pump. The volume of fluid evacuated from each well was measured using a calibrated bucket and the volumes were recorded on standard field forms.

Collection of Groundwater Samples

Samples for VOCs analysis were collected first and directly into pre-preserved sample containers. All sample containers were filled by allowing the pump discharge to flow gently down the inside of the container with minimal turbulence. During purging and sampling, the HDPE tubing remained filled with water to avoid aeration of the groundwater.

As the analysis of metals was an objective, filtered water samples were collected. An in-line 0.45 µm filter (transparent housing) was used. The filter was pre-rinsed with groundwater prior to sample collection. The filter was free of air bubbles before samples were collected.

Sampling progressed at the Site from the monitoring well that was expected to be least contaminated to the well that was expected to be most contaminated to minimize the potential for cross-contamination. The monitoring equipment was decontaminated between each monitoring well. Dedicated sampling HDPE and silicone tubing was used for each monitoring well.

6.10. Phase Two Conceptual Site Model

INTRODUCTION

The Site is occupied by four (4) commercial and/or residential buildings. 2096 Lakeshore Road consists of a one (1) storey residential building that is unoccupied. 2100 Lakeshore Road is undeveloped, however historically a residential building was present. 2093 Old Lakeshore Road consists of a two (2) storey residential building and one (1) parking garage. 2097 Old Lakeshore Road consists of a two (2) storey mixed commercial and residential use building. The ground floor is occupied by a salon and spa, Waters Edge, and the second floor is occupied by a residential tenant. 2101 Old Lakeshore Road consists of a two (2) storey commercial building occupied by a restaurant, The Carriage House.

The Site has been used for residential and commercial purposes, and it is our understanding that a redevelopment is proposed consisting of a twenty seven (27) storey mixed use commercial and residential building with five (5) levels of underground parking.

This Phase Two CSM has been prepared based on information and data collected to date as part of Fisher's previous Phase One ESA (Project FE-P 17-8409 dated October 6, 2017), and the laboratory analysis program performed as part of the Phase Two ESA. The Phase Two CSM provides a narrative, graphical and tabulated description, integrating information related to the Site's geologic and hydrogeologic conditions, APECs/PCAs, the presence and distribution of COCs, contaminant fate and transport, and potential exposure pathways. These components are described in the following sections. The presentation of the Phase Two CSM makes reference to the CSM Figures which are provided in Section 12 of this report.

SITE DESCRIPTION

The Site is municipally addressed as 2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario. The Site is legally described as Part of Lot 6, 7, 8, 9, 10, Block Q, Plan 92, City of Burlington. The PIN for 2093 Old Lakeshore Road is 07061-0011(LT), for 2096 Lakeshore Road is 07061-0010(LT), for 2097 Old Lakeshore Road is 07061-0013(LT), for 2100 Lakeshore Road is 07061-0012(LT), and 2101 Old Lakeshore Road is 07061-0086(LT).

The Site is bound by Lakeshore Road to the north and Old Lakeshore Road to the south, approximately 360 m northeast of the intersection of Lakeshore Road and Brant Street. A commercial building utilized as a sales and presentation centre for a proposed residential redevelopment is adjacent to the east and a public parking lot is adjacent to the west. The total Site area is 0.3357 hectares.

PHYSICAL SETTINGS

Topography, Drainage and Subsurface Structures

The Site area is flat, generally level with surrounding properties, and has an average elevation of approximately 81 m asl. Surface runoff from the roof of the buildings and gravel covered areas drains to unpaved areas on Site that percolate towards the water table, or to storm sewers located along Lakeshore Road and Old Lakeshore Road.

Based on grade elevation values obtained from Google Earth and MNRF, the surrounding area slopes eastward, in the east-west direction along Lakeshore Road from 82 m asl at the intersection with Elizabeth Street to 79 m asl at the intersection with Torrance Street. Grade elevations in the north-south direction slopes southward, from 82 m asl at the intersection of Martha Street and The Waterfront Trail to 76 m asl at the edge of Lake Ontario.

Geological and Hydrogeological Setting

The soil samples recovered from the boreholes generally consisted of sandy silt/clayey silt or granular fill materials, underlain by silty clay/clayey silt overburden. Weathered shale bedrock was underlying the silty clay/clayey silt overburden.

Fill Materials

The fill materials noted during boreholes drilling generally consisted of sandy silt/clayey silt or granular fill materials, except at the locations of MW103 and MW104, where they consisted of brown to red sand and silt, trace gravel, to a maximum depth of 0.9 m bgs. No fill materials were encountered in BH203, MW216, BH224, and BH225.

Unit I: Native Overburden (Aquifer)

The fill materials were underlain by the overburden consisting of reddish brown clayey silt till, extending to maximum depth of 4.88 m bgs. The native overburden was first encountered at a depth of 0.61 m bgs. The maximum encountered depth of the native overburden is 4.27 m.

Unit II: Bedrock (Aquitard)

The overburden was underlain by red weathered shale bedrock, which was encountered at 2.13 m bgs or deeper.

Considering the hard clayey silt till encountered at the Site, the depth of the first moist samples, and the fact that all monitoring wells installed above (and partially into) the weathered shale had groundwater while the monitoring wells installed within the shallower overburden were dry (MW107 and MW109), it appears that the first-encountered aquifer is limited to the overburden-weathered shale contact. The vadose zone comprises much of the overburden, which has very low hydraulic conductivity (10^{-6} – 10^{-8} cm/sec), and the portion of the overburden that would constitute the aquifer zone (based on texture and moisture of soil samples) would have a similarly low conductivity.

Additional aquifers are expected to be present within the bedrock, but it is unlikely that they have been impacted by PCAs identified in Fisher's previous Phase One ESA (Project FE-P 17-8409 dated October 6, 2017). Nevertheless, one (1) groundwater sample was obtained from an existing monitoring well, installed as part of a geotechnical investigation, which was screened along a water-bearing fractured layer within the bedrock. The well was screened from 9.19 m bgs to 12.19 m bgs. The purpose of a limited investigation within the first encountered fractured rock aquifer, i.e. one (1) sampling location, was to obtain a baseline quality of groundwater with regards to naturally occurring CPCs in the weathered shale. Considering the weathered shale bedrock is the aquitard, the investigation was primarily limited to overburden soils. Shale has a typical hydraulic conductivity of 10^{-7} – 10^{-11} cm/sec.

Groundwater elevations varied from 78.90 m asl in MW108 to 81.11 m asl in MW213. Based on the field measurements the groundwater flow direction was determined to have three (3) major components: an east/southeast component at the eastern portion of the Site that naturally follows the declining grade elevation along Lakeshore Road from west to east; a south/southwest component towards Lake Ontario, that is approximately 50 m south of the Site, at the southern portion of the Site; and a northwest component at the northwestern portion of the Site. The localized shallow groundwater flow direction may be influenced by variations in vertical and horizontal stratigraphy, depth of wells' screened intervals, well trauma, and/or seasonal variations.

Minimum horizontal hydraulic gradient was measured between wells MW211 and MW106, and it was determined to be 0.0056. Maximum horizontal hydraulic gradient was measured between wells MW214 and MW108 and it was determined to be 0.046. Average horizontal hydraulic gradient was 0.029.

Minimum vertical hydraulic gradient was measured between wells MW214 and MW103, and it was determined to be 0.50. Maximum vertical hydraulic gradient was measured between wells MW212 and MW108 and it was determined to be 1.01. Average vertical hydraulic gradient was 0.76.

SITE CONDITION

From Fisher's previous Geotechnical Investigation (Project FE-P 17-8421 dated November 1, 2017) conducted at the Site, three (3) representative soil samples were submitted for grain size distribution and hydrometer analysis to ALS Global. The soil samples were obtained from overburden soils across the Site. Analytical results indicate that the ratio of fine-textured soils (silt and clay) account for 82% to

88% of total soils. Considering the soil types encountered at the boreholes locations, as classified in the USDA Soil Survey Manual, and the distribution of boreholes across the Site, the applicable SCS have been applied as if the soil is medium and fine textured.

The Site and properties within a 250 m boundary from the property boundaries of the Site are supplied with water sourced from a surface water body from the municipality. Additionally, well records from Fisher's previous Phase One ESA (Project FE-P 17-8409 dated October 6, 2017) indicated that no domestic wells were within the 250 m boundary.

On April 9, 2019, written notice of intention to utilize non-potable groundwater SCS were submitted to the Region of Halton and the City of Burlington city clerks' offices. A response from the Region of Halton received on April 23, 2019 indicated that Halton Region does not object to the intention to apply non-potable groundwater use criteria. No correspondence has been received from the City of Burlington by the release date of this report.

In accordance with Section 41 of the regulation, the Site is not within, or is adjacent to, an area of natural significance, nor does it include land that is within 30 m of an area of natural significance or part of such an area. Soil pH samples collected from the Site were within the acceptable for the application of MECP Table 3 SCS. The Site is not a shallow soil property as defined in Section 43.1 of the regulation; nor does it include all or part of a water body or is adjacent to a water body or includes land that is within 30 metres of a water body. The Site is not an enhanced investigation property.

6.10.1. Assessment of Potentially Contaminating Activities, Areas of Potential Environmental Concerns and Subsurface Structures

Off-site PCAs within the Phase One Study Area that may contribute to an APEC on-site were identified. Additionally, on-site PCAs have been identified. The following PCAs and their locations were identified that may contribute to an APEC on-site: (a) PCA-10: Commercial Autobody Shops, off-site at 2092 Old Lakeshore Road (20 m south) and 2119 Old Lakeshore Road (40 m east); (b) PCA-28: Gasoline and Associated Products Storage in Fixed Tanks, on-site at current buildings and off-site at 2092 Old Lakeshore Road (20 m south), 2119 Old Lakeshore Road (40 m east), 2072 Lakeshore Road (50 m west) and 2042 Lakeshore Road (120 m west); (c) PCA-30: Importation of Fill Materials of Unknown Quality, on-site at majority of Site; and (d) PCA-55: Transformer Manufacturing, Processing and Use, off-site at 2119 Old Lakeshore Road (40 m east).

Three (3) transport pathways, potentially providing preferential migration of CPCs from the aforementioned on-site and off-Site PCAs, were identified. These include: off-site underground utility mains along Lakeshore Road and Old Lakeshore Road, on-site underground utilities, and on-site building foundations.

Based on the location of PCAs, twelve (12) APECs were identified. Refer to Table 9 below and to the attached Figure B2, Section 12 (Phase Two CSM Figures) for presentation of APECs locations.

Table 9: PCAs, APECs, and associated CPCs

APEC	Location of APEC	PCA	Location of PCA (on-site or off-site)	CPCs	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC A	Northern and central portion of Site	PCA-30: Importation of Fill Materials of Unknown Quality	On-site	Metals, PHCs (F1-F4) and BTEX, VOCs, PAHs, PCBs, Hg, EC, SAR	Soil and groundwater
APEC B	Southwest portion of the Site	PCA-30: Importation of Fill Materials of Unknown Quality	On-site	Metals, PHCs (F1-F4) and BTEX, VOCs, PAHs, PCBs, Hg, EC, SAR	Soil and groundwater
APEC C-1	Southern portion of the Site	PCA-10: Commercial Autobody Shops	Off-site	Metals, PHCs (F1-F4) and BTEX, PAHs, VOCs, CrVI	Soil and groundwater
APEC C-2		PCA-28: Gasoline and Associated Products Storage in Fixed Tanks			
APEC D	Western portion of the Site	PCA-28: Gasoline and Associated Products Storage in Fixed Tanks	Off-site	Metals, PHCs (F1-F4) and BTEX, PAHs, VOCs	Soil and groundwater
APEC E-1	Eastern portion of the Site	PCA-10: Commercial Autobody Shops	Off-site	Metals, PHCs (F1-F4) and BTEX, PAHs, VOCs, PCBs	Soil and groundwater
APEC E-2		PCA-28: Gasoline and Associated Products Storage in Fixed Tanks			
APEC E-3		PCA-55: Transformer Manufacturing, Processing and Use			

APEC	Location of APEC	PCA	Location of PCA (on-site or off-site)	CPCs	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC F	Southeast corner at 2096	PCA-28: Gasoline and Associated Products Storage in Fixed Tanks	On-site	Metals, PHCs (F1-F4) and BTEX, PAHs, VOCs	Soil and groundwater
APEC G	Southwest corner at 2093	PCA-28: Gasoline and Associated Products Storage in Fixed Tanks	On-site	Metals, PHCs (F1-F4) and BTEX, PAHs, VOCs	Soil and groundwater
APEC H	Southwest corner at 2097	PCA-28: Gasoline and Associated Products Storage in Fixed Tanks	On-site	Metals, PHCs (F1-F4) and BTEX, PAHs, VOCs	Soil and groundwater
APEC I	Southeast corner at 2101	PCA-28: Gasoline and Associated Products Storage in Fixed Tanks	On-site	Metals, PHCs (F1-F4) and BTEX, PAHs	Soil and groundwater

The scope of work for the current Phase Two ESA was prepared in order to assess the environmental quality of soil and groundwater at the identified APECs. The current Phase Two ESA investigation include thirty four (34) boreholes, seventeen (17) of which were completed as groundwater monitoring wells. Refer to the attached Figure B2, Phase Two CSM Figures section, for borehole and monitoring well locations. The boreholes were drilled within the APECs.

6.10.2. Identification, Source, Distribution and Migration of Contaminants of Concern

The analytical program of the Phase Two ESA included testing of soil and groundwater for Metals, Hydride-Forming Metals, PHCs (F1 to F4) and BTEX, VOCs, PAHs, PCBs, Hg, CrVI, pH, EC, and/or SAR parameters. For the purpose of this Phase Two CSM, COCs, if present, would be identified by screening analytical results reported for the soil and groundwater samples collected at the Site against the MECP Table 3: Full Depth Generic SCS in a Groundwater Condition for Residential/Parkland/Institutional Property Use for soil and All Types of Property Use for groundwater, in a medium to fine textured soil condition as presented in the MECP's "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the EPA", dated April 15, 2011.

The laboratory soil analytical results indicate that several Metals and PAHs parameters, and EC and SAR were in exceedance. All submitted groundwater samples were within the applicable MECP Table 3 SCS. The identified COCs in soil were observed to be within the fill materials, and are not expected to laterally or vertically migrate. The delineation boreholes, BH219 to BH225, defined the lateral and vertical extent of the identified exceedances. The resulting exceedances of the EC and SAR parameters are likely due to salting operations during the winter months as the majority of the property is asphalt paved. Specifically, cadmium, lead, zinc, fluoranthene, benzo[a]pyrene, EC and SAR are carried forward as COCs.

6.10.3. Climatic or Meteorological Conditions which may Influence Contaminants Distribution

In general, climatic or meteorological conditions have the potential to affect contaminant distribution. Two ways by which climatic or meteorological conditions may affect contaminant distribution include the downward leaching of contaminants by means of the infiltration of precipitation, and the migration of contaminants via groundwater and/or flow due to seasonal groundwater level fluctuations.

It is not expected that infiltration and precipitation will contribute to any contaminant migration as the fill materials identified are underlain by paved asphalt. Considering the depth the water table, seasonal fluctuations in the groundwater levels are not likely to affect the migration of contaminants.

6.10.4. Soil Vapour Intrusion into Surface and Subsurface Structures

No volatile COCs were encountered at the Site. No soil vapour intrusion into on-site buildings is expected.

6.10.5. Graphic Representation of Phase Two Conceptual Site Model

The presentation of the Phase Two CSM makes reference to the following drawings, attached in Section 12.2 of this report:

Figure B1: Site Plan of the Phase One Study Area that presents existing buildings, water bodies and areas of natural significance located in whole or in part in the phase one study area, roads (including names), uses of properties adjacent to the Phase Two Property, and areas where off-site PCAs have occurred, including USTs/ASTs locations, where present.

Figure B2: Site Plan of the Phase Two Property with borehole/monitoring well locations, PCAs, APECs, transport pathways.

Figure B3: Site Plan of the Phase Two Property with borehole/monitoring well locations, groundwater contours and determined groundwater flow directions.

Figure B4: Site Plan of the Phase Two Property with lateral extents of all identified exceedances.

Figure C1: Cross-section A – A'; the cross-section is parallel to the determined groundwater flow and illustrates the stratigraphy, boreholes/monitoring well locations, soil sample depths, groundwater static levels, and wells' screen intervals.

Figure C2: Cross-section B – B'; the cross-section is perpendicular to the determined groundwater flow and illustrates the stratigraphy, boreholes/monitoring well locations, soil sample depths, groundwater static levels, and wells' screen intervals.

Figure C3: Cross-section C – C'; the cross-section is perpendicular to the determined groundwater flow and illustrates the stratigraphy, boreholes/monitoring well locations, soil sample depths, groundwater static levels, and wells' screen intervals.

Figure C4: Cross-section D – D'; the cross-section is perpendicular to the determined groundwater flow and illustrates the stratigraphy, boreholes/monitoring well locations, soil sample depths, groundwater static levels, and wells' screen intervals.

Figure D1: Diagram with Human Health Conceptual Site Model without Risk Management Measures.

Figure D2: Diagram with Ecological Health Conceptual Site Model without Risk Management Measures.

6.10.6. Narrative Form of the Phase Two Conceptual Site Model

Table 10: Phase Two CSM

Areas where PCAs have occurred within the Phase One Study Area	PCA-10: Commercial Autobody Shops - off-site at 2092 Old Lakeshore Road (20 m south) and 2119 Old Lakeshore Road (40 m east); PCA-28: Gasoline and Associated Products Storage in Fixed Tanks - on-site at current buildings and off-site at 2092 Old Lakeshore Road (20 m south), 2119 Old Lakeshore Road (40 m east), 2072 Lakeshore Road (50 m west) and 2042 Lakeshore Road (120 m west); PCA-30: Importation of Fill Materials of Unknown Quality - on-site at majority of Site; PCA-55: Transformer Manufacturing, Processing and Use - off-site at 2119 Old Lakeshore Road (40 m east)
Surface and subsurface structures that may affect contaminant distribution and transport:	T-1: off-site underground utility mains along Lakeshore Road and Old Lakeshore Road; T-2: on-site underground utilities; T-3: on-site building foundations
Type and locations of samples taken at the Phase Two Property:	
Thirty four (34) boreholes were advanced on-site, seventeen (17) of which were completed as groundwater monitoring wells. At least one (1) soil sample from each borehole, for a total of sixty eight (68) soil samples, including eight (8) duplicates, were submitted to the laboratory for analysis of metals, PHCs (F1-F4) and BTEX, VOCs, PAHs, PCBs, Hg, pH, EC, and/or SAR. A total of twenty nine (29) groundwater samples, including six (6) duplicates and six (6) trip blanks were submitted to the laboratory for analysis of metals, PHCs (F1-F4) and BTEX, VOCs, PAHs, PCBs, Hg, and/or CrVI.	

Type and locations of remaining impacts noted at the Phase Two Property considering present investigations:

Based on the analytical results, several exceedances in the soil were identified. The exceedances in soil are summarized below:

BH202 (0.00-0.60 m bgs)
Cadmium: 4.9 ppm vs 1.2 ppm
Lead: 744 ppm vs 120 ppm
Zinc: 4,341 ppm vs 340 ppm
EC: 1.83 mS/cm vs 0.7 mS/cm

BH203 (0.00-0.60 m bgs)
Cadmium: 1.4 ppm vs 1.2 ppm
Zinc: 549 ppm vs 340 ppm
EC: 0.83 mS/cm vs 0.7 mS/cm

BH204 (0.00-0.60 m bgs)
Lead: 222 ppm vs 120 ppm
Zinc: 392 ppm vs 340 ppm

BH205 (0.00-0.60 m bgs)
Lead: 210 ppm vs 120 ppm

BH206 (0.00-0.60 m bgs)
Lead: 248 ppm vs 120 ppm
Zinc: 430 ppm vs 340 ppm

BH207 (0.00-0.60 m bgs)
Lead: 162 ppm vs 120 ppm
EC: 1.6 mS/cm vs 0.7 mS/cm
SAR: 8.1 vs 5

BH209 (0.00-0.60 m bgs)
EC: 3.2 mS/cm vs 0.7 mS/cm

BH210 (0.00-0.60 m bgs)
Fluoranthene: 1.4 ppm vs 0.69 ppm
Benzo[a]pyrene: 0.54 ppm vs 0.3 ppm

MW211 (0.00-0.60 m bgs)
EC: 2.3 mS/cm vs 0.7 mS/cm
SAR: 10 vs 5

MW212 (0.00-0.60 m bgs)
Lead: 211 ppm vs 120 ppm

MW213 (0.00-0.60 m bgs)
Fluoranthene: 2.1 ppm vs 0.69 ppm
Benzo[a]pyrene: 0.48 ppm vs 0.3 ppm

MW214 (0.00-0.60 m bgs)
Lead: 331 ppm vs 120 ppm
Zinc: 367 ppm vs 340 ppm

MW217 (0.00-0.60 m bgs)
Lead: 203 ppm vs 120 ppm

BH222 (0.00-0.60 m bgs)
EC: 0.8 mS/cm vs 0.7 mS/cm

BH223 (0.00-0.60 m bgs)
EC: 1.1 mS/cm vs 0.7 mS/cm

BH223 (0.00-0.60 m bgs) Duplicate
EC: 1 mS/cm vs 0.7 mS/cm

In accordance with Ontario Regulation 153/04, as amended, Section 48, the average of the analytical results from BH224 and BH225, which are within a 1 m radius from MW217, for Lead at the same sampling depth as the identified exceedance, is below the applicable MECP SCS thus it is considered that MW217 has met the applicable MECP SCS for all analyzed parameters.

Based on the analytical results, all of the submitted groundwater samples were below the applicable MECP SCS. All trip blank water samples were below the analytical laboratory's detection limits for all analyzed VOC parameters

Geological and hydrogeological interpretations:

Considering the hard clayey silt till encountered at the Site, the locations of the first moist samples, and the fact that all monitoring wells installed above (and partially into) the weathered shale had groundwater while the monitoring wells installed within the shallower overburden were dry (MW107 and MW109), it appears that the first-encountered aquifer is limited to the overburden-weathered shale contact. The vadose zone comprises much of the overburden, which has very low hydraulic conductivity (10^{-6} – 10^{-8} cm/sec), and the portion of the overburden that would constitute the aquifer (based on texture and moisture of soil samples) would have similarly low conductivity.

Additional aquifers are expected to be present within the bedrock, but it is unlikely that they have been impacted by PCAs identified in Fisher's previous Phase One ESA (Project FE-P 17-8409 dated October 6, 2017). Nevertheless, one (1) groundwater sample was obtained from an existing monitoring well, installed as part of a geotechnical investigation, which was screened along a water-bearing fractured layer within the bedrock. The well was screened from 9.19 m bgs to 12.19 m bgs. The purpose of a limited investigation within the first encountered fractured rock aquifer, i.e. one (1) sampling location, was to obtain a baseline quality of groundwater with regards to naturally occurring CPCs in the weathered shale.

Considering the weathered shale bedrock is the aquitard, the investigation was primarily limited to overburden soils. Shale has a typical hydraulic conductivity of 10^{-7} – 10^{-11} cm/sec.

Groundwater elevations varied from 78.90 m asl in MW108 to 81.11 m asl in MW213. Based on the field measurements the groundwater flow direction was determined to have three (3) major components: an east/southeast component at the eastern portion of the Site that naturally follows the declining grade elevation along Lakeshore Road from west to east; a south/southwest component towards Lake Ontario, that is approximately 50 m south of the Site, at the southern portion of the Site; and a northwest component at the northwestern portion of the Site. The localized shallow groundwater flow direction may be influenced by variations in vertical and horizontal stratigraphy, depth of wells' screened intervals, well trauma, and/or seasonal variations

Human and ecological receptors
Human receptors at the Site consist of workers, visitors, and residents. Ecological receptors at the site consist of trees located along the north and south property borders. Additionally, small terrestrial and aerial animals, eg. squirrels and birds, are likely present
Exposure points
Contaminants in subsurface soil can be transported to ecological receptors by plant uptake and translocation by burrowing animals. Contaminants at depths greater than 3.05 m (10 ft) are considered inaccessible to ecological receptors because that depth generally is below the root zone of plants and the burrowing depth of ground-dwelling animals. Insects and burrowing animals have the potential for bringing contaminated subsurface soils and buried waste to the surface. Once contaminated soil is brought close to the surface, transport and exposure scenarios for ecological receptors are the same as for surface soil. For subsurface contamination, inhalation and direct contact (by burrowing animals) are more important exposure routes than for surface contamination. These receptors include burrowing animals and deep-rooting plants. Because subsurface soil contamination may be translocated to the surface by burrowing animals and plant uptake, other terrestrial species also have some potential for exposure through this pathway. Ecological receptors can be exposed to surface contaminated media directly through incidental ingestion of soil, through physical contact or inhalation. Other exposure mechanisms may include: adsorption / desorption, atmospheric deposition, bioconcentration, degradation, diffusion, dilution, dispersion, evaporation, foliar fixation, gas / particulate partitioning, etc.
Uncertainty or absence of information:
It is inferred that subsurface conditions at the Site approach the regional geological and hydrogeological conditions. Therefore, in the absence of other readily identifiable contaminant transport pathways from properties within the phase one study area to the Site, the actual contribution of natural (or anthropogenic) pathways to contaminant transport and distribution under the Site is somewhat uncertain and may affect the conclusions, however it is unlikely

7. CONCLUSIONS

7.1. Location and Concentration of Contaminants of Concern at the Phase Two Property

Based on the analytical results, several exceedances in the soil were identified. The exceedances in soil are summarized below:

<u>BH202 (0.00-0.60 m bgs)</u>

Cadmium: 4.9 ppm vs 1.2 ppm

Lead: 744 ppm vs 120 ppm

Zinc: 4,341 ppm vs 340 ppm

EC: 1.83 mS/cm vs 0.7 mS/cm

BH203 (0.00-0.60 m bgs)

Cadmium: 1.4 ppm vs 1.2 ppm

Zinc: 549 ppm vs 340 ppm

EC: 0.83 mS/cm vs 0.7 mS/cm

BH204 (0.00-0.60 m bgs)

Lead: 222 ppm vs 120 ppm

Zinc: 392 ppm vs 340 ppm

BH205 (0.00-0.60 m bgs)

Lead: 210 ppm vs 120 ppm

BH206 (0.00-0.60 m bgs)

Lead: 248 ppm vs 120 ppm

Zinc: 430 ppm vs 340 ppm

BH207 (0.00-0.60 m bgs)

Lead: 162 ppm vs 120 ppm

EC: 1.6 mS/cm vs 0.7 mS/cm

SAR: 8.1 vs 5

BH209 (0.00-0.60 m bgs)

EC: 3.2 mS/cm vs 0.7 mS/cm

BH210 (0.00-0.60 m bgs)

Fluoranthene: 1.4 ppm vs 0.69 ppm

Benzo[a]pyrene: 0.54 ppm vs 0.3 ppm

MW211 (0.00-0.60 m bgs)

EC: 2.3 mS/cm vs 0.7 mS/cm

SAR: 10 vs 5

MW212 (0.00-0.60 m bgs)

Lead: 211 ppm vs 120 ppm

MW213 (0.00-0.60 m bgs)

Fluoranthene: 2.1 ppm vs 0.69 ppm

Benzo[a]pyrene: 0.48 ppm vs 0.3 ppm

MW214 (0.00-0.60 m bgs)

Lead: 331 ppm vs 120 ppm

Zinc: 367 ppm vs 340 ppm

MW217 (0.00-0.60 m bgs)

Lead: 203 ppm vs 120 ppm

BH222 (0.00-0.60 m bgs)

EC: 0.8 mS/cm vs 0.7 mS/cm

BH223 (0.00-0.60 m bgs)

EC: 1.1 mS/cm vs 0.7 mS/cm

BH223 (0.00-0.60 m bgs) Duplicate

EC: 1 mS/cm vs 0.7 mS/cm

In accordance with Ontario Regulation 153/04, as amended, Section 48, the average of the analytical results from BH224 and BH225, which are within a 1 m radius from MW217, for Lead at the same sampling depth as the identified exceedance, is below the applicable MECP SCS thus it is considered that MW217 has met the applicable MECP SCS for all analyzed parameters.

Based on the analytical results, all of the submitted groundwater samples were below the applicable MECP SCS. All trip blank water samples were below the analytical laboratory's detection limits for all analyzed VOC parameters.

Based on the defined lateral and vertical extent of the identified soil exceedances, it is recommended that the surficial heterogeneous impacted fill materials be excavated and disposed off-site to a MECP-licensed waste management facility. Subsequent to the soil removal, confirmatory soil samples must be collected for laboratory analysis from within the excavated area and from the clean backfill material source prior to backfilling.

7.2. Subsurface Environmental Conditions at Phase Two Property when a Risk Assessment is to be undertaken

No RA is to be undertaken for the Site.

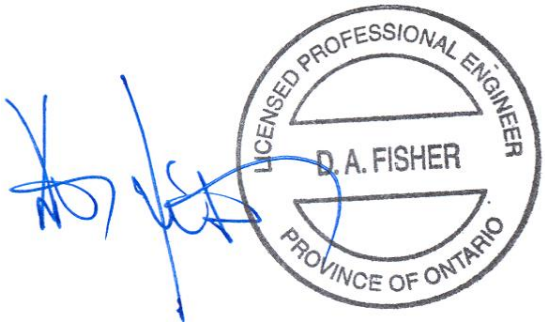
7.3. Compliance with Site Condition or Site Specific Standards as of Certification Date

Based on the laboratory analytical results, some of the soil samples were in exceedance of the applicable MECP Table 3 SCS. All submitted groundwater samples were within the applicable MECP Table 3 SCS. Considering the identified exceedances in soil, the Site is not in compliance with the applicable MECP Table 3 SCS as of the certification date April 30, 2019.

7.4. Signatures

Fisher carried out the present Phase Two ESA at the request of Core FSC Lakeshore Limited & Core FSC Lakeshore GP Inc., and by signing below the qualified person confirms the findings and conclusions of this report.

Respectfully submitted,



David Fisher, P. Eng., C. Chem.
Principal
Fisher Environmental Ltd.

8. REFERENCES

The Phase Two ESA was conducted in accordance with the applicable Regulations, Guidelines, Policies, Standards, Protocols and Objectives administrated by the MECP. Specific reference is made to the following:

- *Ontario Regulation 153/04 (RSC – Part XV.1 of the EPA), Part VII and Schedule D of the Amended Regulation;*
- *"Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario" MECP, December 1996;*
- *EPA, RSO 1990, Charter E. 19, as amended, September 2004;*
- *Soil, Groundwater and Sediment Standards for Use under Part XV.1 of the EPA, dated April 15, 2011;*
- *The Ontario Water Resources Act – R.R.O. 1990, Regulation 903 – Amended to Ontario Regulation 128.03, August 2003;*
- *Google Earth;*
- *MNRF;*
- *Topographic Survey, Aksan Pillar Corporation Ltd., October 4, 2017, reference number 17-24-12787-00;*
- *OGS: Surficial Geology of Southern Ontario (Google Earth Layer);*
- *OGS: Bedrock Geology of Ontario (Google Earth Layer);*
- *Freeze and Cherry 1979 and Holtz and Kovacs 1981;*
- *Phase One Environmental Site Assessment, Fisher Environmental Ltd.,* Project FE-P 17-8409 dated October 6, 2017;
- *Geotechnical Investigation, Fisher Environmental Ltd.,* Project FE-P 17-8421 dated November 1, 2017.

9. QUALIFICATIONS OF THE ASSESSOR

As a Qualified Person who conducts and supervises Phase Two ESAs, Mr. David Fisher, president of Fisher Environmental Ltd., is a senior Managerial and Environmental Engineering Specialist with over thirty (30) years of progressive, innovative experience in the Petrochemical and Environmental Engineering Industry. Mr. Fisher is responsible for the development and management of a progressive environmental consulting engineering company specializing in environmental site assessments and remediation, geotechnical and hydrogeological investigations, tank removals, PCB waste treatment, land reclamation, recycling, hazardous waste disposal, and associated laboratory analytical practices.

Fisher Environmental Ltd. has been established as a team of engineers and consultants since 1989, and continues to develop a strong, wide client base. The company is staffed with personnel holding graduate or postgraduate qualifications at the Markham headquarters, as well as specialist associates offering a broad range of expertise and knowledge in environmental consulting. With a background in the petroleum industry, extensive experience has been gained in the prevention and cleanup of contamination in air, water and soil.

10. LIMITATIONS

This report was prepared for use by Core FSC Lakeshore Limited & Core FSC Lakeshore GP Inc. and is based on the work as described in the Scope of Work. The conclusions presented in this report reflect existing Site conditions within the scope of this assignment.

No investigation method can eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility to an acceptable level. Professional judgment was exercised in gathering and analyzing the information obtained and the formulation of the conclusions and recommendations. Like all professional persons rendering advice, we do not act as absolute insurers of the conclusions reached, but commit ourselves to care and competence in reaching those conclusions. No warranty, whether expressed or implied, is included or intended in this report.

The scope of services performed may not be appropriate for the purposes of other users. This report should not be used in contexts other than pertaining to the evaluation of the property at the current time. Written authorization must be obtained from Fisher Environmental Ltd. prior to use by any other parties, or any future use of this document or its findings, conclusions, or recommendations represented herein. Any use that a third party makes of this report, or any reliance on or decisions made on the basis of it, are the responsibility of the third parties. Fisher Environmental Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

11. TABLES

Data Summary Tables

Table 1: Monitoring Wells Construction Details, Groundwater Levels and LNAPLs and DNAPLs Measurements

Table 2: Summary of Soil Samples Submitted for Chemical Analysis

Table 3: Soil Quality Data – Metals Analysis

Table 4: Soil Quality Data – Hydride-Forming Metals Analysis

Table 5: Soil Quality Data – Volatile Organic Compounds Analysis

Table 6: Soil Quality Data – Petroleum Hydrocarbons (F1-F4) and Benzene, Toluene, Ethylbenzene, Xylene Analysis

Table 7: Soil Quality Data – Polycyclic Aromatic Hydrocarbons Analysis

Table 8: Soil Quality Data – Polychlorinated Biphenyls Analysis

Table 9: Soil Quality Data – Other Regulated Parameters Analysis

Table 10: Soil Quality Data – pH Analysis

Table 11: Summary of Groundwater Samples Submitted for Chemical Analysis

Table 12: Groundwater Quality Data – Metals Analysis

Table 13: Groundwater Quality Data – Hydride-Forming Metals Analysis

Table 14: Groundwater Quality Data – Volatile Organic Compounds Analysis

Table 15: Groundwater Quality Data – Petroleum Hydrocarbons (F1-F4) and Benzene, Toluene, Ethylbenzene, Xylene Analysis

Table 16: Groundwater Quality Data – Polycyclic Aromatic Hydrocarbons Analysis

Table 17: Groundwater Quality Data – Polychlorinated Biphenyls Analysis

Table 18: Groundwater Quality Data – Mercury Analysis

Table 19: Groundwater Quality Data – Hexavalent Chromium Analysis

Table 1 – Monitoring Wells Construction Details, Groundwater Levels and LNAPLs and DNAPLs Measurements

Monitoring Well ID	Ground Elevation (m asl)	Well Construction (m bgs)	Groundwater Static Level – 25 March 2019 (m bgs)	Well Depth (m bgs)	Ground Water Static Level Elevation (m asl)	Well Depth Elevation (m asl)	LNAPL or DNAPL Thickness (m)
MW101	81.84	Riser: 0.00-1.55m, 2" ID PVC Screen: 1.55-4.55m, 10 slot, 2" ID PVC Bentonite: 0.00-1.20m, ¾" pellets Sandpack: 1.20-4.55m, #2 sand silica	1.68	4.55	80.16	77.29	ND
MW102	82.00	Riser: 0.00-1.94m, 2" ID PVC Screen: 1.94-4.94m, 10 slot, 2" ID PVC Bentonite: 0.00-1.60m, ¾" pellets Sandpack: 1.60-4.94m, #2 sand silica	1.30	4.94	80.70	77.06	ND
MW103	82.21	Riser: 0.00-2.96m, 2" ID PVC Screen: 2.96-5.96m, 10 slot, 2" ID PVC Bentonite: 0.00-2.60m, ¾" pellets Sandpack: 2.60-5.96m, #2 sand silica	3.22	5.96	78.99	76.25	ND
MW104	81.98	Riser: 0.00-8.62m, 2" ID PVC Screen: 8.62-11.62m, 10 slot, 2" ID PVC Bentonite: 0.00-8.30m, ¾" pellets Sandpack: 8.30-11.62m, #2 sand silica	3.07	11.62	78.91	70.36	ND
MW105	81.91	Riser: 0.00-1.24m, 2" ID PVC Screen: 1.24-2.74m, 10 slot, 2" ID PVC Bentonite: 0.00-0.90m, ¾" pellets Sandpack: 0.90-2.74m, #2 sand silica	1.12	2.74	80.79	79.17	ND

Notes:

Elevations shown here on are derived from municipal bench mark 914001 (City of Burlington) with geodetic elevation of 77.901 m asl. (Legal and Topographic Survey)

LNAPL and DNAPL – light or dense non-aqueous phase liquid measurements at or under the phase two property.

ND – Not Detected.

Table 1 – Monitoring Wells Construction Details, Groundwater Levels and LNAPLs and DNAPLs Measurements

Monitoring Well ID	Ground Elevation (m asl)	Well Construction (m bgs)	Groundwater Static Level – 25 March 2019 (m bgs)	Well Depth (m bgs)	Ground Water Static Level Elevation (m asl)	Well Depth Elevation (m asl)	LNAPL or DNAPL Thickness (m)
MW106	81.15	Riser: 0.00-1.56m, 2" ID PVC Screen: 1.56-4.56m, 10 slot, 2" ID PVC Bentonite: 0.00-1.20m, ¾" pellets Sandpack: 1.20-4.56m, #2 sand silica	1.72	4.56	79.43	76.59	ND
MW107	81.55	Riser: 0.00-1.04m, 2" ID PVC Screen: 1.04-2.54m, 10 slot, 2" ID PVC Bentonite: 0.00-0.70m, ¾" pellets Sandpack: 0.70-2.54m, #2 sand silica	DRY	2.54	DRY	79.01	ND
MW108	81.65	Riser: 0.00-0.62m, 2" ID PVC Screen: 0.62-3.62m, 10 slot, 2" ID PVC Bentonite: 0.00-0.30m, ¾" pellets Sandpack: 0.30-3.62m, #2 sand silica	2.75	3.62	78.90	78.03	ND
MW109	81.70	Riser: 0.00-0.94m, 2" ID PVC Screen: 0.94-2.44m, 10 slot, 2" ID PVC Bentonite: 0.00-0.60m, ¾" pellets Sandpack: 0.60-2.44m, #2 sand silica	DRY	2.44	DRY	79.26	ND
BH3(MW)	81.98	Riser: 0.00-9.19m, 2" ID PVC Screen: 9.19-12.19m, 10 slot, 2" ID PVC Bentonite: 0.00-8.90m, ¾" pellets Sandpack: 8.90-12.19m, #2 sand silica	6.10	12.19	75.88	69.79	ND

Notes:

Elevations shown here on are derived from municipal bench mark 914001 (City of Burlington) with geodetic elevation of 77.901 m asl. (Legal and Topographic Survey)

LNAPL and DNAPL – light or dense non-aqueous phase liquid measurements at or under the phase two property.

ND – Not Detected.

Table 1 – Monitoring Wells Construction Details, Groundwater Levels and LNAPLs and DNAPLs Measurements

Monitoring Well ID	Ground Elevation (m asl)	Well Construction (m bgs)	Groundwater Static Level – 25 March 2019 (m bgs)	Well Depth (m bgs)	Ground Water Static Level Elevation (m asl)	Well Depth Elevation (m asl)	LNAPL or DNAPL Thickness (m)
MW211	81.55	Riser: 0.00-1.41m, 2" ID PVC Screen: 1.41-2.91m, 10 slot, 2" ID PVC Bentonite: 0.00-1.20m, ¾" pellets Sandpack: 1.20-2.91m, #2 sand silica	1.89	2.91	79.66	78.64	ND
MW212	81.87	Riser: 0.00-1.57m, 2" ID PVC Screen: 1.57-3.07m, 10 slot, 2" ID PVC Bentonite: 0.00-1.40m, ¾" pellets Sandpack: 1.40-3.07m, #2 sand silica	1.32	3.07	80.55	78.80	ND
MW213	81.70	Riser: 0.00-0.61m, 2" ID PVC Screen: 0.61-1.51m, 10 slot, 2" ID PVC Bentonite: 0.00-0.40m, ¾" pellets Sandpack: 0.40-1.51m, #2 sand silica	0.59	1.51	81.11	80.19	ND
MW214	82.32	Riser: 0.00-1.46m, 2" ID PVC Screen: 1.46-2.96m, 10 slot, 2" ID PVC Bentonite: 0.00-1.20m, ¾" pellets Sandpack: 1.20-2.96m, #2 sand silica	1.53	2.96	80.79	79.36	ND
MW215	82.53	Riser: 0.00-0.70m, 2" ID PVC Screen: 0.70-2.20m, 10 slot, 2" ID PVC Bentonite: 0.00-0.50m, ¾" pellets Sandpack: 0.50-2.20m, #2 sand silica	1.91	2.20	80.62	80.33	ND

Notes:

Elevations shown here on are derived from municipal bench mark 914001 (City of Burlington) with geodetic elevation of 77.901 m asl. (Legal and Topographic Survey)

LNAPL and DNAPL – light or dense non-aqueous phase liquid measurements at or under the phase two property.

ND – Not Detected.

Table 1 – Monitoring Wells Construction Details, Groundwater Levels and LNAPLs and DNAPLs Measurements

Monitoring Well ID	Ground Elevation (m asl)	Well Construction (m bgs)	Groundwater Static Level – 25 March 2019 (m bgs)	Well Depth (m bgs)	Ground Water Static Level Elevation (m asl)	Well Depth Elevation (m asl)	LNAPL or DNAPL Thickness (m)
MW216	80.56	Riser: None Screen: 0.00-0.33m, 10 slot, 2" ID PVC Bentonite: None Sandpack: 0.00-0.33m, #2 sand silica	0.05	0.33	80.51	80.23	ND
MW217	79.70	Riser: None Screen: 0.00-0.97m, 10 slot, 2" ID PVC Bentonite: None Sandpack: 0.00-0.97m, #2 sand silica	0.32	0.97	79.38	78.73	ND
MW218	81.75	Riser: 0.00-0.18m, 2" ID PVC Screen: 0.18-1.68m, 10 slot, 2" ID PVC Bentonite: None Sandpack: 0.00-1.68, #2 sand silica	Dry	1.68	NA	80.07	ND

Notes:

Elevations shown here on are derived from municipal bench mark 914001 (City of Burlington) with geodetic elevation of 77.901 m asl. (Legal and Topographic Survey)

LNAPL and DNAPL – light or dense non-aqueous phase liquid measurements at or under the phase two property.

ND – Not Detected.

Table 2 – Summary of Soil Samples Submitted for Chemical Analysis

Sample Number	Sample Depth (m bgs)	Parameter Analyzed
MW101 17-7469-1	3.80-4.40m	Metals, VOCs, PHCs (F1-F4), PAHs, pH
MW102 17-7469-2	0.00-0.60m	Metals, PHCs (F1-F4), PAHs, PCBs
MW102 17-7469-3 Field Duplicate	0.00-0.60m	Metals, PHCs (F1-F4), PAHs, PCBs
MW102 17-7469-4	3.65-3.95m	Metals, VOCs, PHCs (F1-F4), PAHs
MW103 17-7469-5	0.75-1.35m	Metals, PHCs (F1-F4), PAHs, PCBs
MW103 17-7469-6	3.80-4.40m	Metals, VOCs, PHCs (F1-F4), PAHs, pH
MW104 17-7469-7	0.45-1.05m	Metals, PHCs (F1-F4), PAHs, PCBs
MW104 17-7469-8	3.00-3.60m	Metals, VOCs, PHCs (F1-F4), PAHs
MW105 17-7469-9	0.75-1.35m	Metals, PHCs (F1-F4), PAHs, PCBs, pH
MW106 17-7469-10	3.00-3.60m	Metals, VOCs, PHCs (F1-F4), PAHs, PCBs
MW107 17-7469-11	0.00-0.60m	Metals, PHCs (F1-F4), PAHs, PCBs
MW108 17-7469-12	3.00-3.60m	Metals, VOCs, PHCs (F1-F4), PAHs
MW108 17-7469-13 Field Duplicate	3.00-3.60m	Metals, VOCs, PHCs (F1-F4), PAHs
MW109 17-7469-14	0.60-1.20m	Metals, PHCs (F1-F4), PAHs, PCBs
BH203 19-1840-1	0.00-0.60m	Metals, Mercury, PHCs (F1-F4), PAHs, PCBs, EC, SAR
BH203 19-1840-2	1.50-2.10m	Metals, Mercury, PHCs (F1-F4), PAHs, PCBs, EC, SAR
BH206 19-1840-3	0.00-0.60m	Metals, PHCs (F1-F4), PAHs, EC, SAR
BH206 19-1840-4	1.50-2.10m	Metals, PHCs (F1-F4), PAHs, EC, SAR
BH207 19-1840-5	0.00-0.60m	Metals, PHCs (F1-F4), PAHs, EC, SAR

Table 2 – Summary of Soil Samples Submitted for Chemical Analysis

Sample Number	Sample Depth (m bgs)	Parameter Analyzed
BH207 19-1840-6	1.50-2.10m	Metals, PHCs (F1-F4), PAHs, EC, SAR
BH208 19-1840-7	0.75-1.35m	Metals, Mercury, PHCs (F1-F4), PAHs, PCBs, EC, SAR
BH208 19-1840-8	1.50-2.10m	Metals, Mercury, PHCs (F1-F4), PAHs, PCBs, EC, SAR
BH209 19-1840-9	0.00-0.60m	Metals, Mercury, PHCs (F1-F4), PAHs, PCBs, EC, SAR
BH209 19-1840-10	1.50-2.10m	Metals, Mercury, VOCs, PHCs (F1-F4), PAHs, PCBs, EC, SAR
BH211 19-1840-11	0.00-0.60m	Metals, PHCs (F1-F4), PAHs, EC, SAR
BH211 19-1840-12	1.50-2.10m	Metals, VOCs, PHCs (F1-F4), PAHs, EC, SAR
BH211 19-1840-13 Field Duplicate	1.50-2.10m	Metals, VOCs, PHCs (F1-F4), PAHs, EC, SAR
BH201 19-1892-1	0.00-0.60m	Metals, PHCs (F1-F4), PAHs, PCBs, EC, SAR
BH201 19-1892-2	1.50-2.10m	Metals, Mercury, VOCs, PHCs (F1-F4), PAHs, PCBs, EC, SAR
BH205 19-1892-3	0.00-0.60m	Metals, Mercury, PHCs (F1-F4), PAHs, EC, SAR
BH205 19-1892-4	1.50-2.10m	Metals, PAHs, PHCs (F1-F4), PAHs, EC, SAR
BH205 19-1892-5 Field Duplicate	1.50-2.10m	Metals, PAHs, PHCs (F1-F4), PAHs, EC, SAR
BH215 19-1892-6	0.90-1.50m	Metals, PAHs, PHCs (F1-F4), PAHs, EC, SAR
BH215 19-1892-7	1.80-2.25m	Metals, PHCs (F1-F4), PAHs, EC, SAR
BH217 19-1892-8	0.60-0.90m	Metals, PHCs (F1-F4), PAHs, EC, SAR
MW218 19-1916-1	0.90-1.20m	Metals, PHCs (F1-F4), PAHs, EC, SAR
MW218 19-1916-2	1.20-1.65m	Metals, VOCs, PHCs (F1-F4), PAHs, EC, SAR
BH202 19-1956-1	0.00-0.60m	Metals, PHCs (F1-F4), PAHs, EC, SAR
BH202 19-1956-2	1.50-2.10m	Metals, PHCs (F1-F4), PAHs, EC, SAR

Table 2 – Summary of Soil Samples Submitted for Chemical Analysis

Sample Number	Sample Depth (m bgs)	Parameter Analyzed
BH204 19-1956-3	0.00-0.60m	Metals, PHCs (F1-F4), PAHs, EC, SAR
BH204 19-1956-4	1.50-2.10m	Metals, PHCs (F1-F4), PAHs, EC, SAR
BH210 19-1956-5	0.00-0.60m	Metals, Mercury, PHCs (F1-F4), PAHs, PCBs, EC, SAR
BH210 19-1956-6	1.50-2.10m	Metals, Mercury, PHCs (F1-F4), PAHs, PCBs, EC, SAR
BH210 19-1956-7 Field Duplicate	1.50-2.10m	Metals, Mercury, PHCs (F1-F4), PAHs, PCBs, EC, SAR
BH212 19-1956-8	0.00-0.60m	Metals, PHCs (F1-F4), PAHs, EC, SAR
BH212 19-1956-9	1.50-2.10m	Metals, PHCs (F1-F4), PAHs, EC, SAR
BH214 19-1956-10	0.00-0.60m	Metals, PHCs (F1-F4), PAHs, EC, SAR
BH214 19-1956-11	1.50-2.10m	Metals, PHCs (F1-F4), PAHs, EC, SAR
MW213 19-1993-1	0.00-0.90m	Metals, PHCs (F1-F4), PAHs, EC, SAR
MW213 19-1993-2	0.90-1.50m	Metals, VOCs, PHCs (F1-F4), PAHs, EC, SAR
MW216 19-2055-1	0.00-0.30m	Metals, PHCs (F1-F4), PAHs, EC, SAR
MW216 19-2055-2 Field Duplicate	0.00-0.30m	Metals, PHCs (F1-F4), PAHs, EC, SAR
BH219 19-2452-1	0.00-0.60m	Metals
BH220 19-2452-2	0.00-0.60m	Metals
BH221 19-2452-3	0.00-0.60m	Metals, EC, SAR
BH222 19-2452-4	0.00-0.60m	Metals, PAHs, EC, SAR
BH223 19-2452-5	0.00-0.60m	Metals, PAHs, EC, SAR
BH223 19-2452-6 Field Duplicate	0.00-0.60m	Metals, PAHs, EC, SAR

Table 2 – Summary of Soil Samples Submitted for Chemical Analysis

Sample Number	Sample Depth (m bgs)	Parameter Analyzed
BH224 19-2452-7	0.00-0.60m	Metals
BH225 19-2452-8	0.00-0.60m	Metals
BH219 19-2463-1	0.75-1.35m	Metals
BH220 19-2463-2	0.75-1.35m	Metals
BH221 19-2463-3	0.75-1.35m	Metals, EC, SAR
BH222 19-2463-4	0.75-1.35m	Metals, PAHs, EC, SAR
BH223 19-2463-5	0.75-1.35m	Metals, PAHs, EC, SAR
BH223 19-2463-6 Field Duplicate	0.75-1.35m	Metals, PAHs, EC, SAR
BH224 19-2463-7	0.60-1.20m	Metals
BH225 19-2463-8	0.60-1.20m	Metals

NOTES: *Where PHCs (F1-F4) were analyzed, BTEX parameters were also analyzed.*

Table 3: Soil Quality Data - Metals Analysis

Sample Location			MW101	MW102	MW102 (Duplicate)	MW102	MW103
Laboratory ID			17-7469-1	17-7469-2	17-7469-3	17-7469-4	17-7469-5
Sample Depth (m)			3.80-4.40m	0.00-0.60m	0.00-0.60m	3.65-3.95m	0.75-1.35m
Sampling Date			31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	390	5	138	63	70	108	125
Beryllium	5	2	<2	<2	<2	<2	<2
Boron	120	5	13	<5	<5	13	5.9
Cadmium	1.2	1	<1	<1	<1	<1	<1
Chromium	160	5	16	11	12	16	24
Cobalt	22	2	8.4	5.4	5.8	7.7	9.9
Copper	180	5	15	15	16	11	32
Lead	120	10	11	52	60	10	18
Molybdenum	6.9	2	<2	<2	<2	<2	<2
Nickel	130	5	18	10	11	17	23
Silver	25	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	1	<1	<1	<1	<1	<1
Uranium	23	1	<1	<1	<1	<1	1.1
Vanadium	86	10	20	19	21	20	33
Zinc	340	30	54	91	105	59	83

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3: Standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			MW103	MW104	MW104	MW105	MW106
Laboratory ID			17-7469-6	17-7469-7	17-7469-8	17-7469-9	17-7469-10
Sample Depth (m)			3.80-4.40m	0.45-1.05m	3.00-3.60m	0.75-1.35m	3.00-3.60m
Sampling Date			31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17	01-Nov-17
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	390	5	102	30	85	109	63
Beryllium	5	2	<2	<2	<2	<2	<2
Boron	120	5	14	<5	14	7.4	15
Cadmium	1.2	1	<1	<1	<1	<1	<1
Chromium	160	5	16	9.8	15	15	18
Cobalt	22	2	8.7	4.8	8.3	7.4	10
Copper	180	5	11	13	9.7	15	6.4
Lead	120	10	12	30	11	<10	13
Molybdenum	6.9	2	<2	<2	<2	<2	<2
Nickel	130	5	20	8.2	18	19	23
Silver	25	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	1	<1	<1	<1	<1	<1
Uranium	23	1	<1	<1	<1	<1	<1
Vanadium	86	10	21	16	19	22	25
Zinc	340	30	63	64	53	49	64

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3: Standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			MW107	MW108	MW108 (Duplicate)	MW109	
Laboratory ID			17-7469-11	17-7469-12	17-7469-13	17-7469-14	
Sample Depth (m)			0.00-0.60m	3.00-3.60m	3.00-3.60m	0.60-1.20m	
Sampling Date			01-Nov-17	31-Oct-17	31-Oct-17	01-Nov-17	
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	390	5	30	100	99	106	
Beryllium	5	2	<2	<2	<2	<2	
Boron	120	5	<5	9.0	10	<5	
Cadmium	1.2	1	<1	<1	<1	<1	
Chromium	160	5	9.8	17	17	15	
Cobalt	22	2	3.2	9.1	9.6	7.6	
Copper	180	5	8.7	21	21	16	
Lead	120	10	19	10	11	28	
Molybdenum	6.9	2	<2	<2	<2	<2	
Nickel	130	5	6.2	21	20	18	
Silver	25	0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	1	1	<1	<1	<1	<1	
Uranium	23	1	<1	<1	<1	1.1	
Vanadium	86	10	19	21	23	22	
Zinc	340	30	<30	56	54	45	

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH203	BH203	BH206	BH206	BH207
Laboratory ID			19-1840-1	19-1840-2	19-1840-3	19-1840-4	19-1840-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	390	5	92	142	133	110	91
Beryllium	5	2	<2	<2	<2	<2	<2
Boron	120	5	<5	<5	<5	<5	<5
Cadmium	1.2	1	**1.4**	<1	1	<1	<1
Chromium	160	5	21	18	11	12	11
Cobalt	22	2	12	12	5.4	9.4	6.3
Copper	180	5	31	94	40	31	19
Lead	120	10	43	16	**248**	<10	**162**
Molybdenum	6.9	2	<2	<2	<2	<2	<2
Nickel	130	5	22	26	13	23	12
Silver	25	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	1	<1	<1	<1	<1	<1
Uranium	23	1	<1	<1	<1	<1	<1
Vanadium	86	10	27	24	17	17	17
Zinc	340	30	**549**	90	**430**	56	236

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH207	BH208	BH208	BH209	BH209
Laboratory ID			19-1840-6	19-1840-7	19-1840-8	19-1840-9	19-1840-10
Sample Depth (m)			1.50-2.10m	0.75-1.35m	1.50-2.10m	0.00-0.60m	1.50-2.10m
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	390	5	146	99	104	76	133
Beryllium	5	2	<2	<2	<2	<2	<2
Boron	120	5	<5	<5	<5	<5	<5
Cadmium	1.2	1	<1	<1	<1	<1	<1
Chromium	160	5	12	13	14	24	13
Cobalt	22	2	9.3	12	9	4.1	11
Copper	180	5	32	70	25	19	48
Lead	120	10	10	<10	19	76	<10
Molybdenum	6.9	2	<2	<2	<2	<2	<2
Nickel	130	5	22	26	23	9.7	27
Silver	25	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	1	<1	<1	<1	<1	<1
Uranium	23	1	<1	<1	<1	<1	<1
Vanadium	86	10	15	17	20	25	17
Zinc	340	30	60	67	78	164	68

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH211	BH211	BH211 (Duplicate)		
Laboratory ID			19-1840-11	19-1840-12	19-1840-13		
Sample Depth (m)			0.00-0.60m	1.50-2.10m	1.50-2.10m		
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19		
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	390	5	74	113	111		
Beryllium	5	2	<2	<2	<2		
Boron	120	5	<5	<5	<5		
Cadmium	1.2	1	<1	<1	<1		
Chromium	160	5	9.6	11	11		
Cobalt	22	2	4.6	10	9.6		
Copper	180	5	18	45	44		
Lead	120	10	78	<10	<10		
Molybdenum	6.9	2	<2	<2	<2		
Nickel	130	5	9.3	22	23		
Silver	25	0.5	<0.5	<0.5	<0.5		
Thallium	1	1	<1	<1	<1		
Uranium	23	1	<1	<1	<1		
Vanadium	86	10	14	15	14		
Zinc	340	30	76	64	62		

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH201	BH201	BH205	BH205	BH205 (Duplicate)
Laboratory ID			19-1892-1	19-1892-2	19-1892-3	19-1892-4	19-1892-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	1.50-2.10m
Sampling Date			4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	390	5	90	79	99	85	82
Beryllium	5	2	<2	<2	<2	<2	<2
Boron	120	5	7.4	9.9	11	12	13
Cadmium	1.2	1	<1	<1	<1	<1	<1
Chromium	160	5	14	19	20	19	20
Cobalt	22	2	6.1	13	8.9	13	13
Copper	180	5	23	41	34	48	56
Lead	120	10	115	<10	**210**	<10	<10
Molybdenum	6.9	2	<2	<2	<2	<2	<2
Nickel	130	5	12	27	20	28	28
Silver	25	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	1	<1	<1	<1	<1	<1
Uranium	23	1	<1	<1	<1	<1	<1
Vanadium	86	10	24	29	31	30	30
Zinc	340	30	131	49	292	55	49

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH215	BH215	BH217	BH218	BH218
Laboratory ID			19-1892-6	19-1892-7	19-1892-8	19-1916-1	19-1916-2
Sample Depth (m)			0.90-1.50m	1.80-2.25m	0.60-0.90m	0.90-1.20m	1.20-1.65m
Sampling Date			4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	08-Feb-19	08-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	390	5	84	95	192	87	96
Beryllium	5	2	<2	<2	<2	<2	<2
Boron	120	5	14	14.0	13	11	11
Cadmium	1.2	1	<1	<1	<1	<1	<1
Chromium	160	5	26	31	28	16	16
Cobalt	22	2	14	15	13	9.5	9.8
Copper	180	5	96	49	44	33	38
Lead	120	10	<10	<10	**203**	<10	<10
Molybdenum	6.9	2	<2	<2	<2	<2	<2
Nickel	130	5	30	32	28	21	22
Silver	25	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	1	<1	<1	<1	<1	<1
Uranium	23	1	<1	<1	1.1	<1	<1
Vanadium	86	10	35	37	38	24	23
Zinc	340	30	55	63	332	52	51

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH202	BH202	BH204	BH204	BH210
Laboratory ID			19-1956-1	19-1956-2	19-1956-3	19-1956-4	19-1956-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19
Parameters	2011 Table 3 SCS	RDL					
Barium	390	5	106	156	131	79	74
Beryllium	5	2	<2	<2	<2	<2	<2
Boron	120	5	16	9.0	6.9	8.9	<5
Cadmium	1.2	1	**4.9**	<1	<1	<1	<1
Chromium	160	5	16	18	12	14	12
Cobalt	22	2	5.4	12	5.4	10	4.5
Copper	180	5	49	51	29	54	19
Lead	120	10	**744**	13	**222**	<10	87
Molybdenum	6.9	2	<2	<2	<2	<2	<2
Nickel	130	5	13	27	11	22	9.4
Silver	25	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	1	<1	<1	<1	<1	<1
Uranium	23	1	<1	<1	<1	<1	<1
Vanadium	86	10	18	27	20	22	21
Zinc	340	30	**4341**	75	**392**	60	67

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH210	BH210 (Duplicate)	BH212	BH212	BH214
Laboratory ID			19-1956-6	19-1956-7	19-1956-8	19-1956-9	19-1956-10
Sample Depth (m)			1.50-2.10m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19
Parameters	2011 Table 3 SCS	RDL					
Barium	390	5	96	93	120	78	234
Beryllium	5	2	<2	<2	<2	<2	<2
Boron	120	5	9.2	8.9	6	8.8	16
Cadmium	1.2	1	<1	<1	<1	<1	<1
Chromium	160	5	12	13	14	13	14
Cobalt	22	2	8.7	9.2	5.8	9.2	4.6
Copper	180	5	47	47	29	52	42
Lead	120	10	<10	<10	**211**	<10	**331**
Molybdenum	6.9	2	<2	<2	<2	<2	<2
Nickel	130	5	19	19	13	19	10
Silver	25	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	1	<1	<1	<1	<1	<1
Uranium	23	1	<1	<1	<1	<1	<1
Vanadium	86	10	19	19	23	20	20
Zinc	340	30	54	52	264	54	**367**

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH214	MW213	MW213	MW216	MW216 (Duplicate)
Laboratory ID			19-1956-11	19-1993-1	19-1993-2	19-2055-1	19-2055-2
Sample Depth (m)			1.50-2.10m	0.00-0.90m	0.90-1.50m	0.00-0.30m	0.00-0.30m
Sampling Date			14-Feb-19	21-Feb-19	21-Feb-19	01-Mar-19	01-Mar-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	390	5	208	73	118	59	56
Beryllium	5	2	<2	<2	<2	<2	<2
Boron	120	5	12	<5	5.2	5.6	6.8
Cadmium	1.2	1	<1	<1	<1	<1	<1
Chromium	160	5	18	17	18	16	15
Cobalt	22	2	11	7.2	8.2	12	10
Copper	180	5	47	16	20	36	33
Lead	120	10	12	18	<10	<10	<10
Molybdenum	6.9	2	<2	<2	<2	<2	<2
Nickel	130	5	26	16	20	21	19
Silver	25	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	1	<1	<1	<1	<1	<1
Uranium	23	1	<1	<1	<1	<1	<1
Vanadium	86	10	27	25	22	22	20
Zinc	340	30	71	60	47	42	37

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH219	BH220	BH221	BH222	BH223
Laboratory ID			19-2452-1	19-2452-2	19-2452-3	19-2452-4	19-2452-5
Sample Depth (m)			0.00-0.60m	0.00-0.60m	0.00-0.60m	0.00-0.60m	0.00-0.60m
Sampling Date			29,30-Apr-19	29,30-Apr-19	29,30-Apr-19	29,30-Apr-19	29,30-Apr-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	390	5	94	62	126	137	144
Beryllium	5	2	<2	<2	<2	<2	<2
Boron	120	5	5.1	<5	<5	<5	<5
Cadmium	1.2	1	<1	<1	<1	<1	<1
Chromium	160	5	13	17	36	39	40
Cobalt	22	2	7.4	5.2	14	10	19
Copper	180	5	21	13	33	22	29
Lead	120	10	87	82	15	84	59
Molybdenum	6.9	2	<2	<2	<2	<2	<2
Nickel	130	5	17	13	38	21	37
Silver	25	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	1	<1	<1	<1	<1	<1
Uranium	23	1	<1	<1	<1	1	1
Vanadium	86	10	18	31	<10	52	58
Zinc	340	30	178	37	<30	169	44

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH223 (Duplicate)	BH224	BH225		
Laboratory ID			19-2452-6	19-2452-7	19-2452-8		
Sample Depth (m)			0.00-0.60m	0.00-0.60m	0.00-0.60m		
Sampling Date			29,30-Apr-19	29,30-Apr-19	29,30-Apr-19		
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	390	5	137	72	76		
Beryllium	5	2	<2	<2	<2		
Boron	120	5	<5	<5	<5		
Cadmium	1.2	1	<1	<1	<1		
Chromium	160	5	41	25	24		
Cobalt	22	2	19	15	14		
Copper	180	5	28	47	63		
Lead	120	10	60	<10	<10		
Molybdenum	6.9	2	<2	<2	<2		
Nickel	130	5	41	29	28		
Silver	25	0.5	<0.5	<0.5	<0.5		
Thallium	1	1	<1	<1	<1		
Uranium	23	1	1.1	<1	<1		
Vanadium	86	10	59	36	39		
Zinc	340	30	49	32	35		

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH219	BH220	BH221	BH222	BH223
Laboratory ID			19-2463-1	19-2463-2	19-2463-3	19-2463-4	19-2463-5
Sample Depth (m)			0.75-1.35m	0.75-1.35m	0.75-1.35m	0.75-1.35m	0.75-1.35m
Sampling Date			29,30-Apr-19	29,30-Apr-19	29,30-Apr-19	29,30-Apr-19	29,30-Apr-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	390	5	156	92	79	170	100
Beryllium	5	2	<2	<2	<2	<2	<2
Boron	120	5	<5	<5	<5	<5	<5
Cadmium	1.2	1	<1	<1	<1	<1	<1
Chromium	160	5	41	25	24	47	29
Cobalt	22	2	18	12	13	18	16
Copper	180	5	30	44	42	28	51
Lead	120	10	18	<10	14	16	<10
Molybdenum	6.9	2	<2	<2	<2	<2	<2
Nickel	130	5	44	32	32	42	37
Silver	25	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	1	<1	<1	<1	<1	<1
Uranium	23	1	<1	<1	<1	1.8	<1
Vanadium	86	10	59	38	36	67	40
Zinc	340	30	92	34	38	58	42

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH223 (Duplicate)	BH224	BH225		
Laboratory ID			19-2463-1	19-2463-2	19-2463-3		
Sample Depth (m)			0.75-1.35m	0.60-1.20m	0.60-1.20m		
Sampling Date			29,30-Apr-19	29,30-Apr-19	29,30-Apr-19		
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	390	5	102	84	160		
Beryllium	5	2	<2	<2	<2		
Boron	120	5	<5	<5	<5		
Cadmium	1.2	1	<1	1	<1		
Chromium	160	5	29	13	17		
Cobalt	22	2	15	9.4	12		
Copper	180	5	49	40	30		
Lead	120	10	<10	<10	<10		
Molybdenum	6.9	2	<2	<2	<2		
Nickel	130	5	34	23	26		
Silver	25	0.5	<0.5	<0.5	<0.5		
Thallium	1	1	<1	<1	<1		
Uranium	23	1	<1	<1	<1		
Vanadium	86	10	38	17	21		
Zinc	340	30	44	79	95		

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Table 4: Soil Quality Data - Hydride-Forming Metals Analysis

Sample Location			MW101	MW102	MW102 (Duplicate)	MW102	MW103
Laboratory ID			17-7469-1	17-7469-2	17-7469-3	17-7469-4	17-7469-5
Sample Depth (m)			3.80-4.40m	0.00-0.60m	0.00-0.60m	3.65-3.95m	0.75-1.35m
Sampling Date			31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17
Parameters	**2011 Table 3 SCS**	**RDL**					
Antimony	7.5	1	<1	<1	<1	<1	<1
Arsenic	18	1	3.8	2.7	3.3	2.9	4.3
Selenium	2.4	1	<1	<1	<1	1.3	<1

Notes:
Bold – indicates exceedence of applicable MECP SCS
All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.
ppm - means parts per million.
RDL - means report detection limit
2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.
Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			MW103	MW104	MW104	MW105	MW106
Laboratory ID			17-7469-6	17-7469-7	17-7469-8	17-7469-9	17-7469-10
Sample Depth (m)			3.80-4.40m	0.45-1.05m	3.00-3.60m	0.75-1.35m	3.00-3.60m
Sampling Date			31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17	01-Nov-17
Parameters	**2011 Table 3 SCS**	**RDL**					
Antimony	7.5	1	<1	<1	<1	<1	<1
Arsenic	18	1	2.9	1.8	2.0	3.0	2.6
Selenium	2.4	1	<1	<1	<1	<1	<1

Notes:
Bold – indicates exceedence of applicable MECP SCS
All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.
ppm - means parts per million.
RDL - means report detection limit
2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.
Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			MW107	MW108	MW108 (Duplicate)	MW109	
Laboratory ID			17-7469-11	17-7469-12	17-7469-13	17-7469-14	
Sample Depth (m)			0.00-0.60m	3.00-3.60m	3.00-3.60m	0.60-1.20m	
Sampling Date			01-Nov-17	31-Oct-17	31-Oct-17	01-Nov-17	
Parameters	**2011 Table 3 SCS**	**RDL**					
Antimony	7.5	1	<1	<1	<1	<1	
Arsenic	18	1	1.7	3.9	4.0	2.1	
Selenium	2.4	1	<1	<1	<1	1.3	

Notes:
Bold – indicates exceedence of applicable MECP SCS
All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.
ppm - means parts per million.
RDL - means report detection limit
2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.
Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH203	BH203	BH206	BH206	BH207
Laboratory ID			19-1840-1	19-1840-2	19-1840-3	19-1840-4	19-1840-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19
Parameters	2011 Table 3 SCS	RDL					
Antimony	7.5	1	<1	<1	<1	<1	<1
Arsenic	18	1	3.6	5.6	14.0	3.1	4.2
Selenium	2.4	1	<1	<1	<1	<1	<1

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH207	BH208	BH208	BH209	BH209
Laboratory ID			19-1840-6	19-1840-7	19-1840-8	19-1840-9	19-1840-10
Sample Depth (m)			1.50-2.10m	0.75-1.35m	1.50-2.10m	0.00-0.60m	1.50-2.10m
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19
Parameters	2011 Table 3 SCS	RDL					
Antimony	7.5	1	<1	<1	<1	<1	<1
Arsenic	18	1	3.4	4	2.7	5.9	3.2
Selenium	2.4	1	<1	<1	<1	<1	<1

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH211	BH211	BH211 (Duplicate)		
Laboratory ID			19-1840-11	19-1840-12	19-1840-13		
Sample Depth (m)			0.00-0.60m	1.50-2.10m	1.50-2.10m		
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19		
Parameters	2011 Table 3 SCS	RDL					
Antimony	7.5	1	<1	<1	<1		
Arsenic	18	1	3.7	3.5	3.2		
Selenium	2.4	1	<1	<1	<1		

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH201	BH201	BH205	BH205	BH205 (Duplicate)
Laboratory ID			19-1892-1	19-1892-2	19-1892-3	19-1892-4	19-1892-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	1.50-2.10m
Sampling Date			4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19
Parameters	2011 Table 3 SCS	RDL					
Antimony	7.5	1	<1	<1	<1	<1	<1
Arsenic	18	1	4	3.7	5.7	3.7	3.6
Selenium	2.4	1	<1	<1	1.1	<1	<1

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH215	BH215	BH217	BH218	BH218
Laboratory ID			19-1892-6	19-1892-7	19-1892-8	19-1916-1	19-1916-2
Sample Depth (m)			0.90-1.50m	1.80-2.25m	0.60-0.90m	0.90-1.20m	1.20-1.65m
Sampling Date			4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	08-Feb-19	08-Feb-19
Parameters	2011 Table 3 SCS	RDL					
Antimony	7.5	1	<1	<1	<1	<1	<1
Arsenic	18	1	3.9	4.6	3.9	3.6	3.9
Selenium	2.4	1	<1	<1	<1	<1	1.1

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH202	BH202	BH204	BH204	BH210
Laboratory ID			19-1956-1	19-1956-2	19-1956-3	19-1956-4	19-1956-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19
Parameters	2011 Table 3 SCS	RDL					
Antimony	7.5	1	3.4	<1	<1	<1	<1
Arsenic	18	1	11	4.4	7.9	4.1	4
Selenium	2.4	1	1.2	<1	1.3	<1	<1

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH210	BH210 (Duplicate)	BH212	BH212	BH214
Laboratory ID			19-1956-6	19-1956-7	19-1956-8	19-1956-9	19-1956-10
Sample Depth (m)			1.50-2.10m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Antimony	7.5	1	<1	<1	<1	<1	<1
Arsenic	18	1	4	4.2	5.2	5.4	13
Selenium	2.4	1	1.2	<1	1.3	1.3	<1

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH214	MW213	MW213	MW216	MW216 (Duplicate)
Laboratory ID			19-1956-11	19-1993-1	19-1993-2	19-2055-1	19-2055-2
Sample Depth (m)			1.50-2.10m	0.00-0.90m	0.90-1.50m	0.00-0.30m	0.00-0.30m
Sampling Date			14-Feb-19	21-Feb-19	21-Feb-19	01-Mar-19	01-Mar-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Antimony	7.5	1	<1	<1	<1	<1	<1
Arsenic	18	1	5.4	3.1	2.4	3.7	2.9
Selenium	2.4	1	<1	1.6	1.6	<1	<1

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH219	BH220	BH221	BH222	BH223
Laboratory ID			19-2452-1	19-2452-2	19-2452-3	19-2452-4	19-2452-5
Sample Depth (m)			0.00-0.60m	0.00-0.60m	0.00-0.60m	0.00-0.60m	0.00-0.60m
Sampling Date			29,30-Apr-19	29,30-Apr-19	29,30-Apr-19	29,30-Apr-19	29,30-Apr-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Antimony	7.5	1	<1	<1	<1	<1	<1
Arsenic	18	1	5.4	<1	1.8	3.3	2.5
Selenium	2.4	1	<1	<1	<1	<1	<1

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH223 (Duplicate)	BH224	BH225		
Laboratory ID			19-2452-6	19-2452-7	19-2452-8		
Sample Depth (m)			0.00-0.60m	0.00-0.60m	0.00-0.60m		
Sampling Date			29,30-Apr-19	29,30-Apr-19	29,30-Apr-19		
Parameters	2011 Table 3 SCS	RDL					
Antimony	7.5	1	<1	<1	<1		
Arsenic	18	1	2.5	2.8	3.9		
Selenium	2.4	1	<1	<1	<1		

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH219	BH220	BH221	BH222	BH223
Laboratory ID			19-2463-1	19-2463-2	19-2463-3	19-2463-4	19-2463-5
Sample Depth (m)			0.75-1.35m	0.75-1.35m	0.75-1.35m	0.75-1.35m	0.75-1.35m
Sampling Date			29,30-Apr-19	29,30-Apr-19	29,30-Apr-19	29,30-Apr-19	29,30-Apr-19
Parameters	2011 Table 3 SCS	RDL					
Antimony	7.5	1	<1	<1	<1	<1	<1
Arsenic	18	1	3.1	2.2	2.5	3	3.9
Selenium	2.4	1	<1	<1	<1	<1	<1

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH223 (Duplicate)	BH224	BH225		
Laboratory ID			19-2463-1	19-2463-2	19-2463-3		
Sample Depth (m)			0.75-1.35m	0.60-1.20m	0.60-1.20m		
Sampling Date			29,30-Apr-19	29,30-Apr-19	29,30-Apr-19		
Parameters	2011 Table 3 SCS	RDL					
Antimony	7.5	1	<1	<1	<1		
Arsenic	18	1	3.5	8.8	6.6		
Selenium	2.4	1	<1	<1	<1		

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Table 5: Soil Quality Data - Volatile Organic Compounds Analysis

Sample Location			MW101	MW102	MW103	MW104	MW106
Laboratory ID			17-7469-1	17-7469-4	17-7469-6	17-7469-8	17-7469-10
Sample Depth (m)			3.80-4.40m	3.65-3.95m	3.80-4.40m	3.00-3.60m	3.00-3.60m
Sampling Date			31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17	01-Nov-17
Parameters	2011 Table 3 SCS	RDL					
Acetone	28	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	13	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	0.26	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.12	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	2.7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	0.18	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	9.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	4.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	0.097	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlordifluoromethane	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	11	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethylene	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
c-1,2-Dichloroethylene	30	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
t-1,2-Dichloroethylene	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	0.085	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropane (cis-+trans-)	0.083	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexane (n)	34	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	44	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl Isobutyl Ketone	4.3	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl tert-butyl Ether	1.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	0.96	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	2.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	6	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
1,1,1-Trichloroethane	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	0.52	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	5.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	0.022	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Xylenes	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH209	BH211	BH211 (Duplicate)	BH201	MW218
Laboratory ID			19-1840-10	19-1840-12	19-1840-13	19-1892-2	19-1916-2
Sample Depth (m)			1.50-2.10m	1.50-2.10m	1.50-2.10m	1.50-2.10m	1.20-1.65m
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19	4,6,7-Feb-19	08-Feb-19
Parameters	2011 Table 3 SCS	RDL					
Acetone	28	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	13	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	0.26	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.12	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	2.7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	0.18	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	9.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	4.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	0.097	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlordifluoromethane	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	11	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethylene	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
c-1,2-Dichloroethylene	30	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
t-1,2-Dichloroethylene	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	0.085	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropane (cis-+trans-)	0.083	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexane (n)	34	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	44	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl Isobutyl Ketone	4.3	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl tert-butyl Ether	1.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	0.96	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	2.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	6	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
1,1,1-Trichloroethane	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	0.52	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	5.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	0.022	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Xylenes	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			MW213				
Laboratory ID			19-1993-2				
Sample Depth (m)			0.90-1.50m				
Sampling Date			21-Feb-19				
Parameters	**2011 Table 3 SCS**	**RDL**					
Acetone	28	0.5	<0.5				
Benzene	0.17	0.02	<0.02				
Bromodichloromethane	13	0.05	<0.05				
Bromoform	0.26	0.05	<0.05				
Bromomethane	0.05	0.05	<0.05				
Carbon Tetrachloride	0.12	0.05	<0.05				
Chlorobenzene	2.7	0.05	<0.05				
Chloroform	0.18	0.05	<0.05				
Dibromochloromethane	9.4	0.05	<0.05				
1,2-Dichlorobenzene	4.3	0.05	<0.05				
1,3-Dichlorobenzene	6	0.05	<0.05				
1,4-Dichlorobenzene	0.097	0.05	<0.05				
Dichlordifluoromethane	25	0.05	<0.05				
1,1-Dichloroethane	11	0.05	<0.05				
1,2-Dichloroethane	0.05	0.05	<0.05				
1,1-Dichloroethylene	0.05	0.05	<0.05				
c-1,2-Dichloroethylene	30	0.05	<0.05				
t-1,2-Dichloroethylene	0.75	0.05	<0.05				
1,2-Dichloropropane	0.085	0.05	<0.05				
1,3-Dichloropropane (cis-+trans-)	0.083	0.05	<0.05				
Ethylbenzene	15	0.05	<0.05				
Ethylene Dibromide	0.05	0.05	<0.05				
Hexane (n)	34	0.05	<0.05				
Methyl Ethyl Ketone	44	0.5	<0.5				
Methyl Isobutyl Ketone	4.3	0.5	<0.5				
Methyl tert-butyl Ether	1.4	0.05	<0.05				
Methylene Chloride	0.96	0.05	<0.05				
Styrene	2.2	0.05	<0.05				
1,1,1,2-Tetrachloroethane	0.05	0.05	<0.05				
1,1,2,2-Tetrachloroethane	0.05	0.05	<0.05				
Tetrachloroethylene	2.3	0.05	<0.05				
Toluene	6	0.2	<0.2				
1,1,1-Trichloroethane	3.4	0.05	<0.05				
1,1,2-Trichloroethane	0.05	0.05	<0.05				
Trichloroethylene	0.52	0.05	<0.05				
Trichlorofluoromethane	5.8	0.05	<0.05				
Vinyl Chloride	0.022	0.02	<0.02				
Xylenes	25	0.05	<0.05				

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Table 6: Soil Quality Data - Petroleum Hydrocarbons (F1-F4) and Benzene, Toluene, Ethylbenzene, Xylene Analysis

Sample Location			MW101	MW102	MW102 (Duplicate)	MW102	MW103
Laboratory ID			17-7469-1	17-7469-2	17-7469-3	17-7469-4	17-7469-5
Sample Depth (m)			3.80-4.40m	0.00-0.60m	0.00-0.60m	3.65-3.95m	0.75-1.35m
Sampling Date			31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17
Parameters	**2011 Table 3 SCS**	**RDL**					
BTEX in Soil							
Benzene	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	6	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethylbenzene	15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PHCs (F1-F4) in Soil							
$F1_{-BTEX}$ (C_6 - C_{10})	65	10	<10	<10	<10	<10	<10
F2 (C_{10} - C_{16})	150	10	<10	<10	<10	<10	<10
F3 (C_{16} - C_{34})	1,300	50	<50	<50	<50	<50	<50
F4 (C_{34}-C_{50})	5,600	50	<50	<50	<50	<50	<50

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			MW103	MW104	MW104	MW105	MW106
Laboratory ID			17-7469-6	17-7469-7	17-7469-8	17-7469-9	17-7469-10
Sample Depth (m)			3.80-4.40m	0.45-1.05m	3.00-3.60m	0.75-1.35m	3.00-3.60m
Sampling Date			31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17	01-Nov-17
Parameters	**2011 Table 3 SCS**	**RDL**					
BTEX in Soil							
Benzene	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	6	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethylbenzene	15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PHCs (F1-F4) in Soil							
$F1_{-BTEX}$ (C_6 - C_{10})	65	10	<10	<10	<10	<10	<10
F2 (C_{10} - C_{16})	150	10	<10	<10	<10	<10	<10
F3 (C_{16} - C_{34})	1,300	50	<50	<50	<50	<50	<50
F4 (C_{34}-C_{50})	5,600	50	<50	<50	<50	<50	<50

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			MW107	MW108	MW108 (Duplicate)	MW109	
Laboratory ID			17-7469-11	17-7469-12	17-7469-13	17-7469-14	
Sample Depth (m)			0.00-0.60m	3.00-3.60m	3.00-3.60m	0.60-1.20m	
Sampling Date			01-Nov-17	31-Oct-17	31-Oct-17	01-Nov-17	
Parameters	**2011 Table 3 SCS**	**RDL**					
BTEX in Soil							
Benzene	0.17	0.02	<0.02	<0.02	<0.02	<0.02	
Toluene	6	0.2	<0.2	<0.2	<0.2	<0.2	
Ethylbenzene	15	0.05	<0.05	<0.05	<0.05	<0.05	
Xylenes	25	0.05	<0.05	<0.05	<0.05	<0.05	
PHCs (F1-F4) in Soil							
$F1_{-BTEX}$ (C_6 - C_{10})	65	10	<10	<10	<10	<10	
F2 (C_{10} - C_{16})	150	10	<10	<10	<10	<10	
F3 (C_{16} - C_{34})	1,300	50	<50	<50	<50	<50	
F4 (C_{34}-C_{50})	5,600	50	<50	<50	<50	<50	

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH203	BH203	BH206	BH206	BH207
Laboratory ID			19-1840-1	19-1840-2	19-1840-3	19-1840-4	19-1840-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
BTEX in Soil							
Benzene	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	6	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethylbenzene	15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PHCs (F1-F4) in Soil							
$F1_{-BTEX}$ (C_6 - C_{10})	65	10	<10	<10	<10	<10	<10
F2 (C_{10} - C_{16})	150	10	<10	<10	<10	<10	<10
F3 (C_{16} - C_{34})	1,300	50	<50	<50	56	<50	<50
F4 (C_{34}-C_{50})	5,600	50	<50	<50	<50	<50	<50

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH207	BH208	BH208	BH209	BH209
Laboratory ID			19-1840-6	19-1840-7	19-1840-8	19-1840-9	19-1840-10
Sample Depth (m)			1.50-2.10m	0.75-1.35m	1.50-2.10m	0.00-0.60m	1.50-2.10m
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
BTEX in Soil							
Benzene	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	6	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethylbenzene	15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PHCs (F1-F4) in Soil							
$F1_{-BTEX}$ (C_6 - C_{10})	65	10	<10	<10	<10	<10	<10
F2 (C_{10} - C_{16})	150	10	<10	<10	<10	<10	<10
F3 (C_{16} - C_{34})	1,300	50	<50	<50	<50	57	<50
F4 (C_{34}-C_{50})	5,600	50	<50	<50	<50	<50	<50

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH211	BH211	BH211 (Duplicate)		
Laboratory ID			19-1840-11	19-1840-12	19-1840-13		
Sample Depth (m)			0.00-0.60m	1.50-2.10m	1.50-2.10m		
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19		
Parameters	**2011 Table 3 SCS**	**RDL**					
BTEX in Soil							
Benzene	0.17	0.02	<0.02	<0.02	<0.02		
Toluene	6	0.2	<0.2	<0.2	<0.2		
Ethylbenzene	15	0.05	<0.05	<0.05	<0.05		
Xylenes	25	0.05	<0.05	<0.05	<0.05		
PHCs (F1-F4) in Soil							
$F1_{-BTEX}$ (C_6 - C_{10})	65	10	<10	<10	<10		
F2 (C_{10} - C_{16})	150	10	<10	<10	<10		
F3 (C_{16} - C_{34})	1,300	50	76	<50	<50		
F4 (C_{34}-C_{50})	5,600	50	<50	<50	<50		

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH201	BH201	BH205	BH205	BH205 (Duplicate)
Laboratory ID			19-1892-1	19-1892-2	19-1892-3	19-1892-4	19-1892-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	1.50-2.10m
Sampling Date			4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
BTEX in Soil							
Benzene	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	6	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethylbenzene	15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PHCs (F1-F4) in Soil							
$F1_{-BTEX}$ (C_6 - C_{10})	65	10	<10	<10	<10	<10	<10
F2 (C_{10} - C_{16})	150	10	<10	<10	<10	<10	<10
F3 (C_{16} - C_{34})	1,300	50	<50	<50	90	<50	<50
F4 (C_{34}-C_{50})	5,600	50	<50	<50	<50	<50	<50

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH215	BH215	BH217	MW218	MW218
Laboratory ID			19-1892-6	19-1892-7	19-1892-8	19-1916-1	19-1916-2
Sample Depth (m)			0.90-1.50m	1.80-2.25m	0.60-0.90m	0.90-1.20m	1.20-1.65m
Sampling Date			4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	08-Feb-19	08-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
BTEX in Soil							
Benzene	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	6	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethylbenzene	15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PHCs (F1-F4) in Soil							
$F1_{-BTEX}$ (C_6 - C_{10})	65	10	<10	<10	<10	<10	<10
F2 (C_{10} - C_{16})	150	10	<10	<10	<10	<10	<10
F3 (C_{16} - C_{34})	1,300	50	<50	<50	<50	<50	<50
F4 (C_{34}-C_{50})	5,600	50	<50	<50	<50	<50	<50

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH202	BH202	BH204	BH204	BH210
Laboratory ID			19-1956-1	19-1956-2	19-1956-3	19-1956-4	19-1956-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
BTEX in Soil							
Benzene	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	6	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethylbenzene	15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PHCs (F1-F4) in Soil							
$F1_{-BTEX}$ (C_6 - C_{10})	65	10	<10	<10	<10	<10	<10
F2 (C_{10} - C_{16})	150	10	<10	<10	<10	<10	<10
F3 (C_{16} - C_{34})	1,300	50	190	<50	<50	<50	59
F4 (C_{34}-C_{50})	5,600	50	90	<50	<50	<50	<50

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH210	BH210 (Duplicate)	BH212	BH212	BH214
Laboratory ID			19-1956-6	19-1956-7	19-1956-8	19-1956-9	19-1956-10
Sample Depth (m)			1.50-2.10m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
BTEX in Soil							
Benzene	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	6	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethylbenzene	15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PHCs (F1-F4) in Soil							
$F1_{-BTEX}$ (C_6 - C_{10})	65	10	<10	<10	<10	<10	<10
F2 (C_{10} - C_{16})	150	10	<10	<10	<10	<10	<10
F3 (C_{16} - C_{34})	1,300	50	<50	<50	<50	<50	82
F4 (C_{34}-C_{50})	5,600	50	<50	<50	<50	<50	<50

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH214	MW213	MW213	BH216	BH216 (Duplicate)
Laboratory ID			19-1956-11	19-1993-1	19-1993-2	19-2055-1	19-2055-2
Sample Depth (m)			1.50-2.10m	0.00-0.90m	0.90-1.50m	0.00-0.30m	0.00-0.30m
Sampling Date			14-Feb-19	21-Feb-19	21-Feb-19	01-Mar-19	01-Mar-19
Parameters	**2011 Table 3 SCS**	**RDL**					
BTEX in Soil							
Benzene	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	6	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethylbenzene	15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PHCs (F1-F4) in Soil							
$F1_{-BTEX}$ (C_6 - C_{10})	65	10	<10	<10	<10	<10	<10
F2 (C_{10} - C_{16})	150	10	<10	<10	<10	<10	<10
F3 (C_{16} - C_{34})	1,300	50	<50	<50	<50	<50	82
F4 (C_{34}-C_{50})	5,600	50	<50	<50	<50	<50	<50

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Table 7: Soil Quality Data - Polycyclic Aromatic Hydrocarbons Analysis

Sample Location			MW101	MW102	MW102 (Duplicate)	MW102	MW103
Laboratory ID			17-7469-1	17-7469-2	17-7469-3	17-7469-4	17-7469-5
Sample Depth (m)			3.80-4.40m	0.00-0.60m	0.00-0.60m	3.65-3.95m	0.75-1.35m
Sampling Date			31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17
Parameters	**2011 Table 3 SCS**	**RDL**					
Naphthalene	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.17	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	58	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.74	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [a] anthracene	0.63	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [b] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [k] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [a] pyrene	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno [1,2,3-cd] pyrene	0.48	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo [a,h] anthracene	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [g,h,i] perylene	7.8	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			MW103	MW104	MW104	MW105	MW106
Laboratory ID			17-7469-6	17-7469-7	17-7469-8	17-7469-9	17-7469-10
Sample Depth (m)			3.80-4.40m	0.45-1.05m	3.00-3.60m	0.75-1.35m	3.00-3.60m
Sampling Date			31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17	01-Nov-17
Parameters	**2011 Table 3 SCS**	**RDL**					
Naphthalene	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.17	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	58	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.74	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [a] anthracene	0.63	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [b] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [k] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [a] pyrene	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno [1,2,3-cd] pyrene	0.48	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo [a,h] anthracene	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [g,h,i] perylene	7.8	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			MW107	MW108	MW108 (Duplicate)	MW109	
Laboratory ID			17-7469-11	17-7469-12	17-7469-13	17-7469-14	
Sample Depth (m)			0.00-0.60m	3.00-3.60m	3.00-3.60m	0.60-1.20m	
Sampling Date			01-Nov-17	31-Oct-17	31-Oct-17	01-Nov-17	
Parameters	**2011 Table 3 SCS**	**RDL**					
Naphthalene	0.75	0.05	<0.05	<0.05	<0.05	<0.05	
2-Methylnaphthalene	3.4	0.05	<0.05	<0.05	<0.05	<0.05	
1-Methylnaphthalene		0.05	<0.05	<0.05	<0.05	<0.05	
Acenaphthylene	0.17	0.05	<0.05	<0.05	<0.05	<0.05	
Acenaphthene	58	0.05	<0.05	<0.05	<0.05	<0.05	
Fluorene	69	0.05	<0.05	<0.05	<0.05	<0.05	
Phenanthrene	7.8	0.05	<0.05	<0.05	<0.05	<0.05	
Anthracene	0.74	0.05	<0.05	<0.05	<0.05	<0.05	
Fluoranthene	0.69	0.05	<0.05	<0.05	<0.05	<0.05	
Pyrene	78	0.05	<0.05	<0.05	<0.05	<0.05	
Benzo [a] anthracene	0.63	0.05	<0.05	<0.05	<0.05	<0.05	
Chrysene	7.8	0.05	<0.05	<0.05	<0.05	<0.05	
Benzo [b] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	<0.05	
Benzo [k] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	<0.05	
Benzo [a] pyrene	0.3	0.05	<0.05	<0.05	<0.05	<0.05	
Indeno [1,2,3-cd] pyrene	0.48	0.1	<0.1	<0.1	<0.1	<0.1	
Dibenzo [a,h] anthracene	0.1	0.1	<0.1	<0.1	<0.1	<0.1	
Benzo [g,h,i] perylene	7.8	0.1	<0.1	<0.1	<0.1	<0.1	

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH203	BH203	BH206	BH206	BH207
Laboratory ID			19-1840-1	19-1840-2	19-1840-3	19-1840-4	19-1840-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Naphthalene	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.17	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	58	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	7.8	0.05	<0.05	<0.05	<0.05	<0.05	0.11
Anthracene	0.74	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	0.05	<0.05	<0.05	<0.05	<0.05	0.21
Pyrene	78	0.05	<0.05	<0.05	<0.05	<0.05	0.15
Benzo [a] anthracene	0.63	0.05	<0.05	<0.05	<0.05	<0.05	0.07
Chrysene	7.8	0.05	<0.05	<0.05	<0.05	<0.05	0.1
Benzo [b] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	<0.05	0.07
Benzo [k] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	<0.05	0.07
Benzo [a] pyrene	0.3	0.05	<0.05	<0.05	<0.05	<0.05	0.08
Indeno [1,2,3-cd] pyrene	0.48	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo [a,h] anthracene	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [g,h,i] perylene	7.8	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH207	BH208	BH208	BH209	BH209
Laboratory ID			19-1840-6	19-1840-7	19-1840-8	19-1840-9	19-1840-10
Sample Depth (m)			1.50-2.10m	0.75-1.35m	1.50-2.10m	0.00-0.60m	1.50-2.10m
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Naphthalene	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.17	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	58	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	7.8	0.05	0.11	<0.05	<0.05	0.15	<0.05
Anthracene	0.74	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	0.05	0.16	<0.05	<0.05	0.16	<0.05
Pyrene	78	0.05	0.1	<0.05	<0.05	0.13	<0.05
Benzo [a] anthracene	0.63	0.05	<0.05	<0.05	<0.05	0.07	<0.05
Chrysene	7.8	0.05	<0.05	<0.05	<0.05	0.08	<0.05
Benzo [b] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [k] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [a] pyrene	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno [1,2,3-cd] pyrene	0.48	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo [a,h] anthracene	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [g,h,i] perylene	7.8	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH211	BH211	BH211 (Duplicate)		
Laboratory ID			19-1840-11	19-1840-12	19-1840-13		
Sample Depth (m)			0.00-0.60m	1.50-2.10m	1.50-2.10m		
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19		
Parameters	**2011 Table 3 SCS**	**RDL**					
Naphthalene	0.75	0.05	<0.05	<0.05	<0.05		
2-Methylnaphthalene	3.4	0.05	<0.05	<0.05	<0.05		
1-Methylnaphthalene		0.05	<0.05	<0.05	<0.05		
Acenaphthylene	0.17	0.05	<0.05	<0.05	<0.05		
Acenaphthene	58	0.05	<0.05	<0.05	<0.05		
Fluorene	69	0.05	<0.05	<0.05	<0.05		
Phenanthrene	7.8	0.05	0.34	<0.05	<0.05		
Anthracene	0.74	0.05	0.08	<0.05	<0.05		
Fluoranthene	0.69	0.05	0.41	<0.05	<0.05		
Pyrene	78	0.05	0.35	<0.05	<0.05		
Benzo [a] anthracene	0.63	0.05	0.17	<0.05	<0.05		
Chrysene	7.8	0.05	0.18	<0.05	<0.05		
Benzo [b] fluoranthene	0.78	0.05	0.15	<0.05	<0.05		
Benzo [k] fluoranthene	0.78	0.05	0.15	<0.05	<0.05		
Benzo [a] pyrene	0.3	0.05	0.17	<0.05	<0.05		
Indeno [1,2,3-cd] pyrene	0.48	0.1	0.14	<0.1	<0.1		
Dibenzo [a,h] anthracene	0.1	0.1	<0.1	<0.1	<0.1		
Benzo [g,h,i] perylene	7.8	0.1	0.1	<0.1	<0.1		

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH201	BH201	BH205	BH205	BH205 (Duplicate)
Laboratory ID			19-1892-1	19-1892-2	19-1892-3	19-1892-4	19-1892-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	1.50-2.10m
Sampling Date			4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Naphthalene	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.17	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	58	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.74	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	0.05	0.11	<0.05	0.31	<0.05	<0.05
Pyrene	78	0.05	0.09	<0.05	0.29	<0.05	<0.05
Benzo [a] anthracene	0.63	0.05	<0.05	<0.05	0.1	<0.05	<0.05
Chrysene	7.8	0.05	<0.05	<0.05	0.16	<0.05	<0.05
Benzo [b] fluoranthene	0.78	0.05	<0.05	<0.05	0.1	<0.05	<0.05
Benzo [k] fluoranthene	0.78	0.05	<0.05	<0.05	0.1	<0.05	<0.05
Benzo [a] pyrene	0.3	0.05	<0.05	<0.05	0.09	<0.05	<0.05
Indeno [1,2,3-cd] pyrene	0.48	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo [a,h] anthracene	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [g,h,i] perylene	7.8	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH215	BH215	BH217	MW218	MW218
Laboratory ID			19-1892-6	19-1892-7	19-1892-8	19-1916-1	19-1916-2
Sample Depth (m)			0.90-1.50m	1.80-2.25m	0.60-0.90m	0.90-1.20m	1.20-1.65m
Sampling Date			4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	08-Feb-19	08-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Naphthalene	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.17	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	58	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.74	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [a] anthracene	0.63	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [b] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [k] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [a] pyrene	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno [1,2,3-cd] pyrene	0.48	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo [a,h] anthracene	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [g,h,i] perylene	7.8	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH202	BH202	BH204	BH204	BH210
Laboratory ID			19-1956-1	19-1956-2	19-1956-3	19-1956-4	19-1956-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Naphthalene	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.17	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	58	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	7.8	0.05	0.5	<0.05	<0.05	<0.05	0.52
Anthracene	0.74	0.05	<0.05	<0.05	<0.05	<0.05	0.1
Fluoranthene	0.69	0.05	0.58	<0.05	0.09	<0.05	**1.43**
Pyrene	78	0.05	0.39	<0.05	0.08	<0.05	1.19
Benzo [a] anthracene	0.63	0.05	0.07	<0.05	<0.05	<0.05	0.26
Chrysene	7.8	0.05	0.14	<0.05	<0.05	<0.05	0.4
Benzo [b] fluoranthene	0.78	0.05	0.22	<0.05	<0.05	<0.05	0.62
Benzo [k] fluoranthene	0.78	0.05	0.18	<0.05	<0.05	<0.05	0.46
Benzo [a] pyrene	0.3	0.05	0.12	<0.05	<0.05	<0.05	**0.54**
Indeno [1,2,3-cd] pyrene	0.48	0.1	0.16	<0.1	<0.1	<0.1	0.28
Dibenzo [a,h] anthracene	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [g,h,i] perylene	7.8	0.1	0.13	<0.1	<0.1	<0.1	0.27

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH210	BH210 (Duplicate)	BH212	BH212	BH214
Laboratory ID			19-1956-6	19-1956-7	19-1956-8	19-1956-9	19-1956-10
Sample Depth (m)			1.50-2.10m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Naphthalene	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.17	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	58	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.74	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	0.05	<0.05	<0.05	0.1	<0.05	0.12
Pyrene	78	0.05	<0.05	<0.05	0.07	<0.05	0.1
Benzo [a] anthracene	0.63	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [b] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	<0.05	0.06
Benzo [k] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo [a] pyrene	0.3	0.05	<0.05	<0.05	<0.05	<0.05	0.05
Indeno [1,2,3-cd] pyrene	0.48	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo [a,h] anthracene	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [g,h,i] perylene	7.8	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH214	MW213	MW213	MW216	MW216 (Duplicate)
Laboratory ID			19-1956-11	19-1993-1	19-1993-2	19-2055-1	19-2055-2
Sample Depth (m)			1.50-2.10m	0.00-0.90m	0.90-1.50m	0.00-0.30m	0.00-0.30m
Sampling Date			14-Feb-19	21-Feb-19	21-Feb-19	01-Mar-19	01-Mar-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Naphthalene	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.17	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	58	0.05	<0.05	0.17	<0.05	<0.05	<0.05
Fluorene	69	0.05	<0.05	0.16	<0.05	<0.05	<0.05
Phenanthrene	7.8	0.05	<0.05	1.56	<0.05	<0.05	<0.05
Anthracene	0.74	0.05	<0.05	0.12	<0.05	<0.05	<0.05
Fluoranthene	0.69	0.05	<0.05	2.13	<0.05	<0.05	<0.05
Pyrene	78	0.05	<0.05	1.31	<0.05	<0.05	<0.05
Benzo [a] anthracene	0.63	0.05	<0.05	0.53	<0.05	<0.05	<0.05
Chrysene	7.8	0.05	<0.05	0.75	<0.05	<0.05	<0.05
Benzo [b] fluoranthene	0.78	0.05	<0.05	0.7	<0.05	<0.05	<0.05
Benzo [k] fluoranthene	0.78	0.05	<0.05	0.34	<0.05	<0.05	<0.05
Benzo [a] pyrene	0.3	0.05	<0.05	0.48	<0.05	<0.05	<0.05
Indeno [1,2,3-cd] pyrene	0.48	0.1	<0.1	0.39	<0.1	<0.1	<0.1
Dibenzo [a,h] anthracene	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [g,h,i] perylene	7.8	0.1	<0.1	0.24	<0.1	<0.1	<0.1

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH222	BH223	BH223 (Duplicate)		
Laboratory ID			19-2452-4	19-2452-5	19-2452-6		
Sample Depth (m)			0.00-0.60m	0.00-0.60m	0.00-0.60m		
Sampling Date			29,30-Apr-19	29,30-Apr-19	29,30-Apr-19		
Parameters	**2011 Table 3 SCS**	**RDL**					
Naphthalene	0.75	0.05	<0.05	<0.05	<0.05		
2-Methylnaphthalene	3.4	0.05	<0.05	<0.05	<0.05		
1-Methylnaphthalene		0.05	<0.05	<0.05	<0.05		
Acenaphthylene	0.17	0.05	<0.05	<0.05	<0.05		
Acenaphthene	58	0.05	<0.05	<0.05	<0.05		
Fluorene	69	0.05	<0.05	<0.05	<0.05		
Phenanthrene	7.8	0.05	<0.05	<0.05	<0.05		
Anthracene	0.74	0.05	<0.05	<0.05	<0.05		
Fluoranthene	0.69	0.05	<0.05	<0.05	<0.05		
Pyrene	78	0.05	<0.05	<0.05	<0.05		
Benzo [a] anthracene	0.63	0.05	<0.05	<0.05	<0.05		
Chrysene	7.8	0.05	<0.05	<0.05	<0.05		
Benzo [b] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05		
Benzo [k] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05		
Benzo [a] pyrene	0.3	0.05	<0.05	<0.05	<0.05		
Indeno [1,2,3-cd] pyrene	0.48	0.1	<0.1	<0.1	<0.1		
Dibenzo [a,h] anthracene	0.1	0.1	<0.1	<0.1	<0.1		
Benzo [g,h,i] perylene	7.8	0.1	<0.1	<0.1	<0.1		

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH222	BH223	BH223 (Duplicate)		
Laboratory ID			19-2463-4	19-2463-5	19-2463-6		
Sample Depth (m)			0.75-1.35m	0.75-1.35m	0.75-1.35m		
Sampling Date			29,30-Apr-19	29,30-Apr-19	29,30-Apr-19		
Parameters	**2011 Table 3 SCS**	**RDL**					
Naphthalene	0.75	0.05	<0.05	<0.05	<0.05		
2-Methylnaphthalene	3.4	0.05	<0.05	<0.05	<0.05		
1-Methylnaphthalene		0.05	<0.05	<0.05	<0.05		
Acenaphthylene	0.17	0.05	<0.05	<0.05	<0.05		
Acenaphthene	58	0.05	<0.05	<0.05	<0.05		
Fluorene	69	0.05	<0.05	<0.05	<0.05		
Phenanthrene	7.8	0.05	<0.05	<0.05	<0.05		
Anthracene	0.74	0.05	<0.05	<0.05	<0.05		
Fluoranthene	0.69	0.05	<0.05	<0.05	<0.05		
Pyrene	78	0.05	<0.05	<0.05	<0.05		
Benzo [a] anthracene	0.63	0.05	<0.05	<0.05	<0.05		
Chrysene	7.8	0.05	<0.05	<0.05	<0.05		
Benzo [b] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05		
Benzo [k] fluoranthene	0.78	0.05	<0.05	<0.05	<0.05		
Benzo [a] pyrene	0.3	0.05	<0.05	<0.05	<0.05		
Indeno [1,2,3-cd] pyrene	0.48	0.1	<0.1	<0.1	<0.1		
Dibenzo [a,h] anthracene	0.1	0.1	<0.1	<0.1	<0.1		
Benzo [g,h,i] perylene	7.8	0.1	<0.1	<0.1	<0.1		

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Table 8: Soil Quality Data - Polychlorinated Biphenyls Analysis

Sample Location			MW102	MW102 (Duplicate)	MW103	MW104	MW105
Laboratory ID			17-7469-2	17-7469-3	17-7469-5	17-7469-7	17-7469-9
Sample Depth (m)			0.00-0.60m	0.00-0.60m	0.75-1.35m	0.45-1.05m	0.75-1.35m
Sampling Date			31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17	31-Oct-17
Parameters	2011 Table 3 SCS	RDL					
PCB	0.35	0.02	<0.02	<0.02	0.18	<0.02	<0.02

Notes:
Bold – indicates exceedence of applicable MECP SCS
All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.
ppm - means parts per million.
RDL - means report detection limit
2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.
Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			MW106	BH107	BH109		
Laboratory ID			17-7469-10	17-7469-11	17-7469-14		
Sample Depth (m)			3.00-3.60m	0.00-0.60m	0.60-1.20m		
Sampling Date			01-Nov-17	01-Nov-17	01-Nov-17		
Parameters	2011 Table 3 SCS	RDL					
PCB	0.35	0.02	<0.02	<0.02	<0.02		

Notes:
Bold – indicates exceedence of applicable MECP SCS
All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.
ppm - means parts per million.
RDL - means report detection limit
2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.
Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH203	BH203	BH208	BH208	BH209
Laboratory ID			19-1840-1	19-1840-2	19-1840-7	19-1840-8	19-1840-9
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.75-1.35m	1.50-2.10m	0.00-0.60m
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19
Parameters	2011 Table 3 SCS	RDL					
PCB	0.35	0.02	<0.02	<0.02	<0.02	<0.02	<0.02

Notes:
Bold – indicates exceedence of applicable MECP SCS
All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.
ppm - means parts per million.
RDL - means report detection limit
2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.
Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH209	BH201	BH201	BH210	BH210
Laboratory ID			19-1840-10	19-1892-1	19-1892-2	19-1956-5	19-1956-6
Sample Depth (m)			1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m
Sampling Date			01-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	14-Feb-19	14-Feb-19
Parameters	2011 Table 3 SCS	RDL					
PCB	0.35	0.02	<0.02	<0.02	<0.02	<0.02	<0.02

Notes:
Bold – indicates exceedence of applicable MECP SCS
All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.
ppm - means parts per million.
RDL - means report detection limit
2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.
Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH210 (Duplicate)				
Laboratory ID			19-1956-7				
Sample Depth (m)			1.50-2.10m				
Sampling Date			14-Feb-19				
Parameters	2011 Table 3 SCS	RDL					
PCB	0.35	0.02	<0.02				

Notes:
Bold – indicates exceedence of applicable MECP SCS
All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.
ppm - means parts per million.
RDL - means report detection limit
2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.
Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Table 9: Soil Quality Data - Other Regulated Parameters Analysis

Sample Location			BH203	BH203	BH206	BH206	BH207
Laboratory ID			19-1840-1	19-1840-2	19-1840-3	19-1840-4	19-1840-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
EC	0.7	0.01	**0.83**	0.41	0.24	0.28	**1.6**
SAR	5	NA	3.5	1.5	1	1.1	8.1

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

NA - means not applicable

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH207	BH208	BH208	BH209	BH209
Laboratory ID			19-1840-6	19-1840-7	19-1840-8	19-1840-9	19-1840-10
Sample Depth (m)			1.50-2.10m	0.75-1.35m	1.50-2.10m	0.00-0.60m	1.50-2.10m
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19	01-Feb-19
Parameters	**2011 Table 3 SCS**	**RDL**					
EC	0.7	0.01	0.28	0.17	0.20	**3.23**	0.6
SAR	5	NA	0.8	0.69	0.87	1.7	4.4

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

NA - means not applicable

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH211	BH211	BH211 (Duplicate)		
Laboratory ID			19-1840-11	19-1840-12	19-1840-13		
Sample Depth (m)			0.00-0.60m	1.50-2.10m	1.50-2.10m		
Sampling Date			01-Feb-19	01-Feb-19	01-Feb-19		
Parameters	**2011 Table 3 SCS**	**RDL**					
EC	0.7	0.01	**2.32**	0.29	0.29		
SAR	5	NA	10	0.75	0.74		

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

NA - means not applicable

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH201	BH201	BH205	BH205	BH205 (Duplicate)
Laboratory ID			19-1892-1	19-1892-2	19-1892-3	19-1892-4	19-1892-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	1.50-2.10m
Sampling Date			4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19
Parameters	2011 Table 3 SCS	RDL					
EC	0.7	0.01	0.57	0.29	0.21	0.14	0.1
SAR	5	NA	2.8	1.6	0.72	0.33	0.34

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

NA - means not applicable

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH215	BH215	BH217	BH218	BH218
Laboratory ID			19-1892-6	19-1892-7	19-1892-8	19-1916-1	19-1916-2
Sample Depth (m)			0.90-1.50m	1.80-2.25m	0.60-0.90m	0.90-1.20m	1.20-1.65m
Sampling Date			4,6,7-Feb-19	4,6,7-Feb-19	4,6,7-Feb-19	08-Feb-19	08-Feb-19
Parameters	2011 Table 3 SCS	RDL					
EC	0.7	0.01	0.20	0.17	0.19	0.13	0.1
SAR	5	NA	0.46	0.44	1.1	0.29	0.33

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

NA - means not applicable

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH202	BH202	BH204	BH204	BH210
Laboratory ID			19-1956-1	19-1956-2	19-1956-3	19-1956-4	19-1956-5
Sample Depth (m)			0.00-0.60m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19
Parameters	2011 Table 3 SCS	RDL					
EC	0.7	0.01	**1.83**	0.22	0.20	0.23	0.6
SAR	5	NA	1.9	0.23	0.94	0.71	3.4

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

NA - means not applicable

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH210	BH210 (Duplicate)	BH212	BH212	BH214
Laboratory ID			19-1956-6	19-1956-7	19-1956-8	19-1956-9	19-1956-10
Sample Depth (m)			1.50-2.10m	1.50-2.10m	0.00-0.60m	1.50-2.10m	0.00-0.60m
Sampling Date			14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19
Parameters	2011 Table 3 SCS	RDL					
EC	0.7	0.01	0.22	0.23	0.24	0.26	0.3
SAR	5	NA	0.97	0.89	0.74	0.8	0.42

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

NA - means not applicable

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH214	MW213	MW213	MW216	MW216 (Duplicate)
Laboratory ID			19-1956-11	19-1993-1	19-1993-2	19-2055-1	19-2055-2
Sample Depth (m)			1.50-2.10m	0.00-0.90m	0.90-1.50m	0.00-0.30m	0.00-0.30m
Sampling Date			14-Feb-19	21-Feb-19	21-Feb-19	01-Mar-19	01-Mar-19
Parameters	2011 Table 3 SCS	RDL					
EC	0.7	0.01	0.20	0.20	0.15	0.21	0.2
SAR	5	NA	0.41	1.1	0.45	0.55	0.56

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

NA - means not applicable

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH221	BH222	BH223	BH223 (Duplicate)	
Laboratory ID			19-2452-3	19-2452-4	19-2452-5	19-2452-6	
Sample Depth (m)			0.00-0.60m	0.00-0.60m	0.00-0.60m	0.00-0.60m	
Sampling Date			29,30-Apr-19	29,30-Apr-19	29,30-Apr-19	29,30-Apr-19	
Parameters	2011 Table 3 SCS	RDL					
EC	0.7	0.01	0.32	**0.85**	**1.13**	**1.00**	
SAR	5	NA	0.5	4	4.8	4.9	

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

NA - means not applicable

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Sample Location			BH221	BH222	BH223	BH223 (Duplicate)	
Laboratory ID			19-2463-3	19-2463-4	19-2463-5	19-2463-6	
Sample Depth (m)			0.75-1.35m	0.75-1.35m	0.75-1.35m	0.75-1.35m	
Sampling Date			29,30-Apr-19	29,30-Apr-19	29,30-Apr-19	29,30-Apr-19	
Parameters	2011 Table 3 SCS	RDL					
EC	0.7	0.01	0.27	0.40	0.39	0.40	
SAR	5	NA	0.4	4.5	2.3	2.7	

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/g (ppm) dry weight basis, unless otherwise noted.

ppm - means parts per million.

NA - means not applicable

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Table 10: Soil Quality Data - pH Analysis

Sample Location			MW101	MW103	MW105		
Laboratory ID			17-7469-1	17-7469-6	17-7469-9		
Sample Depth (m)			3.80-4.40m	3.80-4.40m	0.75-1.35m		
Sampling Date			31-Oct-17	31-Oct-17	31-Oct-17		
Parameters	**2011 Table 3 SCS**	**RDL**					
pH *(no unit)*	5-9*	NA	8.85	8.95	8.74		

Notes:

* Surface Soil pH value from 5 – 9; Subsurface Soil pH value from 5 – 11.

Bold – indicates exceedence of applicable MECP SCS

RDL - means report detection limit

NA - means not applicable

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3: Standards apply for full depth generic SCS in a non-potable ground water condition for Residential/Parkland/Institutional property use and medium and fine textured soil.

Table 11 – Summary of Groundwater Samples Submitted for Chemical Analysis

Well Number	Sample Number	Parameter Analyzed
MW101	17-7544-1	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs
MW102	17-7544-2	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs, PCBs, Mercury
MW103	17-7544-3	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs, PCBs, Mercury
MW104	17-7544-4	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs, PCBs, Mercury
MW105	17-7544-5	Metals, PHCs (F1-F4) and BTEX, PAHs, PCBs, Mercury
MW106	17-7544-6	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs, PCBs, Mercury
MW106 Field Duplicate	17-7544-7	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs, PCBs, Mercury
MW108	17-7544-8	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs
Travel Blank	17-7544-9	VOCs
Travel Blank	17-7544-10	VOCs
BH3(MW)	17-7613-1	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs, PCBs
BH3(MW) Field Duplicate	17-7613-2	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs, PCBs
Travel Blank	17-7613-3	VOCs
MW211	19-2014-1	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs
MW211 Field Duplicate	19-2014-2	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs
MW212	19-2014-3	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs

Table 11 – Summary of Groundwater Samples Submitted for Chemical Analysis

Well Number	Sample Number	Parameter Analyzed
MW214	19-2014-4	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs
Trip Blank	19-2014-5	VOCs
MW216	19-2056-1	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs
MW217	19-2056-2	Metals, VOCs, PHCs (F1-F4) and BTEX, PAHs
Trip Blank	19-2056-3	VOCs
MW213	19-2266-1	Metals, VOCs, PHCs (F1-F4) and BTEX
MW213 Field Duplicate	19-2266-2	Metals, VOCs, PHCs (F1-F4) and BTEX
MW215	19-2266-3	Metals, VOCs, PAHs
Trip Blank	19-2266-4	VOCs
MW 211	L2237907-1	Hexavalent Chromium
MW211 Field Duplicate	L2237907-2	Hexavalent Chromium
MW 217	L2240912-1	Hexavalent Chromium
MW217 Field Duplicate	L2240912-2	Hexavalent Chromium

NOTES: *Where PHCs (F1-F4) were analyzed, BTEX parameters were also analyzed.*

Table 12: Groundwater Quality Data - Metals Analysis

Sample Location			MW101	MW102	MW103	MW104	MW105
Laboratory ID			17-7544-1	17-7544-2	17-7544-3	17-7544-4	17-7544-5
Sampling Date			14-Nov-17	13-Nov-17	14-Nov-17	14-Nov-17	13-Nov-17
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	29000	2	109	64	75	460	99
Beryllium	67	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	45000	10	203	365	204	204	258
Cadmium	2.7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	810	10	15	11	12	15	11
Cobalt	66	1	<1	<1	<1	<1	<1
Copper	87	5	<5	<5	<5	<5	6.6
Lead	25	1	<1	<1	<1	<1	<1
Molybdenum	9200	0.5	4.9	21	2.0	1.1	2.9
Nickel	490	1	2.9	1.8	3.6	4.0	4.0
Silver	1.5	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Thallium	510	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	420	2	15	9.7	10	4.4	9.6
Vanadium	250	0.5	4.8	4.7	4.0	4.5	3.8
Zinc	1100	5	<5	<5	<5	<5	<5

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW106	MW106 (Duplicate)	MW108	BH3(MW)	BH3(MW) (Duplicate)
Laboratory ID			17-7544-6	17-7544-7	17-7544-8	17-7613-1	17-7613-2
Sampling Date			13-Nov-17	13-Nov-17	13-Nov-17	24-Nov-17	24-Nov-17
Parameters	**2011 Table 3 SCS**	**RDL**					
Barium	29000	2	220	220	186	92	86
Beryllium	67	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	45000	10	562	569	271	895	974
Cadmium	2.7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	810	10	7.7	8.5	9.4	<10	<10
Cobalt	66	1	<1	<1	<1	<1	<1
Copper	87	5	<5	<5	<5	<5	<5
Lead	25	1	<1	<1	<1	<1	<1
Molybdenum	9200	0.5	13	14	5.7	9.0	8.0
Nickel	490	1	4.0	4.0	4.0	2.4	2.2
Silver	1.5	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Thallium	510	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	420	2	11	10	7.7	7.3	7.6
Vanadium	250	0.5	3.2	3.4	3.4	2.4	2.2
Zinc	1100	5	<5	<5	<5	<5	5.4

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW211	MW211 (Duplicate)	MW212	MW214	
Laboratory ID			19-2014-1	19-2014-2	19-2014-3	19-2014-4	
Sampling Date			26-Feb-19	26-Feb-19	26-Feb-19	26-Feb-19	
Parameters	2011 Table 3 SCS	RDL					
Barium	29000	2	141	150	237	109	
Beryllium	67	0.5	<0.5	<0.5	<0.5	<0.5	
Boron	45000	10	160	359	594	444	
Cadmium	2.7	0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	810	10	14	41	30	43	
Cobalt	66	1	7.3	7.3	1.8	1.3	
Copper	87	5	<5	<5	<5	<5	
Lead	25	1	<1	<1	<1	<1	
Molybdenum	9200	0.5	6	6	17.0	7.5	
Nickel	490	1	6.6	6.8	11.0	7.1	
Silver	1.5	0.3	<0.3	<0.3	<0.3	<0.3	
Thallium	510	0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	420	2	14	14	9.1	6.3	
Vanadium	250	0.5	1.9	2.3	7.4	9.4	
Zinc	1100	5	<5	<5	6.6	<5	

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW216	MW217	MW213	MW213 (Duplicate)	MW215
Laboratory ID			19-2056-1	19-2056-2	19-2266-1	19-2266-2	19-2266-3
Sampling Date			04-Mar-19	04-Mar-19	28-Mar-19	28-Mar-19	28-Mar-19
Parameters	2011 Table 3 SCS	RDL					
Barium	29000	2	195	300	16	16	52
Beryllium	67	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	45000	10	113	156	48	49	254
Cadmium	2.7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	810	10	<10	<10	51	51	24
Cobalt	66	1	2.1	1.4	<1	<1	<1
Copper	87	5	8.1	<5	51.0	53.0	10.0
Lead	25	1	<1	2.5	<1	<1	<1
Molybdenum	9200	0.5	9	10	96.0	93.0	49.0
Nickel	490	1	4.3	6.0	14.0	15.0	11.0
Silver	1.5	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Thallium	510	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	420	2	3	4	<2	<2	6.3
Vanadium	250	0.5	2.7	4.3	13.0	13.0	3.3
Zinc	1100	5	<5	<5	<5	<5	<5

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Table 13: Groundwater Quality Data - Hydride-Forming Metals Analysis

Sample Location			MW101	MW102	MW103	MW104	MW105
Laboratory ID			17-7544-1	17-7544-2	17-7544-3	17-7544-4	17-7544-5
Sampling Date			14-Nov-17	13-Nov-17	14-Nov-17	14-Nov-17	13-Nov-17
Parameters	**2011 Table 3 SCS**	**RDL**					
Antimony	20000	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	1900	1	<1	<1	<1	<1	<1
Selenium	63	5	<5	<5	<5	<5	<5

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW106	MW106 (Duplicate)	MW108	BH3(MW)	BH3(MW) (Duplicate)
Laboratory ID			17-7544-6	17-7544-7	17-7544-8	17-7613-1	17-7613-2
Sampling Date			13-Nov-17	13-Nov-17	13-Nov-17	24-Nov-17	24-Nov-17
Parameters	**2011 Table 3 SCS**	**RDL**					
Antimony	20000	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	1900	1	<1	<1	<1	<1	<1
Selenium	63	5	<5	<5	<5	<5	<5

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW211	MW211 (Duplicate)	MW212	MW214	
Laboratory ID			19-2014-1	19-2014-2	19-2014-3	19-2014-4	
Sampling Date			26-Feb-19	26-Feb-19	26-Feb-19	26-Feb-19	
Parameters	**2011 Table 3 SCS**	**RDL**					
Antimony	20000	0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic	1900	1	12.0	7.7	11.0	12.0	
Selenium	63	5	<5	<5	8.1	14.0	

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW216	MW217	MW213	MW213 (Duplicate)	MW215
Laboratory ID			19-2056-1	19-2056-2	19-2266-1	19-2266-2	19-2266-3
Sampling Date			04-Mar-19	04-Mar-19	28-Mar-19	28-Mar-19	28-Mar-19
Parameters	**2011 Table 3 SCS**	**RDL**					
Antimony	20000	0.5	1.8	<0.5	0.9	0.9	<0.5
Arsenic	1900	1	11.0	5.0	<1	<1	<1
Selenium	63	5	<5	<5	<5	<5	<5

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Table 14: Groundwater Quality Data - Volatile Organic Compounds Analysis

Sample Location			MW101	MW102	MW103	MW104	MW106
Laboratory ID			17-7544-1	17-7544-2	17-7544-3	17-7544-4	17-7544-6
Sampling Date			14-Nov-17	13-Nov-17	14-Nov-17	14-Nov-17	13-Nov-17
Parameters	**2011 Table 3 SCS**	**RDL**					
Acetone	130000	30	<30	<30	<30	<30	<30
Benzene	430	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	85000	2	<2	<2	<2	<2	<2
Bromoform	770	5	<5	<5	<5	<5	<5
Bromomethane	56	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	8.4	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorobenzene	630	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	22	1	<1	<1	<1	<1	<1
Dibromochloromethane	82000	2	<2	<2	<2	<2	<2
1,2-Dichlorobenzene	9600	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	9600	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	67	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlordifluoromethane	4400	2	<2	<2	<2	<2	<2
1,1-Dichloroethane	3100	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	12	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
c-1,2-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
t-1,2-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	140	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropane (cis-+trans-)	45	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	2300	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylene Dibromide	0.83	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Hexane (n)	520	5	<5	<5	<5	<5	<5
Methyl Ethyl Ketone	1500000	20	<20	<20	<20	<20	<20
Methyl Isobutyl Ketone	580000	20	<20	<20	<20	<20	<20
Methyl tert-butyl Ether	1400	2	<2	<2	<2	<2	<2
Methylene Chloride	5500	5	<5	<5	<5	<5	<5
Styrene	9100	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	28	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	15	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	18000	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	6700	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	30	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	2500	5	<5	<5	<5	<5	<5
Vinyl Chloride	1.7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	4200	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW106 (Duplicate)	MW108	Travel Blank	Travel Blank	BH3(MW)
Laboratory ID			17-7544-7	17-7544-8	17-7544-9	17-7544-10	17-7613-1
Sampling Date			13-Nov-17	13-Nov-17	13-Nov-17	14-Nov-17	24-Nov-17
Parameters	2011 Table 3 SCS	RDL					
Acetone	130000	30	<30	<30	<30	<30	<30
Benzene	430	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	85000	2	<2	<2	<2	<2	<2
Bromoform	770	5	<5	<5	<5	<5	<5
Bromomethane	56	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	8.4	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorobenzene	630	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	22	1	<1	<1	<1	<1	<1
Dibromochloromethane	82000	2	<2	<2	<2	<2	<2
1,2-Dichlorobenzene	9600	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	9600	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	67	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlordifluoromethane	4400	2	<2	<2	<2	<2	<2
1,1-Dichloroethane	3100	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	12	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
c-1,2-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
t-1,2-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	140	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropane (cis-+trans-)	45	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	2300	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylene Dibromide	0.83	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Hexane (n)	520	5	<5	<5	<5	<5	<5
Methyl Ethyl Ketone	1500000	20	<20	<20	<20	<20	<20
Methyl Isobutyl Ketone	580000	20	<20	<20	<20	<20	<20
Methyl tert-butyl Ether	1400	2	<2	<2	<2	<2	<2
Methylene Chloride	5500	5	<5	<5	<5	<5	<5
Styrene	9100	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	28	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	15	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	18000	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	6700	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	30	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	2500	5	<5	<5	<5	<5	<5
Vinyl Chloride	1.7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	4200	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			BH3(MW) (Duplicate)	Travel Blank			
Laboratory ID			17-7613-2	17-7613-3			
Sampling Date			24-Nov-17	24-Nov-17			
Parameters	2011 Table 3 SCS	RDL					
Acetone	130000	30	<30	<30			
Benzene	430	0.5	<0.5	<0.5			
Bromodichloromethane	85000	2	<2	<2			
Bromoform	770	5	<5	<5			
Bromomethane	56	0.5	<0.5	<0.5			
Carbon Tetrachloride	8.4	0.2	<0.2	<0.2			
Chlorobenzene	630	0.5	<0.5	<0.5			
Chloroform	22	1	<1	<1			
Dibromochloromethane	82000	2	<2	<2			
1,2-Dichlorobenzene	9600	0.5	<0.5	<0.5			
1,3-Dichlorobenzene	9600	0.5	<0.5	<0.5			
1,4-Dichlorobenzene	67	0.5	<0.5	<0.5			
Dichlordifluoromethane	4400	2	<2	<2			
1,1-Dichloroethane	3100	0.5	<0.5	<0.5			
1,2-Dichloroethane	12	0.5	<0.5	<0.5			
1,1-Dichloroethylene	17	0.5	<0.5	<0.5			
c-1,2-Dichloroethylene	17	0.5	<0.5	<0.5			
t-1,2-Dichloroethylene	17	0.5	<0.5	<0.5			
1,2-Dichloropropane	140	0.5	<0.5	<0.5			
1,3-Dichloropropane (cis-+trans-)	45	0.5	<0.5	<0.5			
Ethylbenzene	2300	0.5	<0.5	<0.5			
Ethylene Dibromide	0.83	0.2	<0.2	<0.2			
Hexane (n)	520	5	<5	<5			
Methyl Ethyl Ketone	1500000	20	<20	<20			
Methyl Isobutyl Ketone	580000	20	<20	<20			
Methyl tert-butyl Ether	1400	2	<2	<2			
Methylene Chloride	5500	5	<5	<5			
Styrene	9100	0.5	<0.5	<0.5			
1,1,1,2-Tetrachloroethane	28	0.5	<0.5	<0.5			
1,1,2,2-Tetrachloroethane	15	0.5	<0.5	<0.5			
Tetrachloroethylene	17	0.5	<0.5	<0.5			
Toluene	18000	0.5	<0.5	<0.5			
1,1,1-Trichloroethane	6700	0.5	<0.5	<0.5			
1,1,2-Trichloroethane	30	0.5	<0.5	<0.5			
Trichloroethylene	17	0.5	<0.5	<0.5			
Trichlorofluoromethane	2500	5	<5	<5			
Vinyl Chloride	1.7	0.5	<0.5	<0.5			
Xylenes	4200	0.5	<0.5	<0.5			

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW211	MW211 (Duplicate)	MW212	MW214	Trip Blank
Laboratory ID			19-2014-1	19-2014-2	19-2014-3	19-2014-4	19-2014-5
Sampling Date			26-Feb-19	26-Feb-19	26-Feb-19	26-Feb-19	
Parameters	2011 Table 3 SCS	RDL					
Acetone	130000	30	<30	<30	<30	<30	<30
Benzene	430	0.5	<0.5	<0.5	<0.5	0.8	<0.5
Bromodichloromethane	85000	2	<2	<2	<2	<2	<2
Bromoform	770	5	<5	<5	<5	<5	<5
Bromomethane	56	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	8.4	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorobenzene	630	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	22	1	<1	<1	<1	<1	<1
Dibromochloromethane	82000	2	<2	<2	<2	<2	<2
1,2-Dichlorobenzene	9600	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	9600	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	67	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlordifluoromethane	4400	2	<2	<2	<2	<2	<2
1,1-Dichloroethane	3100	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	12	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
c-1,2-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
t-1,2-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	140	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropane (cis-+trans-)	45	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	2300	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylene Dibromide	0.83	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Hexane (n)	520	5	<5	<5	<5	<5	<5
Methyl Ethyl Ketone	1500000	20	<20	<20	<20	<20	<20
Methyl Isobutyl Ketone	580000	20	<20	<20	<20	<20	<20
Methyl tert-butyl Ether	1400	2	<2	<2	<2	<2	<2
Methylene Chloride	5500	5	<5	<5	<5	<5	<5
Styrene	9100	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	28	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	15	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	18000	0.5	<0.5	<0.5	<0.5	3.3	<0.5
1,1,1-Trichloroethane	6700	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	30	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	2500	5	<5	<5	<5	<5	<5
Vinyl Chloride	1.7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	4200	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW216	MW217	Trip Blank		
Laboratory ID			19-2056-1	19-2056-2	19-2056-3		
Sampling Date			04-Mar-19	04-Mar-19	NA		
Parameters	2011 Table 3 SCS	RDL					
Acetone	130000	30	<30	<30	<30		
Benzene	430	0.5	<0.5	<0.5	<0.5		
Bromodichloromethane	85000	2	<2	<2	<2		
Bromoform	770	5	<5	<5	<5		
Bromomethane	56	0.5	<0.5	<0.5	<0.5		
Carbon Tetrachloride	8.4	0.2	<0.2	<0.2	<0.2		
Chlorobenzene	630	0.5	<0.5	<0.5	<0.5		
Chloroform	22	1	<1	<1	<1		
Dibromochloromethane	82000	2	<2	<2	<2		
1,2-Dichlorobenzene	9600	0.5	<0.5	<0.5	<0.5		
1,3-Dichlorobenzene	9600	0.5	<0.5	<0.5	<0.5		
1,4-Dichlorobenzene	67	0.5	<0.5	<0.5	<0.5		
Dichlordifluoromethane	4400	2	<2	<2	<2		
1,1-Dichloroethane	3100	0.5	<0.5	<0.5	<0.5		
1,2-Dichloroethane	12	0.5	<0.5	<0.5	<0.5		
1,1-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5		
c-1,2-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5		
t-1,2-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5		
1,2-Dichloropropane	140	0.5	<0.5	<0.5	<0.5		
1,3-Dichloropropane (cis-+trans-)	45	0.5	<0.5	<0.5	<0.5		
Ethylbenzene	2300	0.5	<0.5	<0.5	<0.5		
Ethylene Dibromide	0.83	0.2	<0.2	<0.2	<0.2		
Hexane (n)	520	5	<5	<5	<5		
Methyl Ethyl Ketone	1500000	20	<20	<20	<20		
Methyl Isobutyl Ketone	580000	20	<20	<20	<20		
Methyl tert-butyl Ether	1400	2	<2	<2	<2		
Methylene Chloride	5500	5	<5	<5	<5		
Styrene	9100	0.5	<0.5	<0.5	<0.5		
1,1,1,2-Tetrachloroethane	28	0.5	<0.5	<0.5	<0.5		
1,1,2,2-Tetrachloroethane	15	0.5	<0.5	<0.5	<0.5		
Tetrachloroethylene	17	0.5	<0.5	<0.5	<0.5		
Toluene	18000	0.5	<0.5	<0.5	<0.5		
1,1,1-Trichloroethane	6700	0.5	<0.5	<0.5	<0.5		
1,1,2-Trichloroethane	30	0.5	<0.5	<0.5	<0.5		
Trichloroethylene	17	0.5	<0.5	<0.5	<0.5		
Trichlorofluoromethane	2500	5	<5	<5	<5		
Vinyl Chloride	1.7	0.5	<0.5	<0.5	<0.5		
Xylenes	4200	0.5	<0.5	<0.5	<0.5		

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW213	MW213 (Duplicate)	MW215	Trip Blank	
Laboratory ID			19-2266-1	19-2266-2	19-2266-3	19-2266-4	
Sampling Date			28-Mar-19	28-Mar-19	28-Mar-19	NA	
Parameters	2011 Table 3 SCS	RDL					
Acetone	130000	30	<30	<30	<30	<30	
Benzene	430	0.5	<0.5	<0.5	<0.5	<0.5	
Bromodichloromethane	85000	2	<2	<2	<2	<2	
Bromoform	770	5	<5	<5	<5	<5	
Bromomethane	56	0.5	<0.5	<0.5	<0.5	<0.5	
Carbon Tetrachloride	8.4	0.2	<0.2	<0.2	<0.2	<0.2	
Chlorobenzene	630	0.5	<0.5	<0.5	<0.5	<0.5	
Chloroform	22	1	<1	<1	<1	<1	
Dibromochloromethane	82000	2	<2	<2	<2	<2	
1,2-Dichlorobenzene	9600	0.5	<0.5	<0.5	<0.5	<0.5	
1,3-Dichlorobenzene	9600	0.5	<0.5	<0.5	<0.5	<0.5	
1,4-Dichlorobenzene	67	0.5	<0.5	<0.5	<0.5	<0.5	
Dichlordifluoromethane	4400	2	<2	<2	<2	<2	
1,1-Dichloroethane	3100	0.5	<0.5	<0.5	<0.5	<0.5	
1,2-Dichloroethane	12	0.5	<0.5	<0.5	<0.5	<0.5	
1,1-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	
c-1,2-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	
t-1,2-Dichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	
1,2-Dichloropropane	140	0.5	<0.5	<0.5	<0.5	<0.5	
1,3-Dichloropropane (cis-+trans-)	45	0.5	<0.5	<0.5	<0.5	<0.5	
Ethylbenzene	2300	0.5	<0.5	<0.5	<0.5	<0.5	
Ethylene Dibromide	0.83	0.2	<0.2	<0.2	<0.2	<0.2	
Hexane (n)	520	5	<5	<5	<5	<5	
Methyl Ethyl Ketone	1500000	20	<20	<20	<20	<20	
Methyl Isobutyl Ketone	580000	20	<20	<20	<20	<20	
Methyl tert-butyl Ether	1400	2	<2	<2	<2	<2	
Methylene Chloride	5500	5	<5	<5	<5	<5	
Styrene	9100	0.5	<0.5	<0.5	<0.5	<0.5	
1,1,1,2-Tetrachloroethane	28	0.5	<0.5	<0.5	<0.5	<0.5	
1,1,2,2-Tetrachloroethane	15	0.5	<0.5	<0.5	<0.5	<0.5	
Tetrachloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	
Toluene	18000	0.5	6.1	6.8	<0.5	<0.5	
1,1,1-Trichloroethane	6700	0.5	<0.5	<0.5	<0.5	<0.5	
1,1,2-Trichloroethane	30	0.5	<0.5	<0.5	<0.5	<0.5	
Trichloroethylene	17	0.5	<0.5	<0.5	<0.5	<0.5	
Trichlorofluoromethane	2500	5	<5	<5	<5	<5	
Vinyl Chloride	1.7	0.5	<0.5	<0.5	<0.5	<0.5	
Xylenes	4200	0.5	<0.5	<0.5	<0.5	<0.5	

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Table 15: Groundwater Quality Data - Petroleum Hydrocarbons (F1-F4) and Benzene, Toluene, Ethylbenzene, Xylene Analysis

Sample Location			MW101	MW102	MW103	MW104	MW105
Laboratory ID			17-7544-1	17-7544-2	17-7544-3	17-7544-4	17-7544-5
Sampling Date			14-Nov-17	13-Nov-17	14-Nov-17	14-Nov-17	13-Nov-17
Parameters	**2011 Table 3 SCS**	**RDL**					
BTEX in Water							
Benzene	430	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	18000	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	2300	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	4200	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
PHCs (F1-F4) in Water							
$F1_{-BTEX}$ (C_6 - C_{10})	750	25	<25	<25	<25	<25	<25
F2 (C_{10} - C_{16})	150	100	<100	<100	<100	<100	<100
F3 (C_{16} - C_{34})	500	100	<100	<100	<100	<100	<100
F4 (C_{34} - C_{50})	500	100	<100	<100	<100	<100	<100

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW106	MW106 (Duplicate)	MW108	BH3(MW)	BH3(MW) (Duplicate)
Laboratory ID			17-7544-6	17-7544-7	17-7544-8	17-7613-1	17-7613-2
Sampling Date			13-Nov-17	13-Nov-17	13-Nov-17	24-Nov-17	24-Nov-17
Parameters	**2011 Table 3 SCS**	**RDL**					
BTEX in Water							
Benzene	430	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	18000	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	2300	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	4200	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
PHCs (F1-F4) in Water							
$F1_{-BTEX}$ (C_6 - C_{10})	750	25	<25	<25	<25	<25	<25
F2 (C_{10} - C_{16})	150	100	<100	<100	<100	<100	<100
F3 (C_{16} - C_{34})	500	100	<100	<100	<100	<100	<100
F4 (C_{34} - C_{50})	500	100	<100	<100	<100	<100	<100

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW211	MW211 (Duplicate)	MW212	MW214	
Laboratory ID			19-2014-1	19-2014-2	19-2014-3	19-2014-4	
Sampling Date			26-Feb-19	26-Feb-19	26-Feb-19	26-Feb-19	
Parameters	2011 Table 3 SCS	RDL					
BTEX in Water							
Benzene	430	0.5	<0.5	<0.5	<0.5	0.8	
Toluene	18000	0.5	<0.5	<0.5	<0.5	3.3	
Ethylbenzene	2300	0.5	<0.5	<0.5	<0.5	<0.5	
Xylenes	4200	0.5	<0.5	<0.5	<0.5	<0.5	
PHCs (F1-F4) in Water							
$F1_{-BTEX}$ (C_6 - C_{10})	750	25	<25	<25	<25	<25	
F2 (C_{10} - C_{16})	150	100	<100	<100	<100	<100	
F3 (C_{16} - C_{34})	500	100	<100	<100	<100	<100	
F4 (C_{34} - C_{50})	500	100	<100	<100	<100	<100	

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW216	MW217	MW213	MW213 (Duplicate)	
Laboratory ID			19-2056-1	19-2056-2	19-2266-1	19-2266-2	
Sampling Date			04-Mar-19	04-Mar-19	28-Mar-19	28-Mar-19	
Parameters	2011 Table 3 SCS	RDL					
BTEX in Water							
Benzene	430	0.5	<0.5	<0.5	<0.5	<0.5	
Toluene	18000	0.5	<0.5	<0.5	6.1	6.8	
Ethylbenzene	2300	0.5	<0.5	<0.5	<0.5	<0.5	
Xylenes	4200	0.5	<0.5	<0.5	<0.5	<0.5	
PHCs (F1-F4) in Water							
$F1_{-BTEX}$ (C_6 - C_{10})	750	25	<25	<25	<25	<25	
F2 (C_{10} - C_{16})	150	100	<100	<100	<100	<100	
F3 (C_{16} - C_{34})	500	100	<100	<100	<100	<100	
F4 (C_{34} - C_{50})	500	100	<100	<100	<100	<100	

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Table 16: Groundwater Quality Data - Polycyclic Aromatic Hydrocarbons Analysis

Sample Location			MW101	MW102	MW103	MW104	MW105
Laboratory ID			17-7544-1	17-7544-2	17-7544-3	17-7544-4	17-7544-5
Sampling Date			14-Nov-17	13-Nov-17	14-Nov-17	14-Nov-17	13-Nov-17
Parameters	2011 Table 3 SCS	RDL					
Naphthalene	6400	2	<2	<2	<2	<2	<2
2-Methylnaphthalene	1800	1	<1	<1	<1	<1	<1
1-Methylnaphthalene		1	<1	<1	<1	<1	<1
Acenaphthylene	1.8	1	<1	<1	<1	<1	<1
Acenaphthene	1700	1	<1	<1	<1	<1	<1
Fluorene	400	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	580	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	2.4	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	130	0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Pyrene	68	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo [a] anthracene	4.7	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chrysene	1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [b] fluoranthene	0.75	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [k] fluoranthene	0.4	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [a] pyrene	0.81	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno [1,2,3-cd] pyrene	0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dibenzo [a,h] anthracene	0.52	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo [g,h,i] perylene	0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW106	MW106 (Duplicate)	MW108	BH3(MW)	BH3(MW) (Duplicate)
Laboratory ID			17-7544-6	17-7544-7	17-7544-8	17-7613-1	17-7613-2
Sampling Date			13-Nov-17	13-Nov-17	13-Nov-17	24-Nov-17	24-Nov-17
Parameters	2011 Table 3 SCS	RDL					
Naphthalene	6400	2	<2	<2	<2	<2	<2
2-Methylnaphthalene	1800	1	<1	<1	<1	<1	<1
1-Methylnaphthalene		1	<1	<1	<1	<1	<1
Acenaphthylene	1.8	1	<1	<1	<1	<1	<1
Acenaphthene	1700	1	<1	<1	<1	<1	<1
Fluorene	400	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	580	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	2.4	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	130	0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Pyrene	68	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo [a] anthracene	4.7	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chrysene	1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [b] fluoranthene	0.75	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [k] fluoranthene	0.4	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo [a] pyrene	0.81	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno [1,2,3-cd] pyrene	0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dibenzo [a,h] anthracene	0.52	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo [g,h,i] perylene	0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW211	MW211 (Dupe)	MW212	MW214	
Laboratory ID			19-2014-1	19-2014-2	19-2014-3	19-2014-4	
Sampling Date			26-Feb-19	26-Feb-19	26-Feb-19	26-Feb-19	
Parameters	2011 Table 3 SCS	RDL					
Naphthalene	6400	2	<2	<2	<2	<2	
2-Methylnaphthalene	1800	1	<1	<1	<1	<1	
1-Methylnaphthalene		1	<1	<1	<1	<1	
Acenaphthylene	1.8	1	<1	<1	<1	<1	
Acenaphthene	1700	1	<1	<1	<1	<1	
Fluorene	400	0.5	<0.5	<0.5	<0.5	<0.5	
Phenanthrene	580	0.1	<0.1	<0.1	<0.1	<0.1	
Anthracene	2.4	0.1	<0.1	<0.1	<0.1	<0.1	
Fluoranthene	130	0.4	<0.4	<0.4	<0.4	<0.4	
Pyrene	68	0.2	<0.2	<0.2	<0.2	<0.2	
Benzo [a] anthracene	4.7	0.2	<0.2	<0.2	<0.2	<0.2	
Chrysene	1	0.1	<0.1	<0.1	<0.1	<0.1	
Benzo [b] fluoranthene	0.75	0.1	<0.1	<0.1	<0.1	<0.1	
Benzo [k] fluoranthene	0.4	0.1	<0.1	<0.1	<0.1	<0.1	
Benzo [a] pyrene	0.81	0.01	<0.01	<0.01	<0.01	<0.01	
Indeno [1,2,3-cd] pyrene	0.2	0.2	<0.2	<0.2	<0.2	<0.2	
Dibenzo [a,h] anthracene	0.52	0.2	<0.2	<0.2	<0.2	<0.2	
Benzo [g,h,i] perylene	0.2	0.2	<0.2	<0.2	<0.2	<0.2	

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW216	MW217			
Laboratory ID			19-2056-1	19-2056-2			
Sampling Date			04-Mar-19	04-Mar-19			
Parameters	2011 Table 3 SCS	RDL					
Naphthalene	6400	2	<2	<2			
2-Methylnaphthalene	1800	1	<1	<1			
1-Methylnaphthalene		1	<1	<1			
Acenaphthylene	1.8	1	<1	<1			
Acenaphthene	1700	1	<1	<1			
Fluorene	400	0.5	<0.5	<0.5			
Phenanthrene	580	0.1	<0.1	<0.1			
Anthracene	2.4	0.1	<0.1	<0.1			
Fluoranthene	130	0.4	<0.4	<0.4			
Pyrene	68	0.2	<0.2	<0.2			
Benzo [a] anthracene	4.7	0.2	<0.2	<0.2			
Chrysene	1	0.1	<0.1	<0.1			
Benzo [b] fluoranthene	0.75	0.1	<0.1	<0.1			
Benzo [k] fluoranthene	0.4	0.1	<0.1	<0.1			
Benzo [a] pyrene	0.81	0.01	<0.01	<0.01			
Indeno [1,2,3-cd] pyrene	0.2	0.2	<0.2	<0.2			
Dibenzo [a,h] anthracene	0.52	0.2	<0.2	<0.2			
Benzo [g,h,i] perylene	0.2	0.2	<0.2	<0.2			

Notes:

Parameter is the sum of 1- and 2- methylnaphthalene

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Table 17: Groundwater Data Quality - Polychlorinated Biphenyls Analysis

Sample Location			MW102	MW103	MW104	MW105	MW106
Laboratory ID			17-7544-2	17-7544-3	17-7544-4	17-7544-5	17-7544-6
Sampling Date			13-Nov-17	14-Nov-17	14-Nov-17	13-Nov-17	13-Nov-17
Parameters	**2011 Table 3 SCS**	**RDL**					
PCB	15	1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Sample Location			MW106 (Duplicate)	BH3(MW)	BH3(MW) (Duplicate)		
Laboratory ID			17-7544-7	17-7613-1	17-7613-2		
Sampling Date			13-Nov-17	24-Nov-17	24-Nov-17		
Parameters	**2011 Table 3 SCS**	**RDL**					
PCB	15	1.0	<1.0	<1.0	<1.0		

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

Table 18: Groundwater Quality Data - Mercury Analysis

Sample Location			MW102	MW103	MW104	MW105	MW106	MW106 (Duplicate)
Laboratory ID			**17-7544-2**	**17-7544-3**	**17-7544-4**	**17-7544-5**	**17-7544-6**	**17-7544-7**
Sampling Date			**13-Nov-17**	**14-Nov-17**	**14-Nov-17**	**13-Nov-17**	**13-Nov-17**	**13-Nov-17**
Parameters	**2011 Table 3 SCS**	**RDL**						
Mercury	2.8	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

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Table 19: Groundwater Quality Data - Hexavalent Chromium Analysis

Sample Location			MW211	MW211 (Duplicate)	MW217	MW211 (Duplicate)		
Laboratory ID			**L2237907-1**	**L2237907-2**	**L2240912-1**	**L2240912-2**		
Sampling Date			**26-Feb-19**	**26-Feb-19**	**04-Mar-19**	**04-Mar-19**		
Parameters	**2011 Table 3 SCS**	**RDL**						
Hexavalent Chromium	140	0.50	2.54	2.49	<0.50	<0.50		

Notes:

Bold – indicates exceedence of applicable MECP SCS

All values reported in µg/L (ppb), unless otherwise noted.

ppb - means parts per billion.

RDL - means report detection limit.

2011 Table 3 SCS - The SCS are defined in "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the EPA", MECP, April 15, 2011.

Table 3 standards apply for full depth generic SCS in a non-potable ground water condition for All Types of property use and medium and fine textured soil.

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12. FIGURES

12.1 Site Settings Figures

Figure A1: Site Location Map

Figure A2: Legal and Topographic Survey

Figure A3: Surficial Geology Map

Figure A4: Bedrock Geology Map

12.2 CSM Figures

Figure B1: Site Plan of the Phase One Study Area that presents existing buildings, water bodies and areas of natural significance located in whole or in part in the phase one study area, roads (including names), uses of properties adjacent to the Phase Two Property, and areas where off-site PCAs have occurred, including USTs/ASTs locations, where present.

Figure B2: Site Plan of the Phase Two Property with borehole/monitoring well locations, PCAs, APECs, transport pathways.

Figure B3: Site Plan of the Phase Two Property with borehole/monitoring well locations, groundwater contours and determined groundwater flow directions.

Figure B4: Site Plan of the Phase Two Property with lateral extents of all identified exceedances.

Figure C1: Cross-section A – A'; the cross-section is parallel to the determined groundwater flow and illustrates the stratigraphy, boreholes/monitoring well locations, soil sample depths, groundwater static levels, and wells' screen intervals.

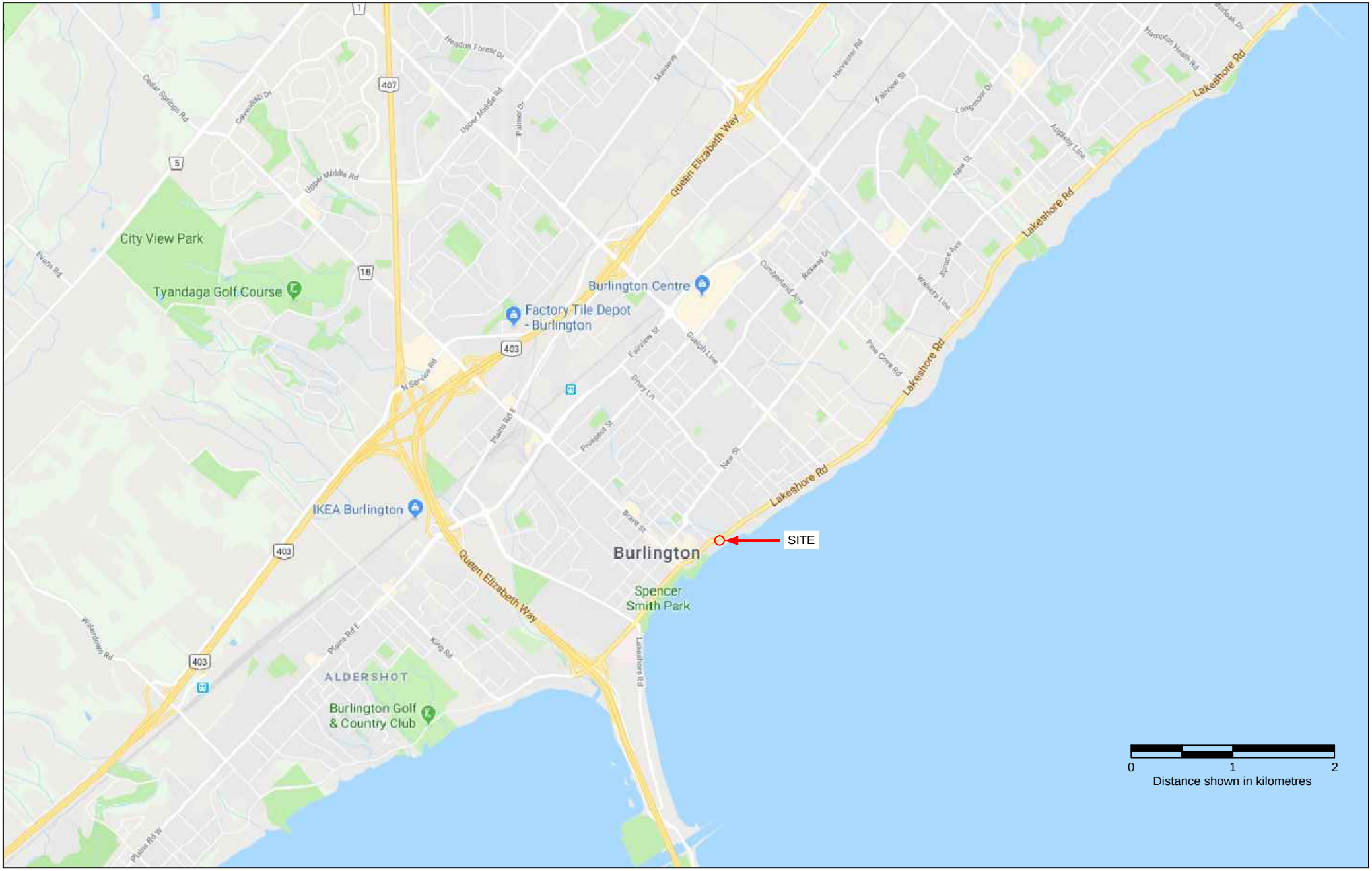
Figure C2: Cross-section B – B'; the cross-section is perpendicular to the determined groundwater flow and illustrates the stratigraphy, boreholes/monitoring well locations, soil sample depths, groundwater static levels, and wells' screen intervals.

Figure C3: Cross-section C – C'; the cross-section is perpendicular to the determined groundwater flow and illustrates the stratigraphy, boreholes/monitoring well locations, soil sample depths, groundwater static levels, and wells' screen intervals.

Figure C4: Cross-section D – D'; the cross-section is perpendicular to the determined groundwater flow and illustrates the stratigraphy, boreholes/monitoring well locations, soil sample depths, groundwater static levels, and wells' screen intervals.

Figure D1: Diagram with Human Health Conceptual Site Model without Risk Management Measures.

Figure D2: Diagram with Ecological Health Conceptual Site Model without Risk Management Measures.



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Markham, Ontario
L3R 3K2
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Fax: 905 475-7718

NORTH

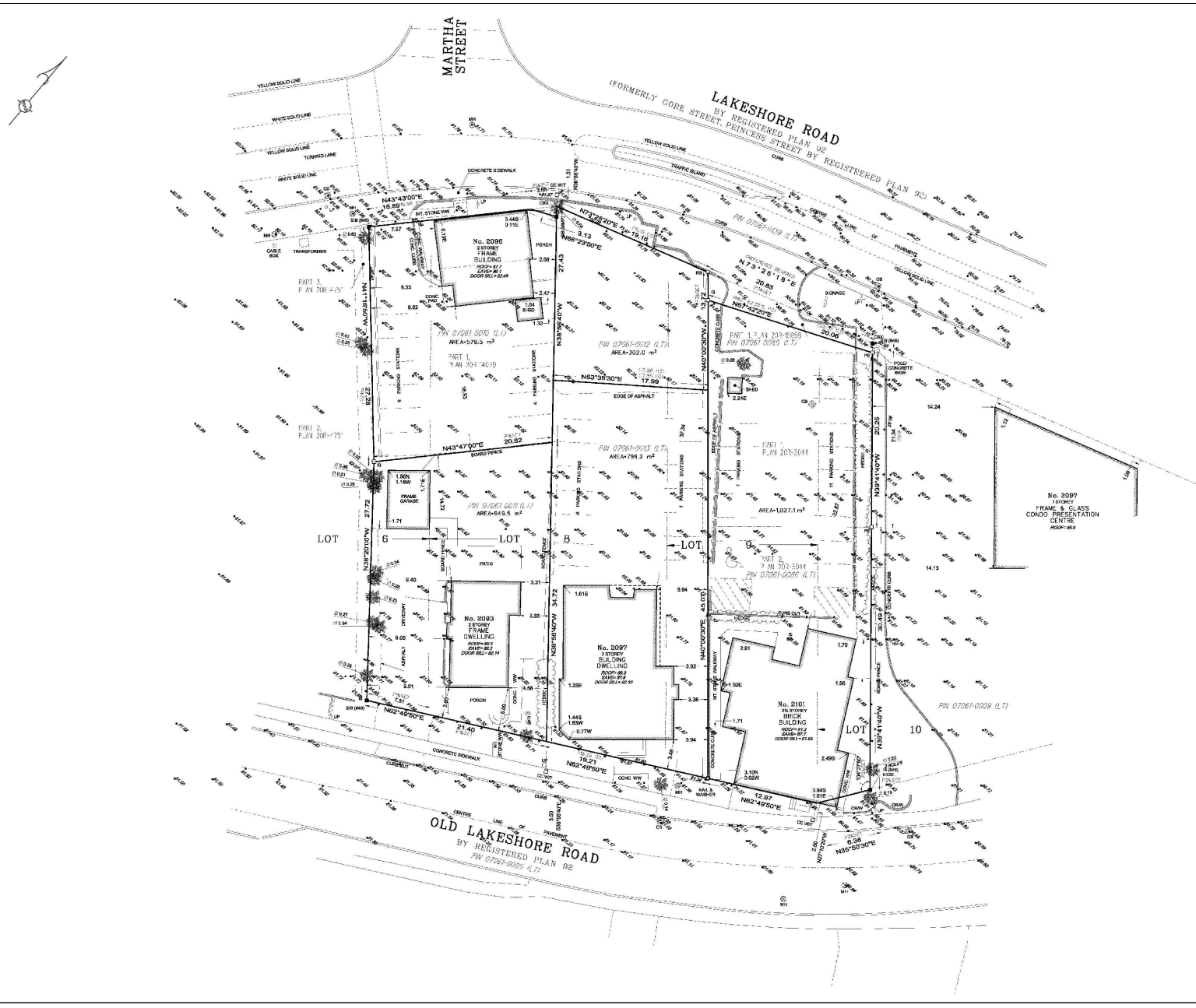
LEGEND

PROJECT NAME AND ADDRESS

Phase Two ESA

2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington, Ontario

PROJECT NO. FE-P 19-9254	FIGURE A1 Site location map.
DATE JULY 2019	
SCALE AS SHOWN	



SURVEYOR'S REAL PROPERTY REPORT

PART 1:

PLAN OF PART OF LOTS 6 & 10, LOT 7, 8 & 9, BLOCK Q REGISTERED PLAN 92 CITY OF BURLINGTON

SCALE 1 : 200

AKSAN PILLER CORPORATION LTD.

PART 2:

PREPARED FOR	CORE DEVELOPMENT GROUP LTD.
LOCATION OF THE BUILDING:	WHOLLY ON THE PROPERTY.
LANES:	CLEAR.
UTILITY BUILDINGS:	AS SHOWN ON PART 1.
DECKS:	AS SHOWN ON PART 1.
SWIMMING POOLS:	NONE.
EXISTING FENCES:	GENERALLY ALONG THE PROPERTY LINES, WITH DEVIATIONS AS SHOWN ON PART 1.
EASEMENTS:	NONE REQITED IN THE LAST REGISTERED INSTRUMENT.
DRIVEWAY:	AS SHOWN ON PART 1.

LEGEND:

■	DENOTES	SURVEY MONUMENT FOUND
□	DENOTES	SURVEY MONUMENT PLANTED
IB	DENOTES	IRON BAR
SIB	DENOTES	STANDARD IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
CO	DENOTES	CUT CROSS
CP	DENOTES	CONCRETE PIN
WIT	DENOTES	WITNESS MONUMENT
O/U	DENOTES	ORIGIN UNKNOWN
N	DENOTES	NORTH
S	DENOTES	SOUTH
E	DENOTES	EAST
W	DENOTES	WEST
Fc	DENOTES	FENCE
C/F	DENOTES	CHAIN LINK FENCE
BF	DENOTES	BOARD FENCE
P & W	DENOTES	POST AND WIRE FENCE
D1	DENOTES	INST. No.
D2	DENOTES	INST. No.
D3	DENOTES	INST. No.
PLAN	DENOTES	REGISTERED PLAN 92
P1	DENOTES	PLAN 20R-4079
P2	DENOTES	PLAN 20R-5044
P3	DENOTES	PLAN 20R-5858
CBX	DENOTES	CABLE BOX
UP	DENOTES	UTILITY POLE
MH	DENOTES	MAN HOLE
CB	DENOTES	CATCH BASIN
LP	DENOTES	LAMP POST
CONC	DENOTES	CONCRETE
WW	DENOTES	WALKWAY
CR/W	DENOTES	CONCRETE RETAINING WALL
B46	DENOTES	R.G. SEWELL, O.L.S.
MWP	DENOTES	CONCRETE RETAINING WALL

80.50 DENOTES TREE TRUNK DIAMETER

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
2025259
THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR. In accordance with Regulation 1026, Section 29(3).

METRIC:
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

BEARING NOTE:
BEARINGS ARE REFERRED TO THE SOUTHER LIMIT OF LAKESHORE ROAD AS SHOWN ON PLAN 20R-13808 HAVING AN ASTRONOMIC BEARING OF N75°25'18"E.

ELEVATIONS NOTE:
ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE DERIVED FROM THE CITY OF BURLINGTON BENCH MARK 91401, ELEVATION = 77.901 m.

CAUTION:
TREE CALIPERS ARE NOT TO ARBORIST STANDARDS AND ARE DEFINED AT 1.4m ABOVE GRADE AT TREE FOR ARBORIST CALIPER REFER TO ARBORIST REPORT.

SURVEYOR'S CERTIFICATE:
I CERTIFY THAT:
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 26th DAY OF SEPTEMBER, 2017

OCTOBER 4, 2017
DATE

HELMUT PILLER
Ontario Land Surveyor

AKSAN PILLER CORPORATION LTD
ONTARIO LAND SURVEYORS

Reference number: 17-24-12787-00

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NORTH

LEGEND

PROJECT NAME AND ADDRESS

Phase Two ESA

2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington, Ontario

PROJECT NO.	FE-P 19-9254
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FIGURE A2

Legal and topographic survey.



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N

LEGEND

5d: Till
Clay to silt-textured till (derived from glaciolacustrine deposits or shale)

9: Coarse-textured glaciolacustrine deposits
Sand, gravel, minor silt and clay

PROJECT NAME AND ADDRESS

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FIGURE A3

Surficial geology map.



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LEGEND

55a: Shale, limestone, dolostone, siltstone
QUEENSTON FORMATION

PROJECT NAME AND ADDRESS

Phase Two ESA

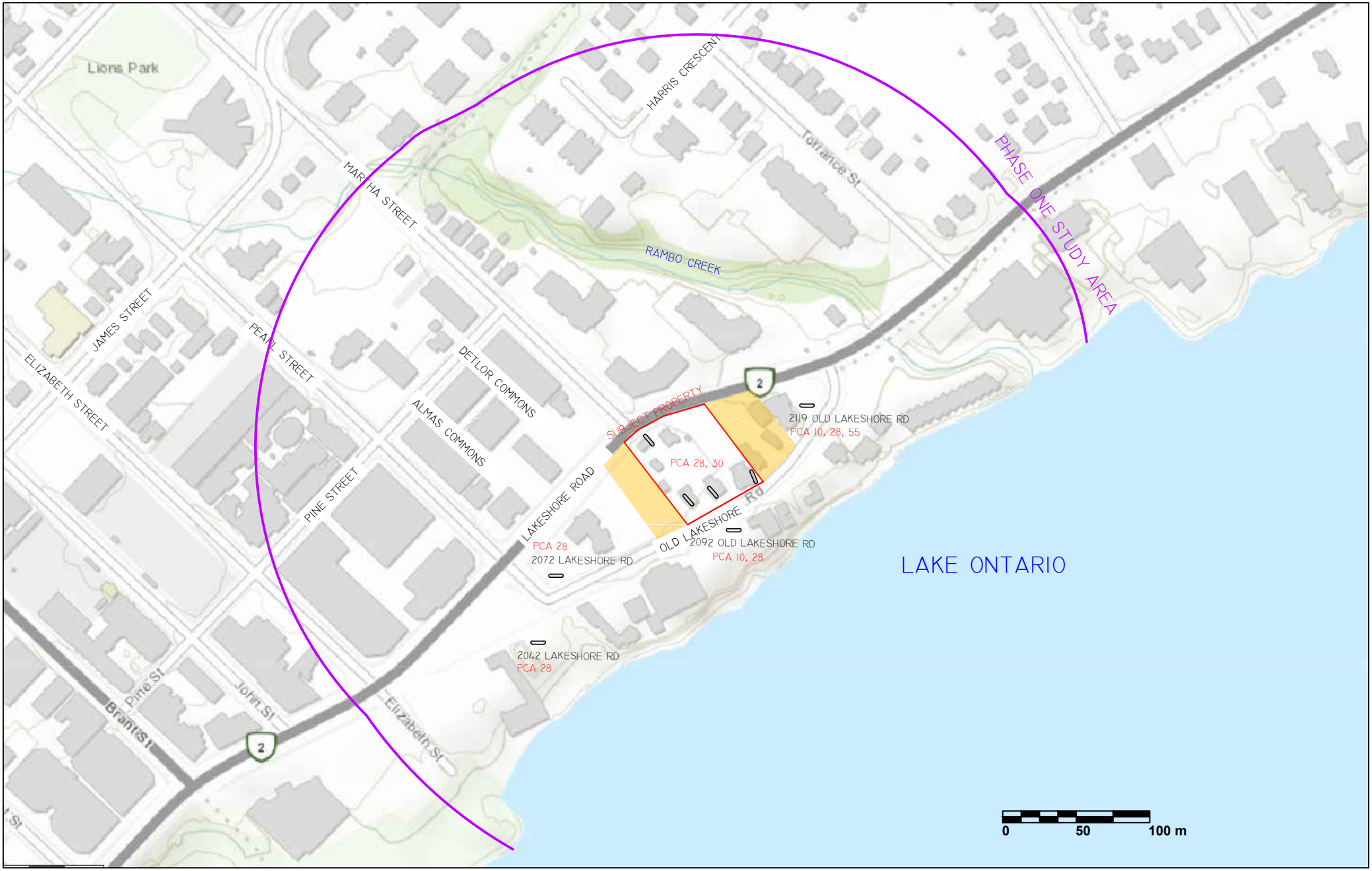
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PROJECT NO.
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FIGURE A4
Bedrock geology map.



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LEGEND

Underground / aboveground storage tank

Commercial property use

PCA — Potentially contaminating activity

PROJECT NAME AND ADDRESS

Phase Two ESA

2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington, Ontario

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FIGURE B1:

Site Plan of the Phase One Study Area that presents existing buildings, water bodies and areas of natural significance located in whole or in part in the phase one study area, roads (including names), uses of properties adjacent to the Phase Two Property, and areas where off-site PCAs have occurred, including USTs/ASTs locations, where present.



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N

LEGEND

- Monitoring well / borehole 2017
- Monitoring well / borehole 2019
- Delineation borehole 2019
- T-1 Transport pathway
- PCA Potentially contaminating activity
- Area of potential environmental concern A
- Area of potential environmental concern B
- Area of potential environmental concern C
- Area of potential environmental concern D
- Area of potential environmental concern E
- Area of potential environmental concern F
- Area of potential environmental concern G
- Area of potential environmental concern H
- Area of potential environmental concern I

PROJECT NAME AND ADDRESS

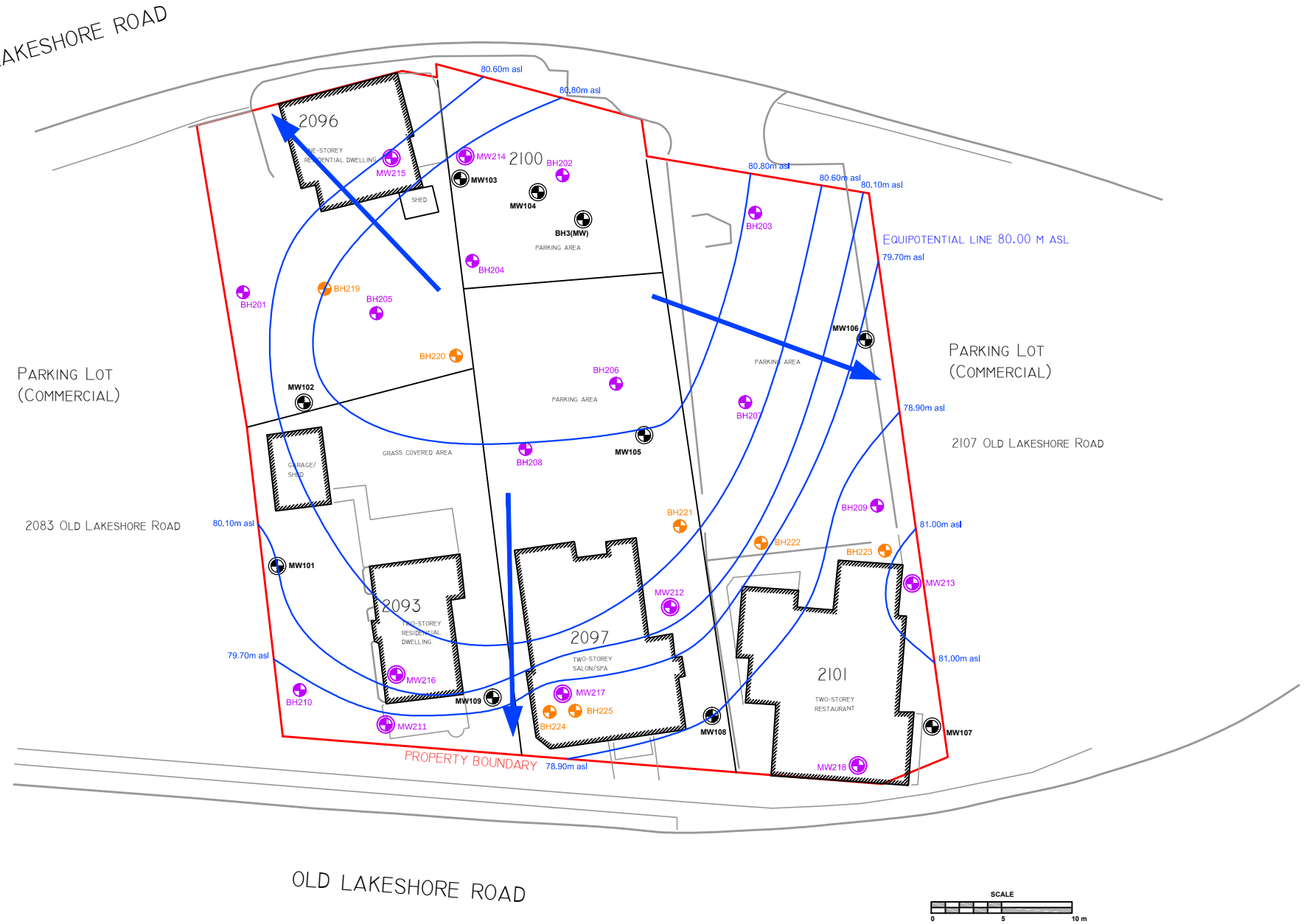
Phase Two ESA

2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington, Ontario

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FIGURE B2:

Site Plan of the Phase Two Property with borehole/monitoring well locations, PCAs, APECs, transport pathways.



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N

LEGEND

- Monitoring well / borehole 2017
- Monitoring well / borehole 2019
- Delineation borehole 2019
- Groundwater flow direction
- Groundwater contour

PROJECT NAME AND ADDRESS

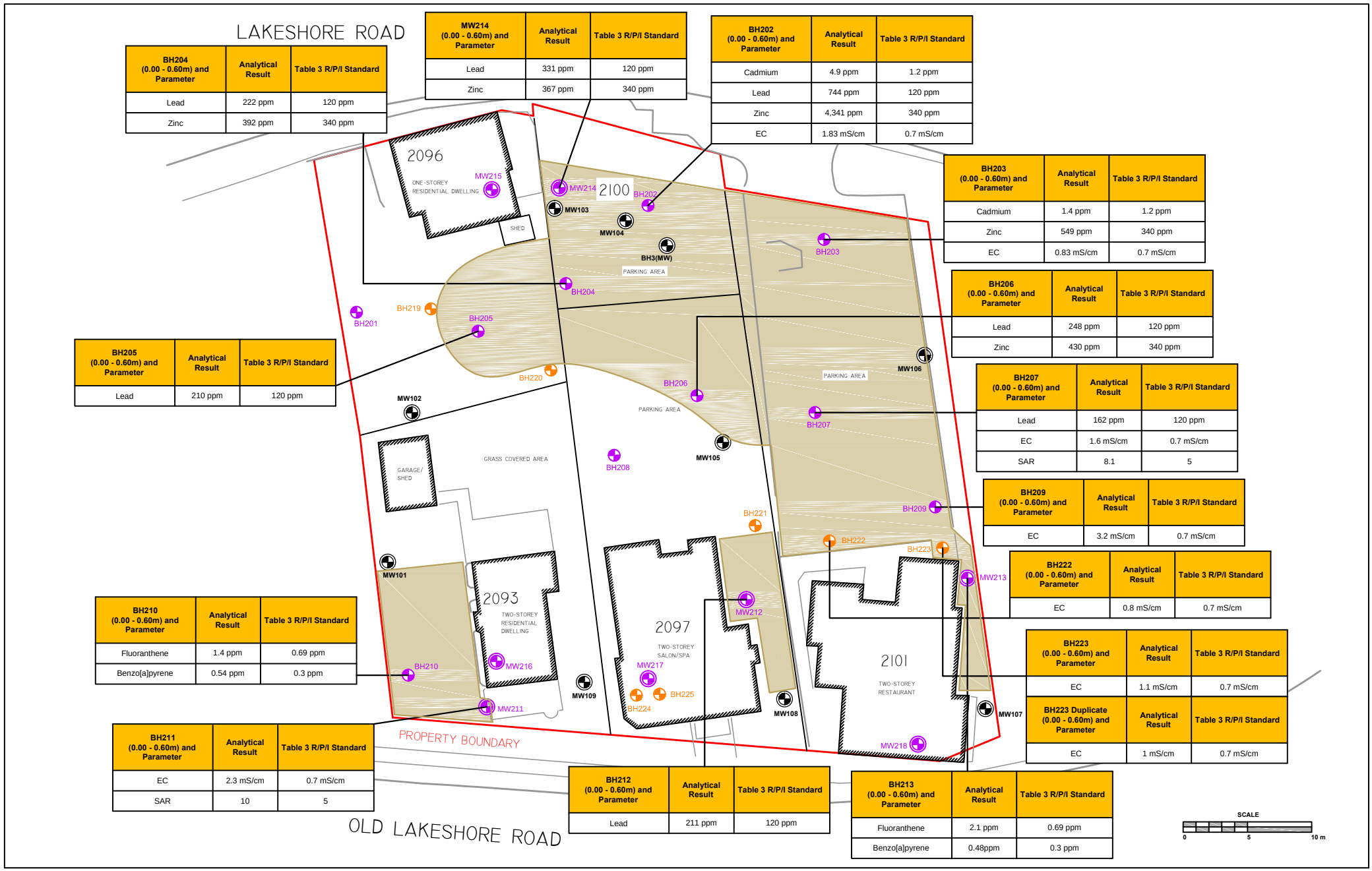
Phase Two ESA

2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington, Ontario

PROJECT NO.	FE-P 19-9254
DATE	JULY 2019
SCALE	AS SHOWN

FIGURE B3:

Site Plan of the Phase Two Property with borehole/monitoring well locations, groundwater contours and determined groundwater flow directions.



BH204 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Lead	222 ppm	120 ppm
Zinc	392 ppm	340 ppm

MW214 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Lead	331 ppm	120 ppm
Zinc	367 ppm	340 ppm

BH202 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Cadmium	4.9 ppm	1.2 ppm
Lead	744 ppm	120 ppm
Zinc	4,341 ppm	340 ppm
EC	1.83 mS/cm	0.7 mS/cm

BH203 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Cadmium	1.4 ppm	1.2 ppm
Zinc	549 ppm	340 ppm
EC	0.83 mS/cm	0.7 mS/cm

BH206 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Lead	248 ppm	120 ppm
Zinc	430 ppm	340 ppm

BH205 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Lead	210 ppm	120 ppm

BH207 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Lead	162 ppm	120 ppm
EC	1.6 mS/cm	0.7 mS/cm
SAR	8.1	5

BH209 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
EC	3.2 mS/cm	0.7 mS/cm

BH222 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
EC	0.8 mS/cm	0.7 mS/cm

BH210 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Fluoranthene	1.4 ppm	0.69 ppm
Benzo[a]pyrene	0.54 ppm	0.3 ppm

BH223 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
EC	1.1 mS/cm	0.7 mS/cm

BH223 Duplicate (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
EC	1 mS/cm	0.7 mS/cm

BH211 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
EC	2.3 mS/cm	0.7 mS/cm
SAR	10	5

BH212 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Lead	211 ppm	120 ppm

BH213 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Fluoranthene	2.1 ppm	0.69 ppm
Benzo[a]pyrene	0.48ppm	0.3 ppm

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LEGEND

- Monitoring well / borehole 2017
- Monitoring well / borehole 2019
- Delineation borehole 2019
- Anticipated lateral extent of identified exceedances

PROJECT NAME AND ADDRESS

Phase Two ESA

2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington, Ontario

PROJECT NO.	FE-P 19-9254
DATE	JULY 2019
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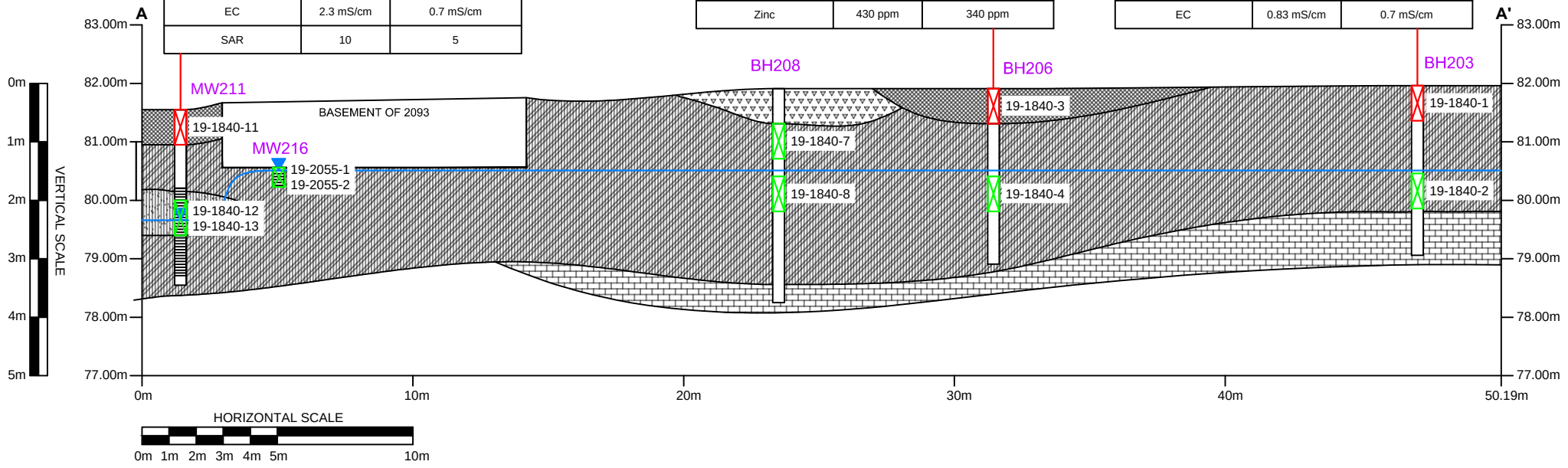
FIGURE B4:

Site Plan of the Phase Two Property with lateral extents of all identified exceedances.

BH211 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
EC	2.3 mS/cm	0.7 mS/cm
SAR	10	5

BH206 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Lead	248 ppm	120 ppm
Zinc	430 ppm	340 ppm

BH203 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Cadmium	1.4 ppm	1.2 ppm
Zinc	549 ppm	340 ppm
EC	0.83 mS/cm	0.7 mS/cm



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NORTH

LEGEND

FILL
CLAY
SILT
SAND
SHALE
GRAVEL
WELL SCREEN
WATER LEVEL
SOIL SAMPLE IN EXCEEDANCE OF APPLICABLE STANDARDS
SOIL SAMPLE WITHIN APPLICABLE STANDARDS

PROJECT NAME AND ADDRESS

Phase Two ESA

2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington, Ontario

PROJECT NO.
FE-P 19-9254

DATE
JULY 2019

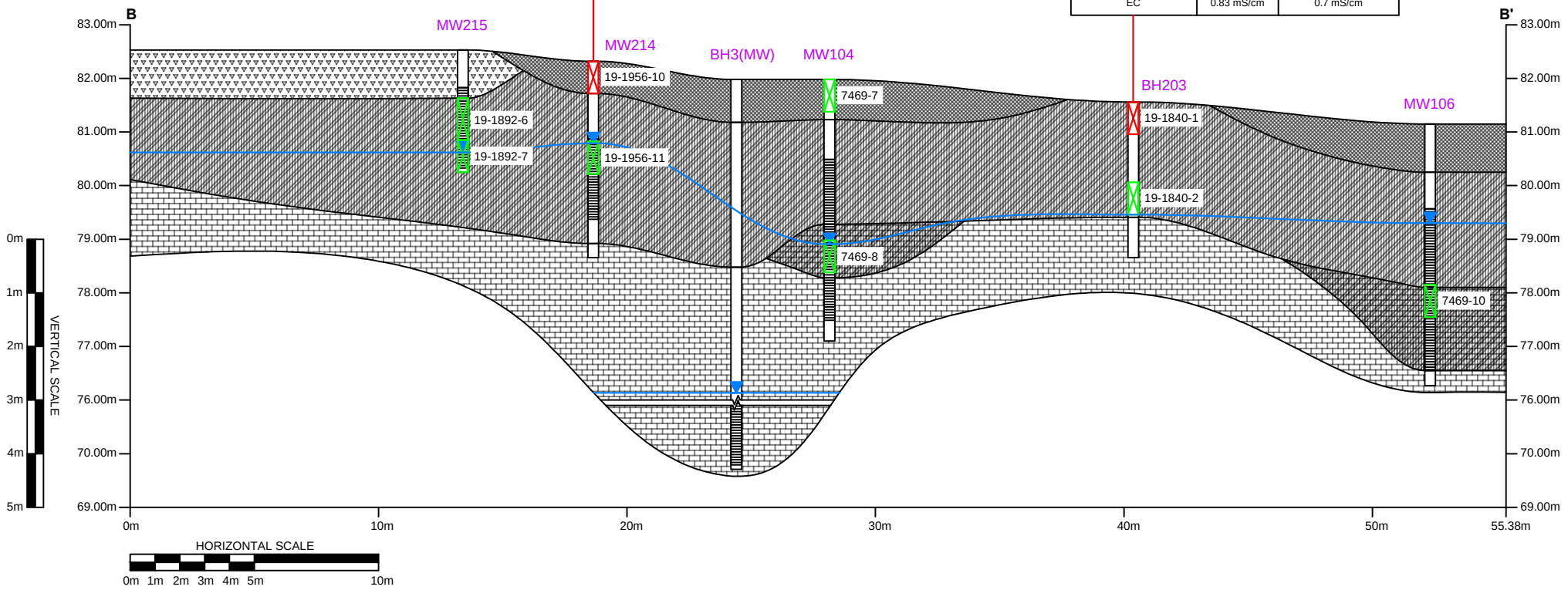
SCALE
AS SHOWN

FIGURE C1

Cross-section A - A'; the cross-section is parallel to the determined groundwater flow and illustrates the stratigraphy, boreholes/monitoring well locations, soil sample depths, groundwater static levels, and wells' screen intervals.

MW214 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Lead	331 ppm	120 ppm
Zinc	367 ppm	340 ppm

BH203 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Cadmium	1.4 ppm	1.2 ppm
Zinc	549 ppm	340 ppm
EC	0.83 mS/cm	0.7 mS/cm



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NORTH

LEGEND

FILL
CLAY
SILT
SAND
SHALE
GRAVEL
WELL SCREEN
WATER LEVEL
SOIL SAMPLE IN EXCEEDANCE OF APPLICABLE STANDARDS
SOIL SAMPLE WITHIN APPLICABLE STANDARDS

PROJECT NAME AND ADDRESS

Phase Two ESA

2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington, Ontario

PROJECT NO.
FE-P 19-9254

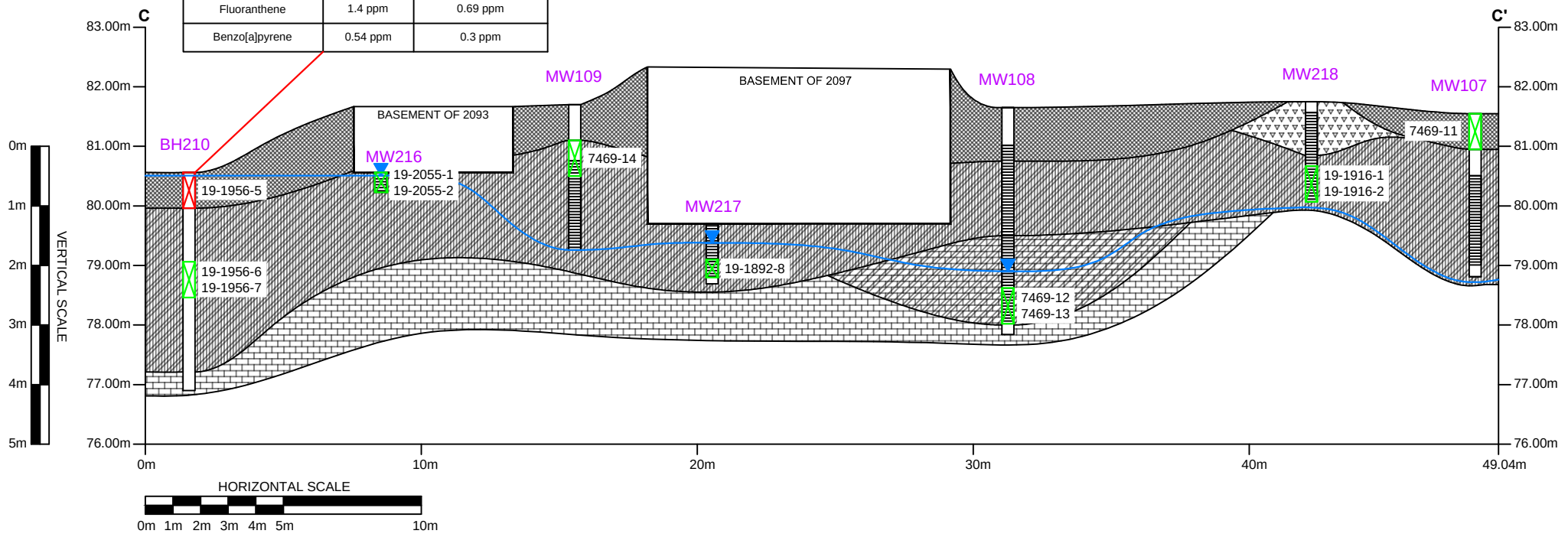
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FIGURE C2

Cross-section B - B'; the cross-section is perpendicular to the determined groundwater flow and illustrates the stratigraphy, boreholes/monitoring well locations, soil sample depths, groundwater static levels, and wells' screen intervals.

BH210 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Fluoranthene	1.4 ppm	0.69 ppm
Benzo[a]pyrene	0.54 ppm	0.3 ppm



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NORTH

LEGEND

FILL
CLAY
SILT
SAND
SHALE
GRAVEL
WELL SCREEN
WATER LEVEL
SOIL SAMPLE IN EXCEEDANCE OF APPLICABLE STANDARDS
SOIL SAMPLE WITHIN APPLICABLE STANDARDS

PROJECT NAME AND ADDRESS

Phase Two ESA

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PROJECT NO.
FE-P 19-9254

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FIGURE C3

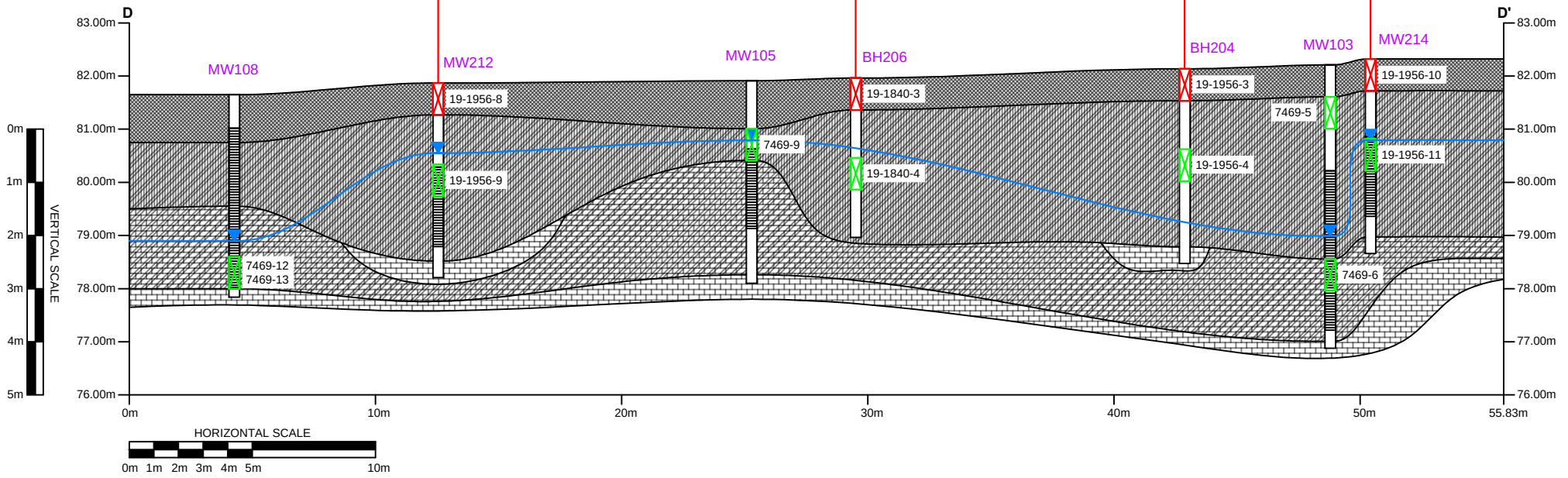
Cross-section C - C'; the cross-section is perpendicular to the determined groundwater flow and illustrates the stratigraphy, boreholes/monitoring well locations, soil sample depths, groundwater static levels, and wells' screen intervals.

BH212 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Lead	211 ppm	120 ppm

BH206 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Lead	248 ppm	120 ppm
Zinc	430 ppm	340 ppm

BH204 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Lead	222 ppm	120 ppm
Zinc	392 ppm	340 ppm

MW214 (0.00 - 0.60m) and Parameter	Analytical Result	Table 3 R/P/I Standard
Lead	331 ppm	120 ppm
Zinc	367 ppm	340 ppm



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NORTH

LEGEND

FILL
CLAY
SILT
SAND
SHALE
GRAVEL
WELL SCREEN
WATER LEVEL
SOIL SAMPLE IN EXCEEDANCE OF APPLICABLE STANDARDS
SOIL SAMPLE WITHIN APPLICABLE STANDARDS

PROJECT NAME AND ADDRESS

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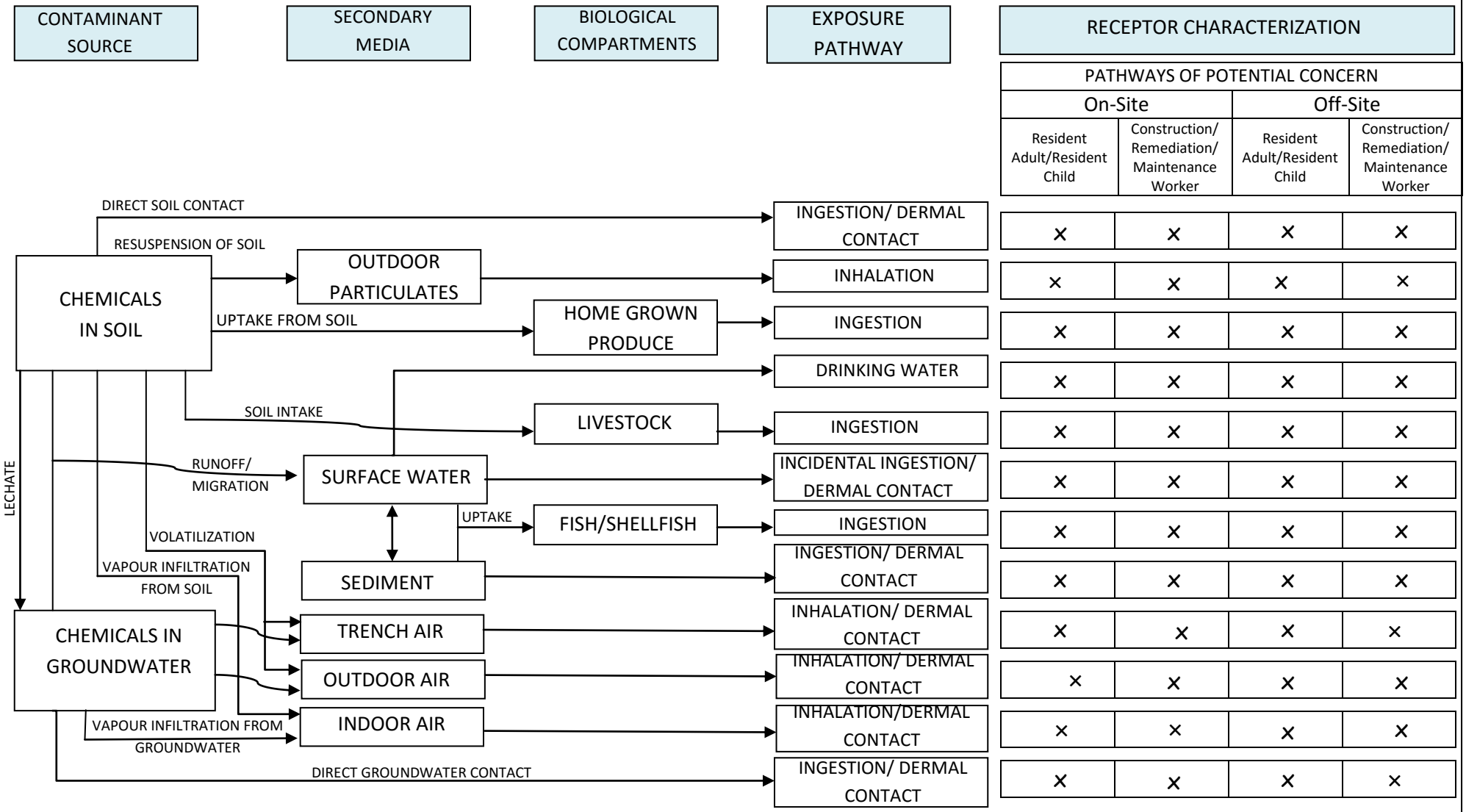
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FIGURE C4

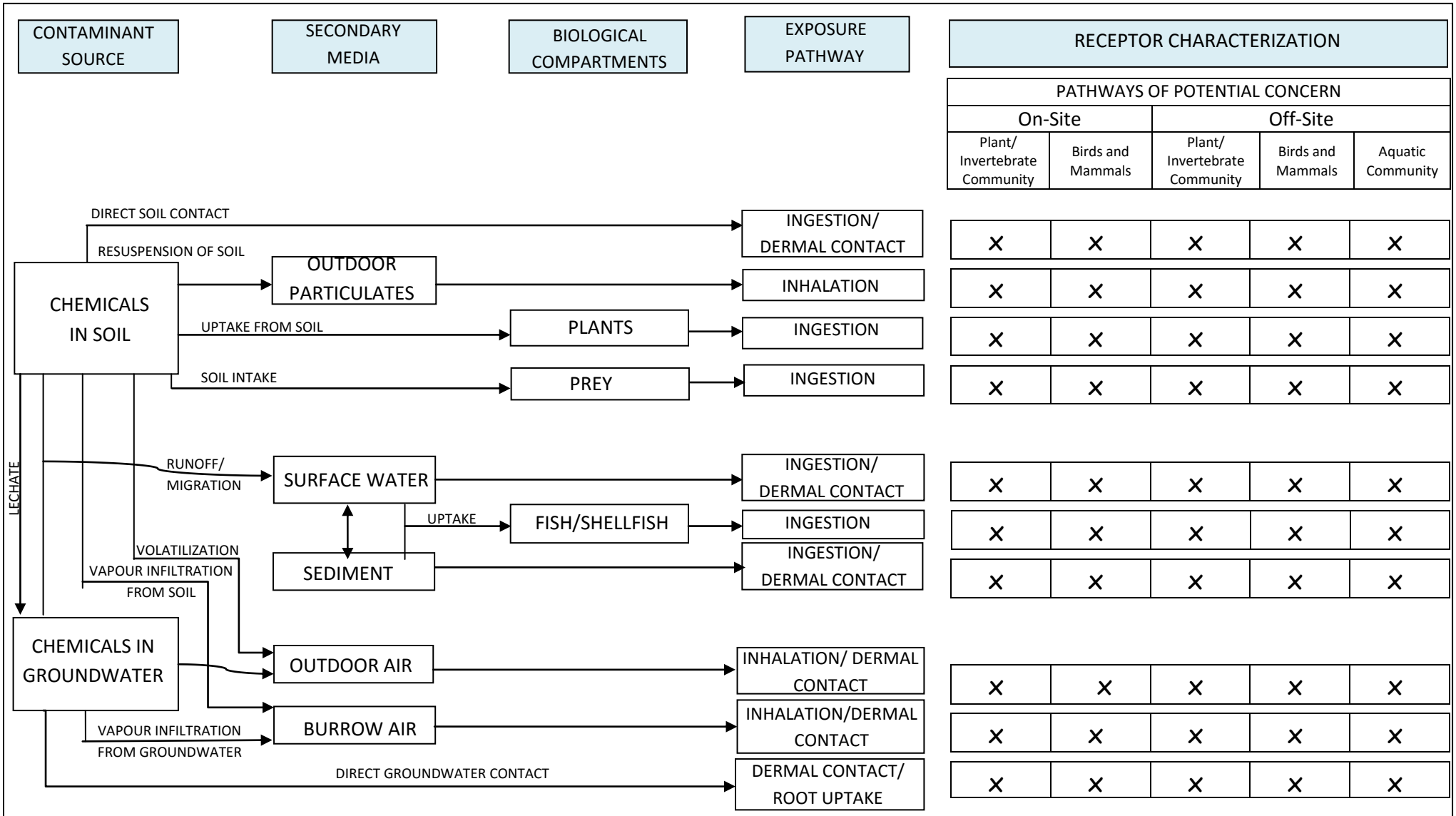
Cross-section D - D'; the cross-section is perpendicular to the determined groundwater flow and illustrates the stratigraphy, boreholes/monitoring well locations, soil sample depths, groundwater static levels, and wells' screen intervals.



✓ = complete pathway (without risk management)

× = incomplete pathway

2093, 2097, 2101 Old Lakeshore Road & 2096, 2100 Lakeshore Road, Burlington, Ontario		
Human Health Conceptual Site Model without Risk Management Measures		
FE-P 19-9254	July 2019	**Figure: D 1**


CONTAMINANT SOURCE
SECONDARY MEDIA
BIOLOGICAL COMPARTMENTS
EXPOSURE PATHWAY
RECEPTOR CHARACTERIZATION
PATHWAYS OF POTENTIAL CONCERN
On-Site
Off-Site
Plant/ Invertebrate Community
Birds and Mammals
Plant/ Invertebrate Community
Birds and Mammals
Aquatic Community
DIRECT SOIL CONTACT
RESUSPENSION OF SOIL
CHEMICALS IN SOIL
OUTDOOR PARTICULATES
UPTAKE FROM SOIL
PLANTS
SOIL INTAKE
PREY
INGESTION/ DERMAL CONTACT
INHALATION
INGESTION
INGESTION
LECHATE
RUNOFF/ MIGRATION
SURFACE WATER
UPTAKE
FISH/SHELLFISH
SEDIMENT
INGESTION/ DERMAL CONTACT
INGESTION
INGESTION/ DERMAL CONTACT
VOLATILIZATION
VAPOUR INFILTRATION FROM SOIL
CHEMICALS IN GROUNDWATER
OUTDOOR AIR
BURROW AIR
VAPOUR INFILTRATION FROM GROUNDWATER
DIRECT GROUNDWATER CONTACT
INHALATION/ DERMAL CONTACT
INHALATION/DERMAL CONTACT
DERMAL CONTACT/ ROOT UPTAKE
✓ = complete pathway (without risk management)
o = pathway considered insignificant and /or lacks sufficient information for evaluation
X = incomplete pathway
2093, 2097, 2101 Old Lakeshore Road & 2096, 2100 Lakeshore Road, Burlington, Ontario
Ecological Conceptual Site Model without Risk Management Measures
FE-P 19-9254
July 2019
Figure: D 2

13. APPENDICES

APPENDIX A – SAMPLING AND ANALYSIS PLAN

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Phase Two ESA

Sampling and Analysis Plan

2093, 2097, 2101 Old Lakeshore Road & 2096, 2100 Lakeshore Road, Burlington, Ontario

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1. INTRODUCTION

The document as presented herein operates as a Sampling and Analysis Plan (SAP) for the requisite field and analytical investigation at the residential and commercial use properties addressed as 2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario, herein referred to as the 'Site', and conducted as part of the Phase Two Environmental Site Assessment (ESA). The SAP has been prepared in compliance with Ontario Regulation 153/04, as amended. This regulation requires a SAP that includes a quality assurance and quality control (QA/QC) program, data quality objectives, standard operating procedures, and a description of physical constraints that limit the ability to conduct sampling and analysis. This SAP was developed based on Fisher Environmental Limited's (Fisher) previous Phase One ESA (Project 17-8409, October 6, 2017).

2. PROBLEM DEFINITION AND BACKGROUND

The Site is occupied by four (4) commercial and/or residential buildings. 2096 Lakeshore Road consists of a one (1) storey residential building that is unoccupied. 2100 Lakeshore Road is undeveloped, however historically a residential building was present. 2093 Old Lakeshore Road consists of a two (2) storey residential building and one (1) parking garage. 2097 Old Lakeshore Road consists of a two (2) storey mixed commercial and residential use building. The ground floor is occupied by a salon and spa, Waters Edge, and the second floor is occupied by a residential tenant. 2101 Old Lakeshore Road consists of a two (2) storey commercial building occupied by a restaurant, The Carriage House.

The Site has been used for residential and commercial purposes, and it is our understanding that a redevelopment is proposed consisting of a twenty seven (27) storey mixed use commercial and residential building with five (5) levels of underground parking.

The Site is bound by Lakeshore Road to the north and Old Lakeshore Road to the south, approximately 360 m northeast of the intersection of Lakeshore Road and Brant Street. A commercial building utilized as a sales and presentation centre for a proposed residential redevelopment is adjacent to the east and a public parking lot is adjacent to the west. The total Site area is 0.3357 hectares.

Off-site PCAs within the Phase One Study Area that may contribute to an Area of Potential Environmental Concern (APEC) on-site were identified. Additionally, on-site Potentially Contaminating Activities (PCAs) have been identified. The following PCAs and their locations were identified that may contribute to an APEC on-site: (a) PCA-10: Commercial Autobody Shops, off-site at 2092 Old Lakeshore Road (20 m south) and 2119 Old Lakeshore Road (40 m east); (b) PCA-28: Gasoline and Associated Products Storage in Fixed Tanks, on-site at current buildings and off-site at 2092 Old Lakeshore Road (20 m south), 2119 Old Lakeshore Road (40 m east), 2072 Lakeshore Road (50 m west) and 2042 Lakeshore Road (120 m west); (c) PCA-30: Importation of Fill Materials of Unknown Quality, on-site at majority of Site; and (d) PCA-55: Transformer Manufacturing, Processing and Use, off-site at 2119 Old Lakeshore Road (40 m east).

A summary of the PCAs, APECs and the associated Contaminants of Potential Concern (CPCs) are detailed below.

Table 1: PCAs, APECs, and associated CPCs

APEC	Location of APEC	PCA	Location of PCA (on-site or off-site)	CPCs	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC A	Northern and central portion of Site	PCA-30: Importation of Fill Materials of Unknown Quality	On-site	Metals, PHCs (F1-F4) and BTEX, VOCs, PAHs, PCBs, Hg, EC, SAR	Soil / groundwater
APEC B	Southwest portion of the Site	PCA-30: Importation of Fill Materials of Unknown Quality	On-site	Metals, PHCs (F1-F4) and BTEX, VOCs, PAHs, PCBs, Hg, EC, SAR	Soil / groundwater
APEC C-1	Southern portion of the Site	PCA-10: Commercial Autobody Shops	Off-site	Metals, PHCs (F1-F4) and BTEX, PAHs, VOCs, Cr6	Soil / groundwater
APEC C-2		PCA-28: Gasoline and Associated Products Storage in Fixed Tanks			
APEC D	Western portion of the Site	PCA-28: Gasoline and Associated Products Storage in Fixed Tanks	Off-site	Metals, PHCs (F1-F4) and BTEX, PAHs, VOCs	Soil / groundwater

APEC	Location of APEC	PCA	Location of PCA (on-site or off-site)	CPCs	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC E-1	Eastern portion of the Site	PCA-10: Commercial Autobody Shops	Off-site	Metals, PHCs (F1-F4) and BTEX, PAHs, VOCs, PCBs	Soil / groundwater
APEC E-2		PCA-28: Gasoline and Associated Products Storage in Fixed Tanks			
APEC E-3		PCA-55: Transformer Manufacturing, Processing and Use			
APEC F	Southeast corner at 2096	PCA-28: Gasoline and Associated Products Storage in Fixed Tanks	On-site	Metals, PHCs (F1-F4) and BTEX, PAHs, VOCs	Soil / groundwater
APEC G	Southwest corner at 2093	PCA-28: Gasoline and Associated Products Storage in Fixed Tanks	On-site	Metals, PHCs (F1-F4) and BTEX, PAHs, VOCs	Soil / groundwater
APEC H	Southwest corner at 2097	PCA-28: Gasoline and Associated Products Storage in Fixed Tanks	On-site	Metals, PHCs (F1-F4) and BTEX, PAHs, VOCs	Soil / groundwater
APEC I	Southeast corner at 2101	PCA-28: Gasoline and Associated Products Storage in Fixed Tanks	On-site	Metals, PHCs (F1-F4) and BTEX, PAHs	Soil / groundwater

Note: PHC (F1-F4) means Petroleum Hydrocarbon in four fractions; BTEX means Benzene, Toluene, Ethylbenzene, Xylene; PAH means Polycyclic Aromatic Hydrocarbon; VOC means Volatile Organic Compound; PCB means Polychlorinated Biphenyl; Cr6 means Hexavalent Chromium; Hg means Mercury; EC means electrical conductivity; SAR means Sodium Adsorption Ratio

The field investigation, including sampling of soil and groundwater, and the analytical program to determine the concentrations of Contaminants of Potential Concern (CPCs) – as provided in the above table – will evaluate the aforementioned APECs. Boreholes will be drilled within the identified APECs and groundwater monitoring wells will be installed.

3. OBJECTIVES

The specific objectives of the work are to assess CPCs at the Site, in soil and groundwater samples. The overall objective for the work is conducted in support of a proposed mixed use commercial and residential redevelopment of the Site and for the filing of a Record of Site Condition (RSC) for the Site. Should analytical results indicate exceedances in the soil and groundwater, a subsequent contaminant delineation is recommended.

4. WORK PROPOSED

To meet the objectives noted above, the work should consist of the following:

1. Preparation of Site, including marking borehole locations and clearing subsurface utilities through public and private locates;

2. Advancing boreholes and installing groundwater monitoring wells, within the identified APECs;

3. Collection and submission of soil samples to the laboratory for analysis of Metals, PHCs (F1 to F4), VOCs, PAHs, PCBs, Hg, EC, SAR, and/or pH parameters; and

4. Development of the newly installed groundwater monitoring wells, sampling of groundwater in the newly installed monitoring wells and one (1) existing bedrock monitoring well, and submission of groundwater samples to the laboratory for analysis of Metals, PHCs (F1-F4), VOCs, PAHs, PCBs, Cr6, and/or Mercury parameters.

4.1. Rationale

Proposed investigative locations for soil and groundwater sampling will address the identified on-site APECs in accordance with the recommendations of Fisher's previous Phase One ESA (Project 17-8409, October 6, 2017), which requires soil and groundwater be tested within all APECs. The rationale for the current Sampling and Analysis Plan is to address all media within the vertical stratigraphic zones that constitute the fill materials, overburden soil and the first-encountered aquifer, within all APECs.

The process of determining the extent of the APECs, and where within each APEC should the borehole/monitoring well be located, takes into consideration subsurface factors which may influence the migration of contaminations including the groundwater flow direction, depth of the overburden, heterogeneity of fill materials, transport pathways created by a change in soil texture, and nature of the contaminants.

4.2. General Considerations

Considerations regarding the investigation's design (i.e., soil and groundwater sampling locations and the type and frequency of analysis) are based on the objectives and field observations. The following are the general parameters used in the design of the fieldwork.

1. The soil and groundwater sampling plan design is initially based on the information provided by the Phase One ESA, and it can be adjusted as the site investigation progressed and the subsurface conditions are revealed by boreholes drilling;

2. A combination of stratified random sampling and judgment sampling is used to identify the areas that are likely to be contaminated, or likely to have differences in contaminant concentrations or in variability;

3. Soil horizons displaying different properties are sampled separately, ensuring that samples from particular depth increments are not mixed with soil from other depths;

4. The media to be sampled includes soil and groundwater;

5. Soil sampling is conducted through the full depth of the boreholes. A minimum of one (1) soil sample is collected for screening from every 0.61 m (2 ft) or 1.52 m (5 ft) of vertical borehole. The number of samples analyzed is defined by the objectives of the Phase Two ESA and Fisher's budget agreed upon by our client. In general, a minimum of one (1) soil sample is analyzed per borehole, with sampling depth depending on the type of expected CPCs, transport pathways, stratigraphy and field screening indications;

6. Groundwater sampling is conducted at least once following monitoring well development. Additional sampling may be conducted as required based on results and objectives. Sample analysis will be selected based on the objectives of the investigation point.

5. QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

The QA/QC program discussed below is based on sections recommended by the Environmental Protection Act (EPA).

5.1. Project/Task Organization

The project is being implemented by Fisher. The final decision for any matter related to the project is with Fisher, also the principal data user.

The following people have been assigned roles within the QA/QC program.

- Fisher Project Qualified Person (QP) & Signing Authority – David Fisher, P.Eng
- Fisher Project Manager — Arij Alam, MEnvSc, $EP_{(ESA)}$
- Fisher QA Manager — Marius Voinea, P.Geo.
- Fisher Field Team Leader — Kerry Tam, MEnvSc
- Fisher Data Entry — Raja Ramdial
- Fisher Data Verification — Zoey Arian

5.2. Quality Objectives and Criteria

The data quality objectives are to: characterize the subsurface through logging and screening soils in the field and sampling; collect representative soil samples, collect samples that are representative of the groundwater and collect data that accurately represents hydrogeological conditions (i.e., water levels).

The criteria for assessing this will be:

- Compliance to this QA/QC program;
- Adherence to Fisher's Standard Field Procedures;
- Reproducibility of water levels and laboratory analysis from samples over time; and
- Evaluation of QA/QC sample analysis against Fisher's standards.

5.3. Special Training/Certifications

The training and certifications required for the work includes:

- Supervision of the work by a QP for Phase Two ESA work as defined by Ontario Regulation 153/04, as amended. In this case, work will be supervised by a Professional Engineer or Professional Geoscientist; and
- Fisher employee training for the various operations required.

Fisher training is documented in Fisher's internal training records. Mr. Marius Voinea and Mr. David Fisher, of Fisher, will supervise the work and are Professional Geoscientist and Professional Engineer, respectively, in Ontario and are QPs as defined by the regulation.

5.4. Documentation and Records

This SAP is to be distributed to project staff. The raw data from the fieldwork will be filed for reference in paper and electronically. As required, data will be tabulated and/or transferred to logs and presented in appendices. Any work outside of the standard procedures, delays or findings outside of the norm (i.e., odours, staining and excess solids in groundwater samples) will be noted on the field notes.

The data obtained as part of this program includes:

1. Field notes and field forms;
2. Chain of Custody from sample submissions;
3. Laboratory confirmation of analysis requested;
4. Tabulated and verified field data;
5. Borehole logs and figures;
6. Wells sampling data log sheets;
7. Fisher data review forms; and
8. Certificates of analysis from the laboratory.

6. STANDARD OPERATING PROCEDURES

GENERAL

Prior to commencing any field activities, borehole locations must be cleared for underground utilities through the services of a private utility locates company as well as public utility locates services.

Drilling is to be conducted utilizing equipment adequate to access borehole locations, suit soil conditions and Phase Two ESA objectives. Fisher personnel must log the subsurface conditions encountered within each of the boreholes at the time of the field work. Soils samples from within the boreholes should be recovered at regular depth intervals by driving a split spoon sampler or direct push continuous sampling using standard sampling procedures in accordance with ASTM D1586. Soil samples must be visually assessed and tested in the field for headspace vapour readings using a 10.6 eV lamp Mini Rae 2000 Photoionization Detector (PID) calibrated to 100 parts per million (ppm) Isobutylene.

A minimum of one (1) soil sample recovered from each of the advanced boreholes must be submitted to a laboratory accredited to test the samples in accordance to the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the EPA, published by the Ministry of the Environment, Conservation and Parks (MECP) on March 9, 2004, and amended as of July 1, 2011. Where field observations suggest that impacts are present in a soil sample, a second deeper soil sample should be submitted from that borehole for laboratory analysis.

The groundwater conditions, where encountered, must be recorded at the time of boreholes' drilling and at completion of each borehole. Generally, if groundwater impacts are suspected, at least three (3) groundwater monitoring wells must be installed at the Site. If VOCs impacts are suspected, the construction of the monitoring wells should be of 52 mm inside diameter Polyvinyl Chloride (PVC) pipe to allow for the use of submersible sampling pumps, otherwise the casing/screen diameter should be selected based on the drilling method. The portion below and/or intersecting the groundwater table should be constructed of a similar diameter machine-slotted screen to permit future measurement of water levels and the collection of groundwater samples.

Each installed monitoring well must be monitored to determine the depth to the groundwater table and presence/absence of free phase product within the groundwater monitoring well. Prior to sampling, the installed groundwater monitoring wells must be developed to remove any water or fluids used during boreholes drilling, and any fine grained material from around the screened interval, by pumping out up to ten (10) well casing volumes of groundwater using dedicated Low-Density Polyethylene (LDPE) tubing and a submersible pump. After each monitoring well development operation, the submersible pump must be washed with an Alconox solution and rinsed with distilled water. The development and sampling methodology followed at each of the installed groundwater monitoring well locations must be in accordance to the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the EPA, specifically using a Low Flow Purging and Sampling procedure (USEPA EQASOP-GW 001). The pumping rate may vary until the water level has stabilized to ensure the sampling of "fresh" formation water. Indicator field parameters such as Temperature, pH, Specific Conductance, Oxidation/Reduction Potential (ORP), Dissolved Oxygen (DO) and Turbidity must be measured during purging activities at each well. Once the indicator field parameters have stabilized, groundwater samples should be taken upstream of the flow-through cell (to prevent cross-contamination).

Groundwater samples must be collected at each installed monitoring well and submitted to a laboratory accredited to test the samples in accordance to the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the EPA, published by the MECP on March 9, 2004, and amended as of July 1, 2011. The groundwater samples must be analyzed for CPCs associated with the identified PCAs.

QA/QC samples must be collected and analyzed during the field program as follows:

- At least one (1) field duplicate sample shall be submitted for laboratory analysis for every ten (10) soil samples submitted for analysis; and
- Where groundwater samples are to be analyzed for VOCs, one (1) trip blank sample shall be submitted for analysis with each sampling event and at least one (1) field duplicate.

BOREHOLE DRILLING

Solid stem auger drilling procedure or direct push probe technology, can be used when advancing boreholes into the surface and intermediate overburden depths, having prior knowledge of fairly consolidated soils. Each auger section is typically 1.52 m (5 ft) in length and has a 114.3 mm (4.5 inch) outside diameter. The solid stem augers must be advanced to the required sampling depth, spun to remove all soil cuttings from within the borehole and then removed to make room for the split spoon sampler. The direct push drilling rig applies static weight and hammer percussion to a rod string in order to advance the probing and sampling rods with each sampling rod typically 0.91 m (3 ft) in length.

To minimize cross-contamination, the augers must be cleaned with a high-pressure washer, then rinsed with potable water prior to moving to the next borehole location. During the drilling program, the split spoon samplers must be cleaned with an Alconox solution using a scrub brush, then rinsed with distilled water between samples.

Soil residues resulted from drilling and sampling should initially be drummed on-site until their quality is assessed against the applicable MECP Site Condition Standards (SCS). Should exceedances of these standards be determined, a composite soil residue sample must be analyzed for leachate quality criteria prior to removal from the Site to determine whether the soils are hazardous or non-hazardous with respect to disposal procedures/locations. Transportation and disposal of impacted soil residues must be conducted by/to an MECP-licensed carrier/receiving facility. If soil analyses indicate compliance with the applicable MECP SCS, soil residues shall be removed from the Site and stored in containers labeled for specific property uses, prior to disposal to a landfill that accepts clean fill.

SOIL SAMPLING

Soil sampling at the Site should be conducted as outlined in the SAP designed on the basis of the information obtained from the Phase One ESA and the Phase One Conceptual Site Models (CSMs).

Soil samples must be collected during the boreholes drilling program. For boreholes, by means of either: a spoon sampler driven into the subsoil by a standard size 65 kg hammer, falling 760 mm, recording soil samples at a maximum of 0.76 m (2.5 ft) intervals and at stratigraphic boundaries or a direct push disposable sleeve sampling method by means of applying static weight and hammer percussion to a rod string in order to advance the probing and sampling rods into the subsurface and collecting soil samples at 0.90 m (3 ft) intervals and at stratigraphic boundaries, up to the completion depths suitable to achieve the Phase Two ESA objectives.

Subsurface conditions encountered in the boreholes, including soil type, moisture content, soil colour and visual indications of environmental impacts, if applicable, must be logged at the time of the field program. A representative portion of each recovered soil sample must immediately be placed in laboratory supplied sample containers. The remaining portion of the soil sample must be placed into a re-sealable bag to be used for field screening of combustible soil vapour concentrations. New disposable latex gloves and a cleaned stainless steel trowel must be used during each sampling event to remove the soil cores from the sampler and to transfer the samples into the laboratory supplied containers. Single use hermetic samplers are an acceptable alternative for sampling of soil to be tested for PHCs (F1) and VOCs.

FIELD SCREENING MEASUREMENTS

Soil samples must be screened in the field using a MiniRae 2000 PID. PIDs are used for applications where high sensitivity is needed to monitor ppm levels of VOCs. The MiniRae 2000 PID has a measurement accuracy range of ±2 ppm or 10% of reading between 0 – 2000 ppm, and ±20% of reading for >2000 ppm. It has an internally integrated pump with a flow rate of 450-550 cc/min. Work humidity conditions are from 0% to 95% relative humidity (non-condensing). The MiniRae 2000 is equipped with a 10 inch hydrophobic probe. The probe includes a replaceable water trap filter disk that prevents particulates and water from entering the instruments flow system.

Calibration consists of exposing the instrument to gas samples of known concentration. The combustible and toxic gas samples should have concentrations in approximately the middle of the detection range. The PID is calibrated to an Isobutylene standard of 100 ppm.

The MiniRae 2000 must be calibrated in the field at the beginning of work each day. The calibration records must be recorded each time the MiniRae 2000 was calibrated. This information is useful for establishing a calibration interval and keeping track of individual instrument performance. Each of the recovered soil samples must be visually classified and screened in the field for headspace vapour concentration (combustible soil vapour and total organic vapour) using the MiniRae 2000. Selection of samples to be submitted for laboratory analysis should be based on the headspace vapour concentration and/or physical evidence of odours/staining. If no odours/staining are noted in the soil samples, the samples with the highest field screening measurement (i.e. highest headspace vapour concentration) or at depths in which certain CPCs were likely expected should be selected for laboratory analysis. In addition, if odours/staining are noted in the soil sample or soil headspace vapour concentrations are elevated, additional soil samples should be selected from below the anticipated impacted zone for laboratory analysis, for vertical delineation purposes. Soil vapour concentrations readings taken during the soil sampling must be included in the logs of boreholes.

The depth to groundwater and the presence or absence of non-aqueous phase liquids (NAPL) must be measured in all groundwater monitoring wells using a Solinst Oil/Water Interface probe, model 122 (interface meter). The sensor accuracy is 1.0 mm. The manufacturer recommends annual calibration of the interface probe.

MONITORING WELL INSTALLATION AND DEVELOPMENT

Groundwater monitoring wells installed at the Site should comprise flush-threaded, Schedule 40, PVC riser. The portion below and intersecting the groundwater table should be constructed of a similar diameter machine-slotted 0.25 mm (10 slot) screen.

Groundwater monitoring wells should be constructed using the following procedure:

- The end cap is threaded onto the bottom of the well screen and the well screen is lowered to the bottom of the open borehole by threading together the necessary number of well screen and riser lengths;
- The groundwater monitoring well materials are lowered into the open borehole after the bottom of the borehole has been cleaned, and all the soil/bedrock cuttings and augers were removed;
- The primary filter pack material consists of Type 2 silica sand. The size of the filter pack material should be selected based on the texture of the formation in which the well is screened and the slot size of the well screen. The filter pack is installed in the annulus between the borehole and the well screen by hand-pouring from the surface;
- The annular space is backfilled with Type 2 silica sand from the bottom of the well to approximately 0.2 to 0.3 m above the top of the screen;
- A bentonite seal is installed from the top of the filter pack to 0.30 m below grade in each of the boreholes. Unprocessed 9.5 mm (3/8 in.) diameter granular bentonite is installed in lifts of 0.15 m to 0.30 m.

- All of the monitoring wells are finished at 0.10 m below grade, are fitted with steel flush-mount or aboveground protectors, and must be locked to prevent tampering. The construction details for each groundwater monitoring well must be presented in the Log of Boreholes.

To minimize the potential for cross-contamination during the groundwater monitoring well installation, the following actions must be completed:

- The wells are designed and assembled following the completion of the drilling activities. The project manager and field personnel must review the soil stratigraphy observed in each borehole to ensure that the proposed groundwater monitoring well screen does not present a significant pathway for the vertical migration of chemicals (i.e. does not cross any underlying confining layers);
- The presence of the bentonite seal reduces the likelihood of any water impacts from the surface reaching the monitoring well annulus;
- Only new well materials must be used; these materials are factory-cleaned and delivered to the Site wrapped in plastic;
- New latex or nitrile gloves must be worn when handling well screen and riser materials;
- No PVC cements, solvents or lubricants should be used in the construction of wells; and
- The top of the well casing must be covered using a PVC slip cap or a J-Plug to prevent filter pack sand or bentonite backfill material from entering the well pipe during the well installation activities.

Prior to sampling, the installed monitoring wells must be developed to remove any water and/or drilling fluids added during drilling/installation, and any fine grained material from around the screened interval, by purging up to ten (10) well casing volumes of groundwater using dedicated LDPE tubing and a submersible pump. The volume of fluid evacuated from each well is measured using a calibrated bucket and the volumes are recorded on standard field forms.

Development is intended to establish good hydraulic connection between the well screen and the surrounding aquifer material, so that any future samples collected at the groundwater monitoring well can be considered representative of the subsurface conditions.

FIELD MEASUREMENT OF WATER QUALITY PARAMETERS

Groundwater sampling in the installed groundwater monitoring wells should be conducted using the Low Flow Purging and Sampling procedure (USEPA EQASOP-GW 001), by means of a Horiba U-52 sensor and flow cell that simultaneously measure indicator field parameters such as Temperature, pH, Specific Conductance, ORP, DO, and Turbidity.

Measurement principle, range, resolution, repeatability and accuracy for each of the sensors incorporated in the Horiba U-52 Flow-Through Cell are presented in the following Table 2.

Table 2: Water Quality Indicators

Sensor	*Measurement Principle*	*Range*	*Resolution*	*Repeatability*	*Accuracy*
pH	Glass electrode method	0 to 14	0.01	±0.05	±0.1
DO	Polarographic method	0 to 50.0 mg/L	0.01 mg/L	±0.1 mg/L	0 to 20 mg/L: ±0.2 mg/L 20 to 50 mg/L: ±0.5 mg/L
Specific Conductivity	4 AC electrode method	0 to 10 S/m (0 to 100 mS/cm)	0.000 to 0.999 mS/cm: 0.001 1.00 to 9.99 mD/cm: 0.01 10.0 to 99.9 mS/cm: 0.1 0.0 to 99.9 mS/m: 0.1 0.100 to 0.999 S/m: 0.001 1.00 to 9.99 S/m: 0.01	±0.05% F.S.	±1% F.S. (Median of two-point calibration)
Temperature	Thermistor method	-10 to 55°C	0.01°C	±0.10°C (at calibration point)	JIS class B platinum thermometer sensor (±0.3 + 0.005 / 1°C)
Turbidity	LED transmitting light source, 30° forward scattering method	0 to 800 NTU	0.1 NTU	±5% (reading) or ±0.5 NTU whichever is greater	±5% (reading) or ±1 NTU whichever is greater
ORP	Platinum electrode method	-2000 mV to +2000 mV	1 mV	±5 mV	±15 mV

The measurement of Indicator Field Parameters is to be conducted in accordance with the following procedure:

- Tubing for a submersible pump or peristaltic pump is placed at a depth corresponding to the middle of the screened interval of each groundwater monitoring well, if plausible, and groundwater is pumped at variable flow rates;
- After the water level has stabilized, the flow-through-cell is connected to the tubing through a "T" connector to monitor the indicator field parameters. When excessive turbidity is encountered with the pump startup, the well is purged for a while without connecting up the flow-through cell, in order to minimize particulate buildup in the cell. Water level drawdown measurements are made using a Solinst Water Interface probe;

- During well purging, indicator field parameters (turbidity, temperature, specific conductance, pH, ORP, DO) are monitored at a frequency of three (3) or five (5) minute intervals, if the pump's flow rate was able to "turn over" at least one flow-through cell volume between measurements (for a 250 mL flow-through-cell with a flow rate of 50 mL/min., the monitoring frequency is every five (5) minutes);
- Purging is considered complete and sampling should begin when all the above indicator field parameters have stabilized. Stabilization is considered to be achieved when three (3) consecutive readings are within the following limits:
  - Turbidity (10% for values greater than 5 NTU; if three (3) Turbidity values are less than 5 NTU, consider the values as stabilized),
  - DO (10% for values greater than 0.5 mg/L, if three (3) DO values are less than 0.5 mg/L, consider the values as stabilized),
  - Specific Conductance (3%),
  - Temperature (3%),
  - pH (± 0.1 unit),
  - ORP (± 10 milliVolts).
- A transparent flow-through cell should be used, allowing field personnel to watch for particulate build-up within the cell. This build-up may affect indicator field parameter values measured within the cell.

The Horiba U-52 unit must be calibrated prior to arriving on the Site for the first time. The calibration records must be recorded each time the Horiba U-52 is calibrated.

GROUNDWATER SAMPLING PROGRAM

Low flow sampling procedure

Groundwater sampling in the installed groundwater monitoring wells is to be conducted using the low flow sampling procedure (USEPA EQASOP-GW 001). The flow-through cell is connected to tubing to a submersible pump or peristaltic pump and is placed at a depth corresponding to the middle of the screened interval, if plausible, of each groundwater monitoring well.

The sampling of groundwater in the monitoring wells should be conducted in accordance with the following procedure:

- The static groundwater level in the well is measured before installing the pump or tubing. The initial water level is recorded on the data log sheet;
- The pump, tubing and/or electrical lines are lowered slowly (to minimize disturbance) into the well to the appropriate depth;

- The pump intake or tubing is kept at least two (2) feet above the bottom of the well, if plausible, to minimize mobilization of particulates present in the bottom of the well;
- Pump tubing lengths above the top of well casing are kept as short as possible to minimize heating the groundwater in the tubing by exposure to sun light and ambient air temperatures. Heating may cause the groundwater to degas, which is unacceptable for the collection of samples for VOCs and dissolved gases analysis;
- Before starting the pump, water level in the well is measured;
- From the time the pump started, purging continues until the time the samples are collected. The purged water is discharged into a graduated bucket to determine the total volume of groundwater purged. This information is recorded on the data log sheet;
- The pump is started at low speed and the speed is slowly increased until discharge occurs. Water level is checked;
- Pump speed is adjusted until there is little or no water level drawdown. If the minimal drawdown that has been achieved exceeds 0.3 feet, but remains stable, purging can continue. The water level and pumping rate are monitored and recorded every three (3) or five (5) minutes during purging. Pumping rate adjustments are recorded (both time and flow rate). Pumping rates are, as needed, reduced to the minimum capabilities of the pump to ensure stabilization of the water level. Adjustments should be made in the first fifteen (15) minutes of pumping in order to help minimize purging time. During pump start-up, drawdown may exceed the 0.3 feet target and then "recovers" somewhat as pump flow adjustments are made. The volume of water between the initial water level and the stabilized water level is calculated and added to the volume of the water which occupied the pump's tubing. This combined volume of water must be purged from the well after the water level has stabilized before samples are collected;
- The flow rate used to achieve a stable pumping level should remain fairly constant while monitoring the indicator parameters for stabilization and while collecting the samples.

Collection of Groundwater Samples

When samples are collected for laboratory analyses, the pump's tubing must be disconnected from the "T" connector with a valve and the flow-through cell. The samples must be collected directly from the pump's tubing. VOC samples must be collected first and directly into pre-preserved sample containers. All sample containers are filled by allowing the pump discharge to flow gently down the inside of the container with minimal turbulence. During purging and sampling, the pump tubing should remain filled with water to avoid aeration of the groundwater.

Pre-preserved sample containers must be used, as required by analytical methods. As determination of filtered metal concentrations is a sampling objective, filtered groundwater samples are collected using the same low flow procedures. An in-line filter (transparent housing) should be used, and the filter size must be 0.45 µm. The filter should be pre-rinsed with groundwater prior to sample collection. The filter should be free of air bubbles before samples are collected.

Each collected sample must be labeled. Samples requiring cooling must be placed into a cooler with ice and/or ice packs during storage and transportation to the laboratory. Sampling should progress at the Site from the well that is expected to be least contaminated to the well that is expected to be most contaminated to minimize the potential for cross-contamination. The monitoring equipment must be decontaminated between each well. Dedicated sampling tubing must be used for each monitoring well.

SAMPLE HANDLING AND CUSTODY

Sample handling will be conducted according to Fisher's Sample Handling, Collection and Storage Standard Field Procedure. In general, Fisher will collect the samples in laboratory-supplied sample containers, containing preservatives as required by the Analytical Protocol. Samples will be stored in a cooler with ice and/or ice packs in the field, out of direct sunlight, and during transportation to the laboratory.

Samples will be labeled with the sample number, sample date and Fisher project number. Fisher will complete the laboratory-specific Chain of Custody as per Fisher's Chain of Custody Completion Standard Field Procedure and laboratory requirements. Sample shipment to the laboratory will be arranged by Fisher, as required. Fisher will keep a copy of the Chain of Custody for verification of sample receipt by the laboratory.

7. ANALYTICAL METHODS

Analysis will be conducted in accordance with the MECP analytical protocols by an analytical laboratory accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA), as conforming to ISO Standard 17025.

Fisher will review sample submission documentation received electronically from the laboratory and verify that all samples have been accounted for and that requested analysis is being conducted. Errors or omissions will be brought to the laboratory's attention. The laboratory will complete additional QC testing (i.e., duplicates and method spikes) as required by its certification. Additionally, Fisher will evaluate laboratories' quality report for issues with the data. If unacceptable variance in the data is found, Fisher will resample if possible, and if required.

8. INSTRUMENT/EQUIPMENT TESTING, INSPECTION AND MAINTENANCE

Instruments used include an interface probe and PID equipped for hydrocarbon and chlorinated solvent detection. The PID equipped with a 10.6 eV lamp will be calibrated to 100 ppm Isobutylene prior to commencing on the day of fieldwork. Instruments will be inspected and maintained according to Fisher's Equipment Maintenance and Calibration Standard Field Procedure. In general, the equipment will be examined for defects and cleaned daily prior to use. Defects will be recorded on Fisher's Equipment Calibration/Maintenance Form and addressed before the start of fieldwork. The water level meter will be cleaned with an Alconox solution after each use to prevent cross-contamination between monitoring wells.

9. INSTRUMENT/EQUIPMENT CALIBRATION AND FREQUENCY

For this work program, the interface probe will be calibrated annually or more frequently if required by manufacturer's instructions. The PID will be calibrated daily. The calibration activity will be recorded on Fisher's Equipment Calibration/Maintenance Form. Works for this task will occur in accordance with Fisher's Equipment Maintenance and Calibration Standard Field Procedure. Groundwater quality monitoring equipment and submersible/peristaltic pumps and accessories are pre-calibrated by the rental company. Calibration records provided will be kept on file.

10. INSPECTION/ACCEPTANCE OF SUPPLIES AND CONSUMABLES

Supplies to be used during the sampling include detergents, disposable gloves, re-sealable bags and tubing. Detergents, disposable gloves, tubing and sampling bottles will be provided directly by suppliers and will be used from new, unopened containers/bags at the Site.

11. DATA MANAGEMENT

Fisher will record all field data in Fisher forms and field books, as required. Field data will be tabulated into a database and verified by Fisher. Data obtained from the boreholes groundwater monitoring wells and laboratory will be managed in Fisher’s database.

12. ASSESSMENTS AND RESPONSE ACTIONS

Adherence to the Sampling and Analysis Plan will be assessed primarily by the Fisher Project Manager and overseen by the Fisher QA Manager. To ensure adherence to the Sampling and Analysis Plan, the Fisher Project Manager will discuss Site activities with field staff to verify work completed. Omissions will be identified and field staff will be requested to verify data when next on-Site.

13. REPORTS

Reports to our client will consist of:

- Memos including tabulated data, figures, QA/QC discussion, as required;
- Reports including tabulated data, figures, QA/QC discussion, as required; and
- Electronic version of field data.

The data generated will be used in a report provided to the MECP, if required. The report will include a discussion of the QA/QC findings and implications of the findings.

14. DATA REVIEW, VERIFICATION AND VALIDATION

As identified in the sections above, Fisher will:

- Verify the recording and integrity of written field data;
- Verify the soil and groundwater sample receipt and analysis requested to the laboratory;
- Tabulate and review the laboratory-supplied analytical results; and
- Verify the electronic data input by Fisher.

15. VERIFICATION AND VALIDATION METHODS

The data handled by Fisher will be verified by a manual check of data received and laboratory request. Verification and validation of laboratory analysis will be completed by determining the relative percent difference (RPD) for duplicate samples by Fisher. Fisher will also review the analysis of blanks, laboratory-completed duplicates, and matrix spikes and verify that these are within the laboratory-specified range.

To calculate RPDs, Fisher will use the following formula:

$\Delta\% = \left| S - D \right|_x 100\% / ½ (S + D)$

Where: $\Delta\%$ = RPD

S = sample value

D = duplicate or replicate value

Notes:

- RPD is calculated only for result pairs with concentrations greater than 5x the method detection limit in both samples.
- RPDs are not calculated where results are below the laboratory detection limits for sample pair.

The acceptable guideline limits for various analysis groups are noted in Table 3 below.

Table 3: Parameters and Recommended RPD

Parameter Category	*Recommended RPD at concentrations exceeding 5 times the Method Detection Limit*
Organics in solids • PAH • Volatile organics • PHC • Most others*	 50% 40% 40% 40%
Organics in water*	30%
Metals in solids	30%
Metals in water	20%
General inorganics in solids	30%
General inorganics in water	20%

"Derivatized acid extractables, like chlorophenol, and pesticides, will tend to be higher

Source: RPD screening values from the October 24, 2005 letter to BC Environment from the BC Environmental Laboratory Quality Assurance Advisory Committee

Where the target RPD is exceeded, we will investigate to assess whether the cause can be determined. We will also assess whether the RPD exceedance is material to the use of the data and if it impacts all data in that category.

Where detectable concentrations are found in a trip blank or field blank, Fisher will evaluate the possible causes of the finding and impacts on data.

Where laboratory QA/QC results indicate issues with data quality, Fisher will also evaluate the impacts of this information and report on our findings.

FISHER ENVIRONMENTAL LTD.

Per:



David Fisher, P. Eng., C. Chem.
Principal
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Contaminants Delineation

Sampling and Analysis Plan

2093, 2097, 2101 Old Lakeshore Road & 2096, 2100 Lakeshore Road, Burlington, Ontario

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1. INTRODUCTION

The document as presented herein operates as a Sampling and Analysis Plan (SAP) for the requisite field and analytical investigation at the residential and commercial use properties addressed as 2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario, herein referred to as the 'Site', and conducted as part of the Contaminants Delineation. The SAP has been prepared in compliance with Ontario Regulation 153/04, as amended. This regulation requires a SAP that includes a quality assurance and quality control (QA/QC) program, data quality objectives, standard operating procedures, and a description of physical constraints that limit the ability to conduct sampling and analysis. This SAP was developed based on Fisher Environmental Limited's (Fisher) analytical results from the Phase Two Environmental Site Assessment (ESA).

2. PROBLEM DEFINITION AND BACKGROUND

The Site is occupied by four (4) commercial and/or residential buildings. 2096 Lakeshore Road consists of a one (1) storey residential building that is unoccupied. 2100 Lakeshore Road is undeveloped, however historically a residential building was present. 2093 Old Lakeshore Road consists of a two (2) storey residential building and one (1) parking garage. 2097 Old Lakeshore Road consists of a two (2) storey mixed commercial and residential use building. The ground floor is occupied by a salon and spa, Waters Edge, and the second floor is occupied by a residential tenant. 2101 Old Lakeshore Road consists of a two (2) storey commercial building occupied by a restaurant, The Carriage House.

The Site has been used for residential and commercial purposes, and it is our understanding that a redevelopment is proposed consisting of a twenty seven (27) storey mixed use commercial and residential building with five (5) levels of underground parking.

The Site is bound by Lakeshore Road to the north and Old Lakeshore Road to the south, approximately 360 m northeast of the intersection of Lakeshore Road and Brant Street. A commercial building utilized as a sales and presentation centre for a proposed residential redevelopment is adjacent to the east and a public parking lot is adjacent to the west. The total Site area is 0.3357 hectares.

Based on the analytical results from Fisher's Phase Two ESA, several exceedances of the applicable Ministry of the Environment, Conservation and Parks (MECP) Table 3 Site Condition Standard (SCS) in the soil were identified. The soil exceedances are summarized below:

<u>BH202 (0.00-0.60 m bgs)</u>

Cadmium: 4.9 ppm vs 1.2 ppm

Lead: 744 ppm vs 120 ppm

Zinc: 4,341 ppm vs 340 ppm

EC: 1.83 mS/cm vs 0.7 mS/cm

BH203 (0.00-0.60 m bgs)

Cadmium: 1.4 ppm vs 1.2 ppm

Zinc: 549 ppm vs 340 ppm

EC: 0.83 mS/cm vs 0.7 mS/cm

BH204 (0.00-0.60 m bgs)

Lead: 222 ppm vs 120 ppm

Zinc: 392 ppm vs 340 ppm

BH205 (0.00-0.60 m bgs)

Lead: 210 ppm vs 120 ppm

BH206 (0.00-0.60 m bgs)

Lead: 248 ppm vs 120 ppm

Zinc: 430 ppm vs 340 ppm

BH207 (0.00-0.60 m bgs)

Lead: 162 ppm vs 120 ppm

EC: 1.6 mS/cm vs 0.7 mS/cm

SAR: 8.1 vs 5

BH209 (0.00-0.60 m bgs)

EC: 3.2 mS/cm vs 0.7 mS/cm

BH210 (0.00-0.60 m bgs)

Fluoranthene: 1.4 ppm vs 0.69 ppm

Benzo[a]pyrene: 0.54 ppm vs 0.3 ppm

MW211 (0.00-0.60 m bgs)

EC: 2.3 mS/cm vs 0.7 mS/cm

SAR: 10 vs 5

MW212 (0.00-0.60 m bgs)

Lead: 211 ppm vs 120 ppm

MW213 (0.00-0.60 m bgs)

Fluoranthene: 2.1 ppm vs 0.69 ppm

Benzo[a]pyrene: 0.48 ppm vs 0.3 ppm

MW214 (0.00-0.60 m bgs)

Lead: 331 ppm vs 120 ppm

Zinc: 367 ppm vs 340 ppm

MW217 (0.00-0.60 m bgs)

Lead: 203 ppm vs 120 ppm

The field investigation, including sampling of soil, and the analytical program to determine the concentrations of the Contaminants of Concern (COCs) listed above will evaluate the lateral and vertical extents of the COCs.

3. OBJECTIVES

The specific objectives of the work are to assess the lateral and extent of the COCs at the Site in the soil samples. The overall objective for the work is conducted in support of a proposed mixed use commercial and residential redevelopment of the Site and for the filing of a Record of Site Condition (RSC) for the Site. Remedial action is required prior to the filing of a RSC.

4. WORK PROPOSED

To meet the objectives noted above, the work should consist of the following:

1. Preparation of Site, including marking borehole locations and clearing subsurface utilities through public and private locates;

2. Advancing boreholes up to 2.13 m (7 ft) below grade; and

3. Collection and submission of soil samples to the laboratory for analysis of Metals, PAHs, EC, and/or SAR parameters.

4.1. Rationale

Proposed investigative locations for soil sampling will address the identified on-site COCs, which requires soil to be tested at all borehole locations. The rationale for the current Sampling and Analysis Plan is to address the soil media within the identified fill materials.

The process of determining the sampling depths of the identified COCs is based on the analytical results from Fisher's Phase Two ESA to identify the vertical and lateral extents of the COCs.

4.2. General Considerations

Considerations regarding the investigation's design (i.e., soil sampling locations and the type and frequency of analysis) are based on the objectives and field observations. The following are the general parameters used in the design of the fieldwork.

1. The soil sampling plan design is initially based on the information provided by the Phase Two ESA, and it can be adjusted as the site investigation progressed and the subsurface conditions are revealed by boreholes drilling;

2. Targeted depths will be sampled from;

3. Soil horizons displaying different properties are sampled separately, ensuring that samples from particular depth increments are not mixed with soil from other depths;

4. The media to be sampled includes soil; and

5. Soil sampling is conducted through the full depth of the boreholes. A minimum of one (1) soil sample is collected for screening from every 0.61 m (2 ft) of vertical borehole. The number of samples analyzed is defined by the objectives of the Contaminants Delineation and Fisher's budget agreed upon by our client. In general, a minimum of one (1) soil sample is analyzed per borehole, with sampling depth depending on the type of expected CPCs, transport pathways, stratigraphy and field screening indications.

5. QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

The QA/QC program discussed below is based on sections recommended by the Environmental Protection Act (EPA).

5.1. Project/Task Organization

The project is being implemented by Fisher. The final decision for any matter related to the project is with Fisher, also the principal data user.

The following people have been assigned roles within the QA/QC program.

- Fisher Project Qualified Person (QP) & Signing Authority – David Fisher, P.Eng
- Fisher Project Manager — Arij Alam, MEnvSc, $EP_{(ESA)}$
- Fisher QA Manager — Marius Voinea, P.Geo.
- Fisher Field Team Leader — Kerry Tam, MEnvSc
- Fisher Data Entry — Raja Ramdial
- Fisher Data Verification — Zoey Arian

5.2. Quality Objectives and Criteria

The data quality objectives are to: characterize the subsurface through logging and screening soils in the field and sampling, and collect representative soil samples.

The criteria for assessing this will be:

- Compliance to this QA/QC program;
- Adherence to Fisher's Standard Field Procedures; and
- Evaluation of QA/QC sample analysis against Fisher's standards.

5.3. Special Training/Certifications

The training and certifications required for the work includes:

- Supervision of the work by a QP for Contaminants Delineation work as defined by Ontario Regulation 153/04, as amended. In this case, work will be supervised by a Professional Engineer or Professional Geoscientist; and
- Fisher employee training for the various operations required.

Fisher training is documented in Fisher's internal training records. Mr. Marius Voinea and Mr. David Fisher, of Fisher, will supervise the work and are Professional Geoscientist and Professional Engineer, respectively, in Ontario and are QPs as defined by the regulation.

5.4. Documentation and Records

This SAP is to be distributed to project staff. The raw data from the fieldwork will be filed for reference in paper and electronically. As required, data will be tabulated and/or transferred to logs and presented in appendices. Any work outside of the standard procedures, delays or findings outside of the norm (i.e., odours, staining) will be noted on the field notes.

The data obtained as part of this program includes:

1. Field notes and field forms;
2. Chain of Custody from sample submissions;
3. Laboratory confirmation of analysis requested;
4. Tabulated and verified field data;
5. Borehole logs and figures;

6. Fisher data review forms; and

7. Certificates of analysis from the laboratory.

6. STANDARD OPERATING PROCEDURES

GENERAL

Prior to commencing any field activities, borehole locations must be cleared for underground utilities through the services of a private utility locates company as well as public utility locates services.

Drilling is to be conducted utilizing equipment adequate to access borehole locations, suit soil conditions and Contaminants Delineation objectives. Fisher personnel must log the subsurface conditions encountered within each of the boreholes at the time of the field work. Soils samples from within the boreholes should be recovered at regular depth intervals by driving a split spoon sampler or direct push continuous sampling using standard sampling procedures in accordance with ASTM D1586. Soil samples must be visually assessed and tested in the field for headspace vapour readings using a 10.6 eV lamp Mini Rae 2000 Photoionization Detector (PID) calibrated to 100 parts per million (ppm) Isobutylene.

A minimum of one (1) soil sample recovered from each of the advanced boreholes must be submitted to a laboratory accredited to test the samples in accordance to the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the EPA, published by the Ministry of the Environment, Conservation and Parks (MECP) on March 9, 2004, and amended as of July 1, 2011. Where field observations suggest that impacts are present in a soil sample, a deeper soil sample will be submitted from that borehole for laboratory analysis.

QA/QC samples must be collected and analyzed during the field program as follows:

- At least one (1) field duplicate sample shall be submitted for laboratory analysis for every ten (10) soil samples submitted for analysis.

BOREHOLE DRILLING

Solid stem auger drilling procedure or direct push probe technology, can be used when advancing boreholes into the surface and intermediate overburden depths, having prior knowledge of fairly consolidated soils. Each auger section is typically 1.52 m (5 ft) in length and has a 114.3 mm (4.5 inch) outside diameter. The solid stem augers must be advanced to the required sampling depth, spun to remove all soil cuttings from within the borehole and then removed to make room for the split spoon sampler. The direct push drilling rig applies static weight and hammer percussion to a rod string in order to advance the probing and sampling rods with each sampling rod typically 0.91 m (3 ft) in length.

To minimize cross-contamination, the augers must be cleaned with a high-pressure washer, then rinsed with potable water prior to moving to the next borehole location. During the drilling program, the split spoon samplers must be cleaned with an Alconox solution using a scrub brush, then rinsed with distilled water between samples.

Soil residues resulted from drilling and sampling should initially be drummed on-site until their quality is assessed against the applicable MECP SCS. Should exceedances of these standards be determined, a composite soil residue sample must be analyzed for leachate quality criteria prior to removal from the Site to determine whether the soils are hazardous or non-hazardous with respect to disposal procedures/locations. Transportation and disposal of impacted soil residues must be conducted by/to an MECP-licensed carrier/receiving facility. If soil analyses indicate compliance with the applicable MECP SCS, soil residues shall be removed from the Site and stored in containers labeled for specific property uses, prior to disposal to a landfill that accepts clean fill.

SOIL SAMPLING

Soil sampling at the Site should be conducted as outlined in the SAP designed on the basis of the information obtained from the Phase Two ESA.

Soil samples must be collected during the boreholes drilling program. For boreholes, by means of either: a spoon sampler driven into the subsoil by a standard size 65 kg hammer, falling 760 mm, recording soil samples at a maximum of 0.76 m (2.5 ft) intervals and at stratigraphic boundaries or a direct push disposable sleeve sampling method by means of applying static weight and hammer percussion to a rod string in order to advance the probing and sampling rods into the subsurface and collecting soil samples at 0.90 m (3 ft) intervals and at stratigraphic boundaries, up to the completion depths suitable to achieve the Contaminants Delineation objectives.

Subsurface conditions encountered in the boreholes, including soil type, moisture content, soil colour and visual indications of environmental impacts, if applicable, must be logged at the time of the field program. A representative portion of each recovered soil sample must immediately be placed in laboratory supplied sample containers. The remaining portion of the soil sample must be placed into a re-sealable bag to be used for field screening of combustible soil vapour concentrations. New disposable latex gloves and a cleaned stainless steel trowel must be used during each sampling event to remove the soil cores from the sampler and to transfer the samples into the laboratory supplied containers.

FIELD SCREENING MEASUREMENTS

Soil samples must be screened in the field using a MiniRae 2000 PID. PIDs are used for applications where high sensitivity is needed to monitor ppm levels of VOCs. The MiniRae 2000 PID has a measurement accuracy range of ±2 ppm or 10% of reading between 0 – 2000 ppm, and ±20% of reading for >2000 ppm. It has an internally integrated pump with a flow rate of 450-550 cc/min. Work humidity conditions are from 0% to 95% relative humidity (non-condensing). The MiniRae 2000 is equipped with a 10 inch hydrophobic probe. The probe includes a replaceable water trap filter disk that prevents particulates and water from entering the instruments flow system.

Calibration consists of exposing the instrument to gas samples of known concentration. The combustible and toxic gas samples should have concentrations in approximately the middle of the detection range. The PID is calibrated to an Isobutylene standard of 100 ppm.

The MiniRae 2000 must be calibrated in the field at the beginning of work each day. The calibration records must be recorded each time the MiniRae 2000 was calibrated. This information is useful for establishing a calibration interval and keeping track of individual instrument performance. Each of the recovered soil samples must be visually classified and screened in the field for headspace vapour concentration (combustible soil vapour and total organic vapour) using the MiniRae 2000.

Selection of samples to be submitted for laboratory analysis should be based on the identified depths of the COCs. In addition, headspace vapour concentration and/or physical evidence of odours/staining is to be considered. If odours/staining are noted in the soil sample or soil headspace vapour concentrations are elevated, additional soil samples will be selected from below the anticipated impacted zone for laboratory analysis. Soil vapour concentrations readings taken during the soil sampling must be included in the logs of boreholes.

SAMPLE HANDLING AND CUSTODY

Sample handling will be conducted according to Fisher's Sample Handling, Collection and Storage Standard Field Procedure. In general, Fisher will collect the samples in laboratory-supplied sample containers, containing preservatives as required by the Analytical Protocol. Samples will be stored in a cooler with ice and/or ice packs in the field, out of direct sunlight, and during transportation to the laboratory.

Samples will be labeled with the sample number, sample date and Fisher project number. Fisher will complete the laboratory-specific Chain of Custody as per Fisher's Chain of Custody Completion Standard Field Procedure and laboratory requirements. Sample shipment to the laboratory will be arranged by Fisher, as required. Fisher will keep a copy of the Chain of Custody for verification of sample receipt by the laboratory.

7. ANALYTICAL METHODS

Analysis will be conducted in accordance with the MECP analytical protocols by an analytical laboratory accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA), as conforming to ISO Standard 17025.

Fisher will review sample submission documentation received electronically from the laboratory and verify that all samples have been accounted for and that requested analysis is being conducted. Errors or omissions will be brought to the laboratory's attention. The laboratory will complete additional QC testing (i.e., duplicates and method spikes) as required by its certification. Additionally, Fisher will evaluate laboratories' quality report for issues with the data. If unacceptable variance in the data is found, Fisher will resample if possible, and if required.

8. INSTRUMENT/EQUIPMENT TESTING, INSPECTION AND MAINTENANCE

Instruments used include a PID equipped for hydrocarbon and chlorinated solvent detection. The PID equipped with a 10.6 eV lamp will be calibrated to 100 ppm Isobutylene prior to commencing on the day of fieldwork. The PID will be inspected and maintained according to Fisher's Equipment Maintenance and Calibration Standard Field Procedure. In general, the equipment will be examined for defects and cleaned daily prior to use. Defects will be recorded on Fisher's Equipment Calibration/Maintenance Form and addressed before the start of fieldwork.

9. INSTRUMENT/EQUIPMENT CALIBRATION AND FREQUENCY

For this work program, the PID will be calibrated daily. The calibration activity will be recorded on Fisher's Equipment Calibration/Maintenance Form. Works for this task will occur in accordance with Fisher's Equipment Maintenance and Calibration Standard Field Procedure.

10. INSPECTION/ACCEPTANCE OF SUPPLIES AND CONSUMABLES

Supplies to be used during the sampling include disposable gloves and re-sealable bags. Disposable gloves and sampling bottles/re-sealable bags will be provided directly by suppliers and will be used from new, unopened containers/bags at the Site.

11. DATA MANAGEMENT

Fisher will record all field data in Fisher forms and field books, as required. Field data will be tabulated into a database and verified by Fisher. Data obtained from the boreholes and laboratory will be managed in Fisher's database.

12. ASSESSMENTS AND RESPONSE ACTIONS

Adherence to the Sampling and Analysis Plan will be assessed primarily by the Fisher Project Manager and overseen by the Fisher QA Manager. To ensure adherence to the Sampling and Analysis Plan, the Fisher Project Manager will discuss Site activities with field staff to verify work completed. Omissions will be identified and field staff will be requested to verify data when next on-Site.

13. REPORTS

Reports to our client will consist of:

- Memos including tabulated data, figures, QA/QC discussion, as required;
- Reports including tabulated data, figures, QA/QC discussion, as required; and
- Electronic version of field data.

The data generated will be used in a report provided to the MECP, if required. The report will include a discussion of the QA/QC findings and implications of the findings.

14. DATA REVIEW, VERIFICATION AND VALIDATION

As identified in the sections above, Fisher will:

- Verify the recording and integrity of written field data;
- Verify the soil sample receipt and analysis requested to the laboratory;
- Tabulate and review the laboratory-supplied analytical results; and
- Verify the electronic data input by Fisher.

15. VERIFICATION AND VALIDATION METHODS

The data handled by Fisher will be verified by a manual check of data received and laboratory request. Verification and validation of laboratory analysis will be completed by determining the relative percent difference (RPD) for duplicate samples by Fisher. Fisher will also review the analysis of blanks, laboratory-completed duplicates, and matrix spikes and verify that these are within the laboratory-specified range.

To calculate RPDs, Fisher will use the following formula:

$\Delta\% = \left| S - D \right|_x 100\% / ½ (S + D)$

Where: $\Delta\%$ = RPD

S = sample value

D = duplicate or replicate value

Notes:

- RPD is calculated only for result pairs with concentrations greater than 5x the method detection limit in both samples.
- RPDs are not calculated where results are below the laboratory detection limits for sample pair.

The acceptable guideline limits for various analysis groups are noted in Table 1 below.

Table 1: Parameters and Recommended RPD

Parameter Category	*Recommended RPD at concentrations exceeding 5 times the Method Detection Limit*
Organics in solids • PAH • Volatile organics • PHC • Most others*	 50% 40% 40% 40%
Organics in water*	30%
Metals in solids	30%
Metals in water	20%
General inorganics in solids	30%
General inorganics in water	20%

"Derivatized acid extractables, like chlorophenol, and pesticides, will tend to be higher

Source: RPD screening values from the October 24, 2005 letter to BC Environment from the BC Environmental Laboratory Quality Assurance Advisory Committee

Where the target RPD is exceeded, we will investigate to assess whether the cause can be determined. We will also assess whether the RPD exceedance is material to the use of the data and if it impacts all data in that category. Where laboratory QA/QC results indicate issues with data quality, Fisher will also evaluate the impacts of this information and report on our findings.

FISHER ENVIRONMENTAL LTD.

Per:



David Fisher, P. Eng., C. Chem.
Principal
Fisher Environmental Ltd.

APPENDIX B – LOG OF BOREHOLES

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LOG OF BOREHOLE NO. BH3(MW) SHEET. 3 of 5

PROJECT NO.: FE-P 17-8409

PROJECT NAME: Geotechnical Investigation

LOCATION: 2100 Lakeshore Road

DRILLING METHOD: Hollow Stem & NQ Rock Coring

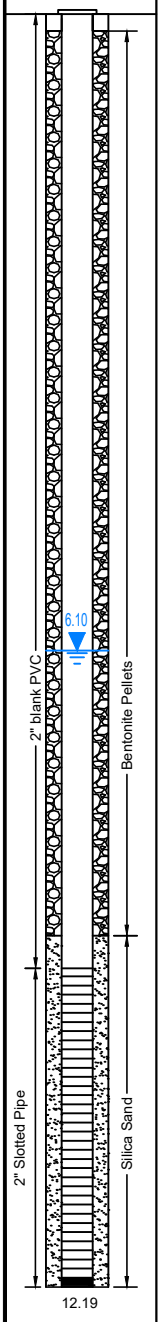
DRILLING DATE: 03 October 2017

DEPTH (feet)	DEPTH (metres)	DESCRIPTION	STRATA PLOT	ELEV./ DEPTH (m)	SAMPLES NUMBER	SAMPLES Type	SAMPLES "N" VALUE
		GROUND SURFACE (m asl)		81.98/ 0.00			
0	0	FILL SANDY SILT (Gravel 6"): dark Brown with Black patches, trace GRAVEL, dry, loose			1	SS	4
4	1	SILTY CLAY : Brown with Orange spots, trace GRAVEL, dry			2	SS	15
6	2				3	SS	100+
8	3	CLAY : with GRAVEL, Orange-Brown, dry, with weathered SHALE, Red, dry, Grey pieces			4	SS	59
10	3	Refusal at 11½' short rock coring			5	SS	100+
12	4	SHALE : (queenston, bedrock formation)layered shale with grey siltstone layers, Red, moist to dry, hard					
14	4						
16	5						
18	5	weathered 19'-21'					
20	6						
22	7	Fractured at 23'					
24	7						
26	8						
28	8						
30	9						
32	10						
34	10	weathered at 34'					
36	11	weathered 36 ½' - 40'					
38	11						
40	12	End of Borehole at 12.27m		69.71/ 12.27			
42	13						
44	13						
46	14						
48	14						
50	15						

PENETRATION TESTING (SPT) ▲ 20 40 60 80
SHEAR STRENGTH (Kpa) ✤ 40 80 120 160

VAPOUR READING (ppm) □ 20 40 60 80
MOISTURE CONTENT (%) ○ 10 20 30 40

PIEZOMETER OR WELL CONSTRUCTION



Groundwater Depth (m): 6.10 m on Oct 16, 2017

LOGGED: ZV

CHECKED: CW

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Log of Borehole: MW101
2093, 2097,2101 Old Lakeshore Rd. & 2096, 2100 Lakeshore Rd., Burlington, Ontario

Sheet: 1 of 9
Project #: 17-8460
G.S.Elevation: 81.84 m asl

Location: 2093 Old Lakeshore Road

Drill Method: D-50 Drilling Rig
Drilling Date: 31 October 2017

Sample Method: Solid Stem
Dates: Water Level 13 November 2017

Borehole Diameter: 4"
Water Level: 1.66m
Logged By: ZA
Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
0				0	FILL: Brown SANDY SILT, dry, compact	
1				2 / 4 / 1	Brown SILTY CLAY, dry	2" blank PVC; Concrete; 1.66; Bentonite Pellets; Silica Sand; 2" Slotted Pipe
2				6 / 8 / 2		
3				10 / 12 / 3		
4	7469-1			14 / 4	Red SILTY CLAY, hard, seams of red SHALE, moist	
5				16 / 5	Red SHALE, consolidation , moist	4.53m
6				18 / 20 / 6	End of borehole at 4.57m	
7				22 / 24 / 7		
8				26 / 28 / 8		
9				30 / 9		
10				32 / 10		

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Log of Borehole: MW102
2093, 2097,2101 Old Lakeshore Rd.
& 2096, 2100 Lakeshore Rd.,
Burlington, Ontario

Sheet: 2 of 9
Project #: 17-8460
G.S.Elevation: 82.00 m asl

Location: 2096 Lakeshore Road

Drill Method: D-50 Drilling Rig
Drilling Date: 31 October 2017

Sample Method: Solid Stem
Dates: Water Level 13 November 2017

Borehole Diameter: 4"
Water Level: 1.99m
Logged By: ZA
Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
0–1	7469-2 7469-3			0–2	FILL: Brown SANDY SILT, trace gravel, organic odour	
1–3				2–10	Brown SILTY CLAY, dry	2" blank PVC; Concrete; 1.99; Bentonite Pellets; Silica Sand
3–4	7469-4			10–16	Red SILTY CLAY, hard, seams of red SHALE, moist	2" Slotted Pipe
4–5				16–18	Red SHALE, consolidation , moist	4.93m
					End of borehole at 5.18m	
5–10				18–32		

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Log of Borehole: MW103
2093, 2097,2101 Old Lakeshore Rd.
& 2096, 2100 Lakeshore Rd.,
Burlington, Ontario

Sheet: 3 of 9
Project #: 17-8460
G.S.Elevation: 82.21 m asl

Location: 2096 Lakeshore Road

Drill Method: D-50 Drilling Rig
Drilling Date: 31 October 2017

Sample Method: Solid Stem
Dates: Water Level 13 November 2017

Borehole Diameter: 4"
Water Level: 2.74m
Logged By: ZA
Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					GRAVEL	
					FILL: Brown to red SAND and GRAVEL, with SILT, moist	
1	7469-5			2 / 4 / 6 / 8 / 10 / 12 / 14 / 16 / 18 / 20 / 22 / 24 / 26 / 28 / 30 / 32	Brown SILTY CLAY, dry	2" blank PVC; Concrete; Bentonite Pellets; Silica Sand; 2" Slotted Pipe; 2.74; 4.99m
2						
3						
4	7469-6				Red SILTY CLAY, hard, seams of red SHALE, dry to slightly moist	
5					Red SHALE, weathered , moist	
6					Red SHALE, consolidation , moist	
7					End of borehole at 5.33m	
8						
9						
10						

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Log of Borehole: MW104
2093, 2097,2101 Old Lakeshore Rd. & 2096, 2100 Lakeshore Rd., Burlington, Ontario

Sheet: 4 of 9
Project #: 17-8460
G.S.Elevation: 81.98 m asl

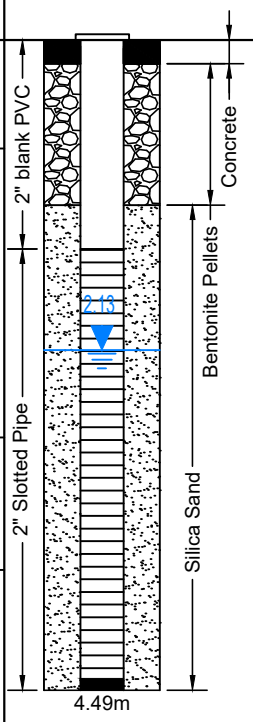
Location: 2100 Lakeshore Road

Drill Method: D-50 Drilling Rig
Drilling Date: 31 October 2017

Sample Method: Solid Stem
Dates: Water Level 13 November 2017

Borehole Diameter: 4"
Water Level: 2.13m
Logged By: ZA
Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					GRAVEL	
				2	FILL: Brown to red SAND and SILT, trace GRAVEL, moist	
	7469-7			4		
1				6	Brown SILTY CLAY, dry	
2				8		
				10	Red SILTY CLAY, hard, seams of red SHALE, dry to slightly moist	
3	7469-8			12		
				14	Red SHALE, slightly weathered , moist	
4				16		
					End of borehole at 4.88m	
5				18		
				20		
6				22		
				24		
7				26		
				28		
8						
				30		
9						
				32		
10				10		



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Log of Borehole: MW105
2093, 2097,2101 Old Lakeshore Rd. & 2096, 2100 Lakeshore Rd., Burlington, Ontario

Sheet: 5 of 9
Project #: 17-8460
G.S.Elevation: 81.91 m asl

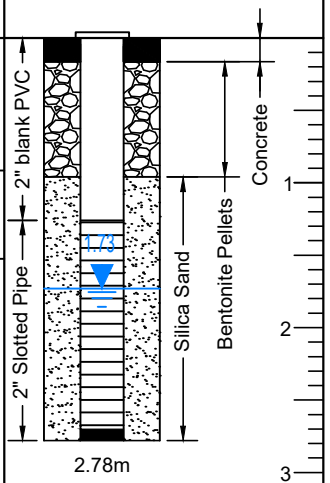
Location: 2097 Old Lakeshore Road

Drill Method: D-50 Drilling Rig
Drilling Date: 31 October 2017

Sample Method: Solid Stem
Dates: Water Level 13 November 2017

Borehole Diameter: 4"
Water Level: 1.73m
Logged By: ZA
Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
1				2 / 1	FILL: Brown SANDY SILT, trace GRAVEL	
	7469-9			4	Brown SILTY CLAY, dry	
2				6 / 2		
				8	Red CLAY, hard, seams of red SHALE, dry	
3				10 / 3		
				12		
4				4	Red SHALE, consolidated, dry	
				14	End of borehole at 3.81m	
5				16 / 5		
				18		
6				20 / 6		
				22		
7				7		
				24		
8				26 / 8		
				28		
9				9		
				30		
10				32 / 10		



FISHER ENVIRONMENTAL LTD.

Log of Borehole: MW106
2093, 2097,2101 Old Lakeshore Rd. & 2096, 2100 Lakeshore Rd., Burlington, Ontario

Sheet: 6 of 9
Project #: 17-8460
G.S.Elevation: 81.15 m asl

Location: 2101 Old Lakeshore Road

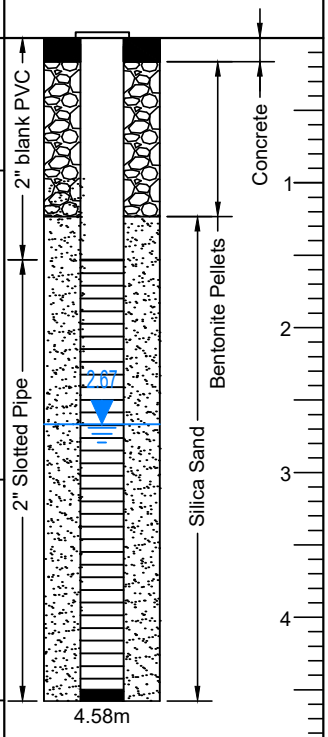
Drill Method: D-50 Drilling Rig
Drilling Date: 1 November 2017

Sample Method: Solid Stem
Dates: Water Level 13 November 2017

Borehole Diameter: 4"
Water Level: 2.67m
Logged By: ZA
Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description
0					ASPHALT
0.3					FILL: Brown SANDY SILT, dry compact
1.5					Brown SILTY CLAY, dry
3.0	7469-10				Red SILTY CLAY, hard, seams of red SHALE, slightly moist
4.6					Red SHALE, consolidated, moist
4.88					End of borehole at 4.88m

Monitoring Well Construction & Water Level (m)



FISHER ENVIRONMENTAL LTD.

Log of Borehole: MW107
2093, 2097,2101 Old Lakeshore Rd.
& 2096, 2100 Lakeshore Rd.,
Burlington, Ontario

Sheet: 7 of 9
Project #: 17-8460
G.S.Elevation: 81.55 m asl

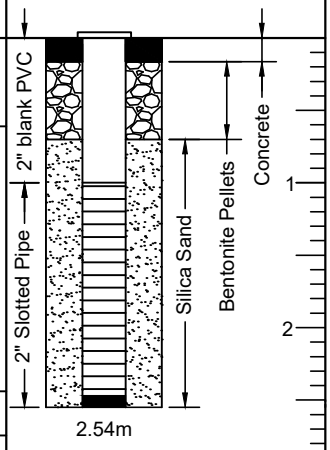
Location: 2101 Old Lakeshore Road

Drill Method: Big Beaver
Drilling Date: 1 November 2017

Sample Method: Solid Stem
Dates: Water Level 13 November 2017

Borehole Diameter: 4"
Water Level: Dry
Logged By: ZA
Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					GRASS and soil	
	7469-11				FILL: Brown SANDY SILT, dry, compact	
					Brown SILTY CLAY, dry	
					Red SILTY CLAY, hard, slightly moist	
					End of borehole at 2.74m	



FISHER ENVIRONMENTAL LTD.

Log of Borehole: MW108
2093, 2097,2101 Old Lakeshore Rd. & 2096, 2100 Lakeshore Rd., Burlington, Ontario

Sheet: 8 of 9
Project #: 17-8460
G.S.Elevation: 81.65 m asl

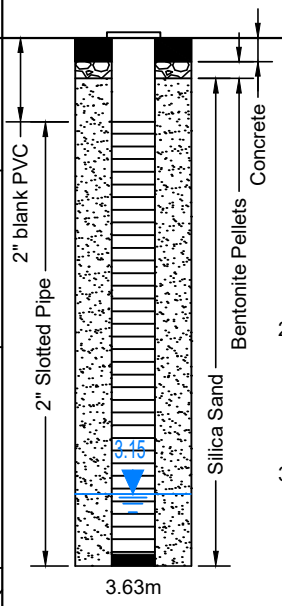
Location: 2097 Old Lakeshore Road

Drill Method: D-50 Drilling Rig
Drilling Date: 31 October 2017

Sample Method: Solid Stem
Dates: Water Level 13 November 2017

Borehole Diameter: 4"
Water Level: 3.15m
Logged By: ZA
Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
0–1				0–2	FILL: Brown SANDY SILT, trace GRAVEL	
1–2				4–6	Brown SILTY CLAY, dry	
2–3				8–10	Red CLAY, hard, seams of red SHALE, dry	
3–4	7469-12 7469-13			12–14	Red SHALE, consolidated, dry	
					End of borehole at 3.81m	



16 18 20 22 24 26 28 30 32
5 6 7 8 9 10

FISHER ENVIRONMENTAL LTD.

Log of Borehole: MW109
2093, 2097,2101 Old Lakeshore Rd.
& 2096, 2100 Lakeshore Rd.,
Burlington, Ontario

Sheet: 9 of 9
Project #: 17-8460
G.S.Elevation: 81.70 m asl

Location: 2093 Old Lakeshore Road

Drill Method: Big Beaver
Drilling Date: 1 November 2017

Sample Method: Solid Stem
Dates: Water Level 13 November 2017

Borehole Diameter: 4"
Water Level: Dry
Logged By: ZA
Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					GRASS and soil	
				2	FILL: Brown SANDY SILT, dry, compact	2" blank PVC
1	7469-14			4	Brown SILTY CLAY, dry	Concrete
2				6		Bentonite Pellets
				8	Red SILTY CLAY, hard, dry	Silica Sand
					End of borehole at 2.44m	2" Slotted Pipe
						2.44m
3				10		
				12		
4				14		
				16		
5				18		
				20		
6				22		
				24		
7				26		
				28		
8				30		
				32		
9						
10				10		

FISHER ENVIRONMENTAL LTD.

Log of Borehole: BH201
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 1 of 18
Project #: 19-9254
G.S.Elevation:

Location:

Drill Method: Diedrich 50
Drilling Date: 7 February 2019
Sample Method: Split Spoon
Dates: Water Level N/A
Borehole Diameter: 4"
Water Level: N/A
Logged By: KT
Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
0	19-1892-1		0.0	0	FILL: reddish brown, brown, dark brown clayey silt with organic material, moist	
			0.0	2	Reddish brown to greyish brown CLAYEY SILT till, moist	
1				4		1
	19-1892-2		0.0	6	Reddish brown CLAYEY SILT till	
2				8		2
			0.0	10	Reddish brown CLAYEY SILT till to grey WEATHERED SHALE	
3				3	End of borehole at 2.90 m bgs	3
				12		
4				4		4
				14		
				16		
5				5		5
				18		
				20		
6				6		6
				22		
				24		
7				7		7
				26		
				28		
8				8		8
				30		
				32		
9				9		9
10				10		10

FISHER ENVIRONMENTAL LTD.

Log of Borehole: BH202
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 2 of 18
Project #: 19-9254
G.S.Elevation:

Location:

Drill Method: GeoProbe 7822DT
Drilling Date: 14 February 2019
Sample Method: Split Spoon
Dates: Water Level N/A
Borehole Diameter: 4"
Water Level: N/A
Logged By: KT
Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
0	19-1956-1		0.0	0	FILL: brown and black medium - fine sand, some gravel, trace rock fragments and wood pieces	
			0.0	2	Reddish brown CLAYEY SILT till, some sand, moist	
1				4		1
	19-1956-2		0.0	6	Reddish brown CLAYEY SILT till, moist to dry	
2				8		2
			0.0		Reddish brown CLAYEY SILT till to red WEATHERED SHALE	
3				10	End of borehole at 2.90 m bgs	3
4				12		4
5				14		5
6				16		6
7				18		7
8				20		8
9				22		9
10				24		10
				26		
				28		
				30		
				32		

FISHER ENVIRONMENTAL LTD.

Log of Borehole: BH203
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 3 of 18
Project #: 19-9254
G.S.Elevation:

Location:

Drill Method: Diedrich-50
Drilling Date: 1 February 2019
Sample Method: Split Spoon
Dates: Water Level N/A
Borehole Diameter: 4"
Water Level: N/A
Logged By: KT
Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
0	19-1840-1		0.0	0	Greyish brown CLAYEY SILT till	
			0.0	2 / 4 / 1	Reddish brown CLAYEY SILT till	
1	19-1840-2		0.0	6 / 2	Reddish brown CLAYEY SILT till, some gravel, moist	
2			0.0	8 / 10 / 3	Red WEATHERED SHALE	
3					End of borehole at 2.90 m bgs	
4				12 / 14 / 4		
5				16 / 18 / 5		
6				20 / 22 / 6		
7				24 / 7		
8				26 / 28 / 8		
9				30 / 9		
10				32 / 10		

FISHER ENVIRONMENTAL LTD.

Log of Borehole: BH204
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 4 of 18
Project #: 19-9254
G.S.Elevation:

Location:

Drill Method: GeoProbe 7822DT
Drilling Date: 14 February 2019
Sample Method: Split Spoon
Dates: Water Level N/A
Borehole Diameter: 4"
Water Level: N/A
Logged By: KT
Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
0	19-1956-3		0.0	0	FILL: dark brown clayey silt, trace sand, gravel, coal and wood pieces	
1			0.0	2 / 4 / 1	Brown SANDY SILT to greyish brown CLAYEY SILT till, wet to dry	1
2	19-1956-4		0.0	6 / 2	Reddish brown CLAYEY SILT till, some rock fragments	2
3			0.0	8 / 10 / 3	Reddish brown CLAYEY SILT till	3
4			0.0	12 / 4	Reddish brown CLAYEY SILT till to red WEATHERED SHALE	4
5				14 / 16 / 5	End of borehole at 3.66 m bgs	5
6				18 / 20 / 6		6
7				22 / 24 / 7		7
8				26 / 28 / 8		8
9				30 / 9		9
10				32 / 10		10

FISHER ENVIRONMENTAL LTD.

Log of Borehole: BH205
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 5 of 18
Project #: 19-9254
G.S.Elevation:

Location:

Drill Method:	Diedrich-50	Drilling Date:	7 February 2019
Sample Method:	Split Spoon	Dates: Water Level	N/A
Borehole Diameter:	4"	Water Level: N/A	Logged By: KT / Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
1	19-1892-3		0.0	2	FILL: grey and dark grey sandy silt, trace organics, brick pieces and coal	
			0.0	4 / 1	Greyish brown CLAYEY SILT till	
2	19-1892-4 19-1892-5 (Duplicate)		0.0	6 / 2	Reddish brown CLAYEY SILT till, some sand	
			0.0	8	Reddish brown CLAYEY SILT till, some rock fragments	
3				10 / 3	Reddish brown CLAYEY SILT till to red WEATHERED SHALE	
			0.0	12		
4				14 / 4	End of borehole at 3.66 m bgs	
5				16 / 5		
				18		
6				20 / 6		
				22		
7				24 / 7		
				26		
8				28 / 8		
9				30 / 9		
				32		
10				10		

FISHER ENVIRONMENTAL LTD.	Log of Borehole: BH206 2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario	Sheet: 6 of 18 Project #: 19-9254 G.S.Elevation:

Location:			
Drill Method:	Diedrich-50	Drilling Date:	1 February 2019
Sample Method:	Split Spoon	Dates: Water Level	N/A
Borehole Diameter:	4"	Water Level: N/A	Logged By: KT / Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
1	19-1840-3		0.0	2	FILL: brown, dark brown and reddish brown sandy silt, some gravel	
			0.0	4	Greyish brown CLAYEY SILT till, some sand	
2	19-1840-4		0.0	6	Reddish brown CLAYEY SILT till, some sand	
			0.0	8	Reddish brown CLAYEY SILT till, some gravel	
3				10	Spoon Refusal at 3.00 m bgs	
4				12		
				14		
5				16		
				18		
6				20		
				22		
7				24		
				26		
8				28		
				30		
9				32		
10				10		

FISHER ENVIRONMENTAL LTD.

Log of Borehole: BH207
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 7 of 18
Project #: 19-9254
G.S.Elevation:

Location:

Drill Method: Diedrich-50
Drilling Date: 1 February 2019
Sample Method: Split Spoon
Dates: Water Level N/A
Borehole Diameter: 4"
Water Level: N/A
Logged By: KT
Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
	19-1840-5		0.0		FILL: brown sandy silt and gravel	
			0.0		Greyish brown to reddish brown SILTY SAND to reddish brown CLAYEY SILT till	
	19-1840-6		0.0		Reddish brown and grey CLAYEY SILT till	
			0.0		Reddish brown CLAYEY SILT till, some sand	
					Spoon Refusal at 3.00 m bgs	

FISHER ENVIRONMENTAL LTD.

Log of Borehole: BH208
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 8 of 18
Project #: 19-9254
G.S.Elevation:

Location:

Drill Method:	Diedrich-50	Drilling Date:	1 February 2019
Sample Method:	Split Spoon	Dates: Water Level	N/A
Borehole Diameter:	4"	Water Level: N/A	Logged By: KT / Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
				2	Granular material, gravel and rock	
1	19-1840-7		0.0	4 / 1	Grey and brown CLAYEY SILT till	1
2	19-1840-8		0.0	6 / 2	Reddish brown CLAYEY SILT till	2
			0.0	8		
3				10 / 3		3
			0.0			
				12 / 4	Red WEATHERED SHALE	
					End of borehole at 3.66 m bgs	
4				14 / 16 / 5		4 / 5
5				18 / 6		
6				20 / 22 / 7		6 / 7
7				24 / 26 / 8		
8				28 / 9		8 / 9
9				30 / 32 / 10		
10						10

FISHER ENVIRONMENTAL LTD.

Log of Borehole: BH209
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 9 of 18
Project #: 19-9254
G.S.Elevation:

Location:

Drill Method: Diedrich-50
Drilling Date: 1 February 2019
Sample Method: Split Spoon
Dates: Water Level N/A
Borehole Diameter: 4"
Water Level: N/A
Logged By: KT
Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
1	19-1840-9		0.0	2	FILL: brown sandy silt, some gravel	
			0.0	4 / 1	Greyish brown to reddish brown CLAYEY SILT till, some sand, trace rock	
2	19-1840-10		0.0	6 / 2	Reddish brown CLAYEY SILT till, some sand, trace rock	
			0.0	8	Reddish brown SANDY SILT till	
3				10 / 3	Spoon Refusal at 3.00 m bgs	
4				12 / 4		
				14		
5				16 / 5		
				18		
6				20 / 6		
				22		
7				24 / 7		
				26		
8				28 / 8		
9				30 / 9		
				32		
10				10		

FISHER ENVIRONMENTAL LTD.	Log of Borehole: BH210 2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario	Sheet: 10 of 18 Project #: 19-9254 G.S.Elevation:

Location:			
Drill Method:	GeoProbe 7822DT	Drilling Date:	14 February 2019
Sample Method:	Split Spoon	Dates: Water Level	N/A
Borehole Diameter:	4"	Water Level: N/A	Logged By: KT / Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
1	19-1956-5		0.0	2	FILL: brown clayey silt, some sand, moist	
			0.0	4 / 1	Greyish brown CLAYEY SILT till, some sand, moist	
2	19-1956-6 19-1956-7 (Duplicate)		0.0	6 / 2	Reddish brown CLAYEY SILT till	
			0.0	8		
3			0.0	10 / 3	Reddish brown CLAYEY SILT till to red WEATHERED SHALE	
				12	End of borehole at 3.66 m bgs	
4				14 / 4		
5				16 / 5		
				18		
6				20 / 6		
				22		
7				24 / 7		
				26		
8				28 / 8		
9				30 / 9		
				32		
10				10		

FISHER ENVIRONMENTAL LTD.

Log of Borehole: MW211
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 11 of 18
Project #: 19-9254
G.S.Elevation: 81.55 m asl

Location:

Drill Method:	Diedrich-50	Drilling Date:	1 February 2019
Sample Method:	Split Spoon	Dates: Water Level	21 February 2019
Borehole Diameter:	4"	Water Level: 1.86 m bgs	Logged By: KT / Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
0					TOPSOIL	
1	19-1840-11		0.0	2	FILL: topsoil, dark brown to brown sandy silt	
			0.0	4	Grey and brown to greyish brown CLAYEY SILT till	
2	19-1840-12 19-1840-13 (Duplicate)		0.0	6	Reddish brown SANDY SILT till to CLAYEY SILT till	
			0.0	8	Greyish brown and reddish brown CLAYEY SILT till	
3				10	Spoon Refusal at 3.00 m bgs	2" blank PVC; 1.86; 2" Slotted Pipe; Silica Sand; Bentonite Pellets; 2.84 m bgs
4				12		
5				14		
6				16		
7				18		
8				20		
9				22		
10				24		
				26		
				28		
				30		
				32		

FISHER ENVIRONMENTAL LTD.

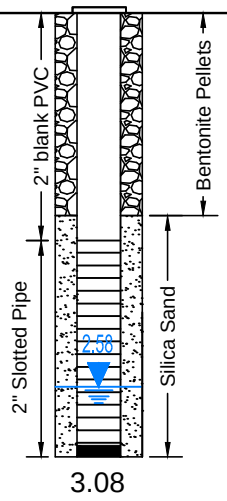
Log of Borehole: MW212
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 12 of 18
Project #: 19-9254
G.S.Elevation: 81.87 m asl

Location:

Drill Method:	GeoProbe 7822 DT	Drilling Date:	14 February 2019
Sample Method:	Split Spoon	Dates: Water Level	21 February 2019
Borehole Diameter:	4"	Water Level: 2.58 m bgs	Logged By: KT / Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
0	19-1956-8		0.0		FILL: grey medium-fine sand to dark brown clayey silt, some sand	
			0.0	2 / 4	Brown CLAYEY SILT, some SAND, moist	
1	19-1956-9		0.0	6	Reddish brown CLAYEY SILT till, trace rock fragments	
			0.0	8	Reddish brown CLAYEY SILT till	
2				10		
			0.0	12	Reddish brown CLAYEY SILT till to red WEATHERED SHALE	
3				14	End of borehole at 3.66 m bgs	
4				16		
5				18		
6				20		
7				22		
8				24		
9				26		
10				28		
				30		
				32		



FISHER ENVIRONMENTAL LTD.

Log of Borehole: MW213
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 13 of 18
Project #: 19-9254
G.S.Elevation: 81.70 m asl

Location:

Drill Method:	GeoProbe 420 M	Drilling Date:	21 February 2019
Sample Method:	Direct Push	Dates: Water Level	6 March 2019
Borehole Diameter:	2"	Water Level: 1.46 m bgs	Logged By: KT / Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					TOPSOIL	
0 to 1	19-1993-1		0.0	0 to 2	FILL: topsoil black and brown medium-fine sand, moist to dry	
1 to 2	19-1993-2		0.0	2 to 6	Greyish brown to reddish brown CLAYEY SILT till	1" blank PVC; 1" Slotted Pipe; 1.46; 1.59; Silica Sand; Bentonite Pellets
					End of borehole at 1.60 m bgs	

FISHER ENVIRONMENTAL LTD.

Log of Borehole: MW214
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 14 of 18
Project #: 19-9254
G.S.Elevation: 82.32 m asl

Location:

Drill Method: Diedrich-50
Drilling Date: 14 February 2019
Sample Method: Split Spoon
Dates: Water Level 21 February 2019
Borehole Diameter: 4"
Water Level: 1.88 m bgs
Logged By: KT
Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
0–1	19-1956-10		0.0	0–4 / 0–1	FILL: brown and black clayey silt, trace glass, wood pieces, and rock fragments	2" blank PVC
			0.0		Reddish brown CLAYEY SILT till, some SAND	
1–2	19-1956-11		0.0	4–10 / 1–3	Reddish brown CLAYEY SILT till	2" Slotted Pipe; Silica Sand; Bentonite Pellets; 1.88; 2.96
			0.0			
2–3			0.0	10–12 / 3–4	Reddish brown CLAYEY SILT till to red WEATHERED SHALE	
3–10				12–32 / 4–10	End of borehole at 3.66 m bgs	

FISHER ENVIRONMENTAL LTD.

Log of Borehole: MW215
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 15 of 18
Project #: 19-9254
G.S.Elevation: 81.53 m asl

Location:

Drill Method:	Geo-Probe 420M	Drilling Date:	6 February 2019
Sample Method:	Direct Push	Dates: Water Level	21 February 2019
Borehole Diameter:	2"	Water Level: Dry	Logged By: KT / Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					CONCRETE 4.5"	1" blank PVC
1				2	Granular material, gravel and rock	
	19-1892-6		0.0	4	Greyish brown to reddish brown CLAYEY SILT till	1" Slotted Pipe
2	19-1892-7		0.0	6	Reddish brown CLAYEY SILT till	Silica Sand
				8	End of borehole at 2.28 m bgs	Bentonite Pellets
3				10		2.20
4				12		
				14		
5				16		
				18		
6				20		
				22		
7				24		
				26		
8				28		
				30		
9				32		
10				10		

FISHER ENVIRONMENTAL LTD.

Log of Borehole: MW216
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 16 of 18
Project #: 19-9254
G.S.Elevation: 80.56 m asl

Location:

Drill Method:	Pionjar	Drilling Date:	1 March 2019
Sample Method:	Direct Push	Dates: Water Level	4 March 2019
Borehole Diameter:	2"	Water Level: 0.05 m bgs	Logged By: KT / Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					CONCRETE 2"	0.05
	19-2055-1 19-2055-2 (Duplicate)		0.0		Reddish brown CLAYEY SILT till, slightly moist, refusal	1" Slotted Pipe; 0.33; Silica Sand
					Refusal at 0.33 m bgs	

0 1 2 3 4 5 6 7 8 9 10

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32

0 1 2 3 4 5 6 7 8 9 10

FISHER ENVIRONMENTAL LTD.

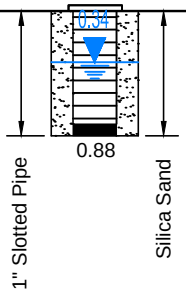
Log of Borehole: MW217
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 17 of 18
Project #: 19-9254
G.S.Elevation: 79.70 m asl

Location:

Drill Method:	GeoProbe 420M	Drilling Date:	4 February 2019
Sample Method:	Direct Push	Dates: Water Level	4 March 2019
Borehole Diameter:	2"	Water Level: 0.34 m bgs	Logged By: KT / Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					CONCRETE 10"	
					Granular material, gravel and rock	
	19-1892-8		0.0		Reddish brown CLAYEY SILT till, moist to dry	
					Reddish brown CLAYEY SILT till to red WEATHERED SHALE	
					End of borehole at 1.01 m bgs	



FISHER ENVIRONMENTAL LTD.

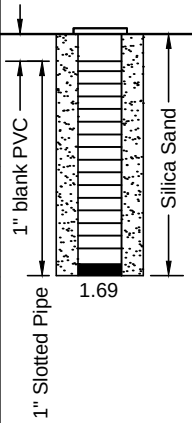
Log of Borehole: MW218
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 18 of 18
Project #: 19-9254
G.S.Elevation: 81.75 m asl

Location:

Drill Method:	GeoProbe 420M	Drilling Date:	8 February 2019
Sample Method:	Direct Push	Dates: Water Level	21 February 2019
Borehole Diameter:	2"	Water Level: DRY	Logged By: KT / Checked By: MV

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					½" HARDWOOD, ¾" WOOD SUBFLOOR, 6" CONCRETE	
					Granular material, gravel and rock	
1	19-1916-1		0.0	2 / 4 / 1		
	19-1916-2				Reddish brown CLAYEY SILT till	
2				6 / 2		
					End of borehole at 1.68 m bgs	
3				8 / 10 / 3		
4				12 / 4		
5				14 / 16 / 5		
6				18 / 20 / 6		
7				22 / 24 / 7		
8				26 / 28 / 8		
9				30 / 9		
10				32 / 10		



FISHER ENVIRONMENTAL LTD.

Log of Borehole: BH219
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 1 of 7
Project #: 19-9418
G.S.Elevation:

Location:

Drill Method:	Diedrich 50	Drilling Date:	30 April 2019
Sample Method:	Split Spoon	Dates: Water Level	N/A
Borehole Diameter:	4"	Water Level: N/A	Logged By: AH / Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
	19-2452-1		0.0		FILL: grey medium-fine sand to grey silty clay	
1	19-2463-1		0.0	2, 4, 1	Brown CLAYEY SILT till, moist	1
2			0.0	6, 2	Reddish brown CLAYEY SILT till, moist	2
				8	End of borehole at 2.13 m bgs	
3				10, 3		3
4				12, 4		4
5				14, 16, 5		5
6				18, 20, 6		6
7				22, 24, 7		7
8				26, 8		8
9				28, 30, 9		9
10				32, 10		10

FISHER ENVIRONMENTAL LTD.	Log of Borehole: BH220 2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario	Sheet: 2 of 7 Project #: 19-9418 G.S.Elevation:

Location:			
Drill Method:	Diedrich 50	Drilling Date:	30 April 2019
Sample Method:	Split Spoon	Dates: Water Level	N/A
Borehole Diameter:	4"	Water Level: N/A	Logged By: AH / Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
	19-2452-2		0.0	2	FILL: grey medium-fine sand to reddish brown clayey silt to brown silty sand, moist	
1	19-2463-2		0.0	4 / 1	Brown CLAYEY SILT till with wet medium-fine SAND seam	1
			0.0	6 / 2	Reddish brown CLAYEY SILT till, moist	
2				8	End of borehole at 2.13 m bgs	2
3				10 / 3		3
4				12 / 4		4
5				14 / 16 / 5		5
6				18 / 20 / 6		6
7				22 / 24 / 7		7
8				26 / 8		8
9				28 / 30 / 9		9
10				32 / 10		10

FISHER ENVIRONMENTAL LTD.

Log of Borehole: BH221
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 3 of 7
Project #: 19-9418
G.S.Elevation:

Location:

Drill Method:	Diedrich 50	Drilling Date:	30 April 2019
Sample Method:	Split Spoon	Dates: Water Level	N/A
Borehole Diameter:	4"	Water Level: N/A	Logged By: AH / Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
0	19-2452-3		0.0	0	FILL: grey medium-fine sand to dark brown sandy silt, organic inclusions	
1	19-2463-3		0.0	4 / 1	Brown CLAYEY SILT till, moist	1
2			0.0	6 / 2	Reddish brown CLAYEY SILT till, moist	2
				8	End of borehole at 2.13 m bgs	
3				10 / 3		3
4				12 / 4		4
5				16 / 5		5
6				18 / 20 / 6		6
7				22 / 24 / 7		7
8				26 / 8		8
9				28 / 30 / 9		9
10				32 / 10		10

FISHER ENVIRONMENTAL LTD.

Log of Borehole: BH222
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 4 of 7
Project #: 19-9418
G.S.Elevation:

Location:

Drill Method: Diedrich 50
Drilling Date: 30 April 2019
Sample Method: Split Spoon
Dates: Water Level N/A
Borehole Diameter: 4"
Water Level: N/A
Logged By: AH
Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
0	19-2452-4		0.0	0	FILL: grey medium-fine sand to dark brown sandy silt, organic inclusions, moist	
1	19-2463-4		0.0	2 / 4 / 1	Brown CLAYEY SILT till, moist	1
2			0.0	6 / 2	Reddish brown CLAYEY SILT till, moist	2
				8	End of borehole at 2.13 m bgs	
3				10 / 3		3
4				12 / 4		4
5				14 / 16 / 5		5
6				18 / 20 / 6		6
7				22 / 24 / 7		7
8				26 / 8		8
9				28 / 30 / 9		9
10				32 / 10		10

FISHER ENVIRONMENTAL LTD.

Log of Borehole: BH223
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 5 of 7
Project #: 19-9418
G.S.Elevation:

Location:

Drill Method: Diedrich 50
Drilling Date: 30 April 2019
Sample Method: Split Spoon
Dates: Water Level N/A
Borehole Diameter: 4"
Water Level: N/A
Logged By: AH
Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					ASPHALT	
0	19-2452-5 19-2452-6		0.0	0	FILL: brown medium-fine sand, moist	
1	19-2463-5 19-2463-6		0.0	2	Brown CLAYEY SILT till, moist	
2			0.0	4	Reddish brown CLAYEY SILT till, moist	
				6	End of borehole at 2.13 m bgs	
3				8		
4				10		
5				12		
6				14		
7				16		
8				18		
9				20		
10				22		
				24		
				26		
				28		
				30		
				32		

FISHER ENVIRONMENTAL LTD.	Log of Borehole: BH224 2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario	Sheet: 6 of 7 Project #: 19-9418 G.S.Elevation:

Location:

Drill Method:	GeoProbe 420M	Drilling Date:	29 April 2019
Sample Method:	Direct Push	Dates: Water Level	N/A
Borehole Diameter:	2"	Water Level: N/A	Logged By: AH / Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					CONCRETE 10"	
1	19-2452-7		0.0	2	Reddish brown CLAYEY SILT till, moist	
	19-2463-7		0.0	4		
					End of borehole at 1.22 m bgs	
2				6		
				8		
3				10		
				12		
4				14		
				16		
5				18		
				20		
6				22		
				24		
7				26		
				28		
8				30		
				32		
9						
10				10		

FISHER ENVIRONMENTAL LTD.

Log of Borehole: BH225
2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington, Ontario

Sheet: 7 of 7
Project #: 19-9418
G.S.Elevation:

Location:

Drill Method:	GeoProbe 420M	Drilling Date:	29 April 2019
Sample Method:	Direct Push	Dates: Water Level	N/A
Borehole Diameter:	2"	Water Level: N/A	Logged By: AH / Checked By: AA

DEPTH (meters)	Sample No.	Blow Counts	H.C.Vapour (ppm)	(feet) DEPTH (meters)	Materials Description	Monitoring Well Construction & Water Level (m)
					CONCRETE 10"	
1	19-2452-8		0.0	2 / 4	Reddish brown CLAYEY SILT till, moist	
	19-2463-8		0.0			
					End of borehole at 1.22 m bgs	
2				6 / 8		
3				10 / 12		
4				14 / 16		
5				18 / 20		
6				22 / 24		
7				26 / 28		
8				30 / 32		
9						
10						

APPENDIX C – CERTIFICATES OF ANALYSIS

FISHER ENVIRONMENTAL LABORATORIES

FULL RANGE ANALYTICAL SERVICES • SOIL/WATER/AIR TESTING • ENVIRONMENTAL COMPLIANCE PACKAGES • 24 HOUR EMERGENCY RESPONSE • CALA ACCREDITED

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Client: Core Development Group Ltd.
Address: 287 MacPherson Ave, #101
Toronto, ON
M3V 1A4
Tel.: (416) 966-2673
Email: sarah@coredevelopment.ca
Attn.: Sarah Chu

F.E. Job #: 17-7469
Project Name: Phase Two ESA
Project #: FE-P-17-8460
Date Sampled: 31-Oct-17, 1-Nov-17
Date Received: 2-Nov-17
Date Reported: 13-Nov-17
Location: 2093, 2097, 2101 Old Lakeshore & 2096, 2100 Lakeshore Rd Burlington, ON

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Soil	14	3-Nov-17	6-Nov-17	Metals F-18	SM 3120-B
VOCs	Soil	7	3-Nov-17	7-Nov-17	VOCs F-6	SM 6200-B
PHCs (F1 & BTEX)	Soil	14	3-Nov-17	7-Nov-17	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Soil	14	6-Nov-17	7-Nov-17	PHCs F-7	CCME CWS
PAHs	Soil	14	8-Nov-17	9-Nov-17	PAHs F-4	SM 6410-B
PCBs	Soil	8	7-Nov-17	7-Nov-17	PCBs F-5	SM 6630C
pH	Soil	3	13-Nov-17	13-Nov-17	pH-EC-SAR F-16	SW-846, 9045D
Moisture Content	Soil	14	N/A	9-Nov-17	Support Procedures F-99	Carter (1993)

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:

Roger Lin, Ph. D., C. Chem.
Laboratory Manager

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
Ronggen (Roger) Lin
CHEMIST

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-1*** MW101 3.80-4.40m	***17-7469-2*** MW102 0.00-0.60m	***17-7469-3*** MW102 (Dupe) 0.00-0.60m	***17-7469-4*** MW102 3.65-3.95m	**Soil Standards [1]** Table 2 R/P/I	**Soil Standards [1]** Table 3 R/P/I
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	7.5	7.5
Arsenic	3.8	2.7	3.3	2.9	18	18
Barium	138	63	70	108	390	390
Beryllium	<2	<2	<2	<2	(5) 4	(5) 4
Boron	13	<5	<5	13	120	120
Cadmium	<1	<1	<1	<1	1.2	1.2
Chromium	16	11	12	16	160	160
Cobalt	8.4	5.4	5.8	7.7	22	22
Copper	15	15	16	11	(180) 140	(180) 140
Lead	11	52	60	10	120	120
Molybdenum	<2	<2	<2	<2	6.9	6.9
Nickel	18	10	11	17	(130) 100	(130) 100
Selenium	<1	<1	<1	1.3	2.4	2.4
Silver	<0.5	<0.5	<0.5	<0.5	(25) 20	(25) 20
Thallium	<1	<1	<1	<1	1	1
Uranium	<1	<1	<1	<1	23	23
Vanadium	20	19	21	20	86	86
Zinc	54	91	105	59	340	340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-5*** MW103 0.75-1.35m	***17-7469-6*** MW103 3.80-4.40m	***17-7469-7*** MW104 0.45-1.05m	***17-7469-8*** MW104 3.00-3.60m	**Soil Standards [1]** Table 2 R/P/I	**Soil Standards [1]** Table 3 R/P/I
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	7.5	7.5
Arsenic	4.3	2.9	1.8	2.0	18	18
Barium	125	102	30	85	390	390
Beryllium	<2	<2	<2	<2	(5) 4	(5) 4
Boron	5.9	14	<5	14	120	120
Cadmium	<1	<1	<1	<1	1.2	1.2
Chromium	24	16	9.8	15	160	160
Cobalt	9.9	8.7	4.8	8.3	22	22
Copper	32	11	13	9.7	(180) 140	(180) 140
Lead	18	12	30	11	120	120
Molybdenum	<2	<2	<2	<2	6.9	6.9
Nickel	23	20	8.2	18	(130) 100	(130) 100
Selenium	<1	<1	<1	<1	2.4	2.4
Silver	<0.5	<0.5	<0.5	<0.5	(25) 20	(25) 20
Thallium	<1	<1	<1	<1	1	1
Uranium	1.1	<1	<1	<1	23	23
Vanadium	33	21	16	19	86	86
Zinc	83	63	64	53	340	340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-9*** MW105 0.75-1.35m	***17-7469-10*** MW106 3.00-3.60m	***17-7469-11*** MW107 0.00-0.60m	***17-7469-12*** MW108 3.00-3.60m	**Soil Standards [1]** Table 2 R/P/I	**Soil Standards [1]** Table 3 R/P/I
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	7.5	7.5
Arsenic	3.0	2.6	1.7	3.9	18	18
Barium	109	63	30	100	390	390
Beryllium	<2	<2	<2	<2	(5) 4	(5) 4
Boron	7.4	15	<5	9.0	120	120
Cadmium	<1	<1	<1	<1	1.2	1.2
Chromium	15	18	9.8	17	160	160
Cobalt	7.4	10	3.2	9.1	22	22
Copper	15	6.4	8.7	21	(180) 140	(180) 140
Lead	<10	13	19	10	120	120
Molybdenum	<2	<2	<2	<2	6.9	6.9
Nickel	19	23	6.2	21	(130) 100	(130) 100
Selenium	<1	<1	<1	<1	2.4	2.4
Silver	<0.5	<0.5	<0.5	<0.5	(25) 20	(25) 20
Thallium	<1	<1	<1	<1	1	1
Uranium	<1	<1	<1	<1	23	23
Vanadium	22	25	19	21	86	86
Zinc	49	64	<30	56	340	340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-13*** MW108 (Dupe) 3.00-3.60m	***17-7469-14*** MW109 0.60-1.20m			**Soil Standards [1]** Table 2 R/P/I	**Soil Standards [1]** Table 3 R/P/I
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1			7.5	7.5
Arsenic	4.0	2.1			18	18
Barium	99	106			390	390
Beryllium	<2	<2			(5) 4	(5) 4
Boron	10	<5			120	120
Cadmium	<1	<1			1.2	1.2
Chromium	17	15			160	160
Cobalt	9.6	7.6			22	22
Copper	21	16			(180) 140	(180) 140
Lead	11	28			120	120
Molybdenum	<2	<2			6.9	6.9
Nickel	20	18			(130) 100	(130) 100
Selenium	<1	1.3			2.4	2.4
Silver	<0.5	<0.5			(25) 20	(25) 20
Thallium	<1	<1			1	1
Uranium	<1	1.1			23	23
Vanadium	23	22			86	86
Zinc	54	45			340	340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
Metals in Soil						
Antimony	<1	1	94	80-120	97	70-130
Arsenic	<1	1	92	80-120	78	70-130
Barium	<5	5	80	80-120	106	70-130
Beryllium	<2	2	111	80-120	87	70-130
Boron	<5	5	113	80-120	85	70-130
Cadmium	<1	1	99	80-120	94	70-130
Chromium	<5	5	92	80-120	82	70-130
Cobalt	<2	2	96	80-120	72	70-130
Copper	<5	5	95	80-120	68	70-130
Lead	<10	10	97	80-120	100	70-130
Molybdenum	<2	2	96	80-120	99	70-130
Nickel	<5	5	100	80-120	70	70-130
Selenium	<1	1	98	80-120	87	70-130
Silver	<0.5	0.5	98	80-120	83	70-130
Thallium	<1	1	106	80-120	129	70-130
Uranium	<1	1	114	80-120	114	70-130
Vanadium	<10	10	96	80-120	82	70-130
Zinc	<30	30	94	80-120	87	70-130

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Soil						
Antimony	0.0	0-30				
Arsenic	16	0-30				
Barium	6.8	0-30				
Beryllium	0.0	0-30				
Boron	0.0	0-30				
Cadmium	0.0	0-30				
Chromium	2.0	0-30				
Cobalt	3.8	0-30				
Copper	3.2	0-30				
Lead	0.0	0-30				
Molybdenum	0.0	0-30				
Nickel	2.3	0-30				
Selenium	0.0	0-30				
Silver	0.0	0-30				
Thallium	0.0	0-30				
Uranium	0.0	0-30				
Vanadium	0.4	0-30				
Zinc	2.4	0-30				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-1*** MW101 3.80-4.40m	***17-7469-4*** MW102 3.65-3.95m	***17-7469-6*** MW103 3.80-4.40m	***17-7469-8*** MW104 3.00-3.60m	**Soil Standards [1]** Table 2 R/P/I	Table 3 R/P/I
	Concentration (µg/g)					
VOCs in Soil						
Acetone	<0.5	<0.5	<0.5	<0.5	(28) 16	(28) 16
Benzene	<0.02	<0.02	<0.02	<0.02	(0.17) 0.21	(0.17) 0.21
Bromodichloromethane	<0.05	<0.05	<0.05	<0.05	(1.9) 1.5	13
Bromoform	<0.05	<0.05	<0.05	<0.05	(0.26) 0.27	(0.26) 0.27
Bromomethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Carbon Tetrachloride	<0.05	<0.05	<0.05	<0.05	(0.12) 0.05	(0.12) 0.05
Chlorobenzene	<0.05	<0.05	<0.05	<0.05	(2.7) 2.4	(2.7) 2.4
Chloroform	<0.05	<0.05	<0.05	<0.05	(0.18) 0.05	(0.18) 0.05
Dibromochloromethane	<0.05	<0.05	<0.05	<0.05	(2.9) 2.3	9.4
1,2-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	(1.7) 1.2	(4.3) 3.4
1,3-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	(6) 4.8	(6) 4.8
1,4-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	(0.097) 0.083	(0.097) 0.083
Dichlordifluoromethane	<0.05	<0.05	<0.05	<0.05	(25) 16	(25) 16
1,1-Dichloroethane	<0.05	<0.05	<0.05	<0.05	(0.6) 0.47	(11) 3.5
1,2-Dichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
1,1-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	0.05
c-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	(2.5) 1.9	(30) 3.4
t-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	(0.75) 0.084	(0.75) 0.084
1,2-Dichloropropane	<0.05	<0.05	<0.05	<0.05	(0.085) 0.05	(0.085) 0.05
1,3-Dichloropropene (cis-+trans-)	<0.05	<0.05	<0.05	<0.05	(0.081) 0.05	(0.083) 0.05
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	(1.6) 1.1	(15) 2
Ethylene Dibromide	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Hexane (n)	<0.05	<0.05	<0.05	<0.05	(34) 2.8	(34) 2.8
Methyl Ethyl Ketone	<0.5	<0.5	<0.5	<0.5	(44) 16	(44) 16
Methyl Isobutyl Ketone	<0.5	<0.5	<0.5	<0.5	(4.3) 1.7	(4.3) 1.7
Methyl tert-butyl Ether	<0.05	<0.05	<0.05	<0.05	(1.4) 0.75	(1.4) 0.75
Methylene Chloride	<0.05	<0.05	<0.05	<0.05	(0.96) 0.1	(0.96) 0.1
Styrene	<0.05	<0.05	<0.05	<0.05	(2.2) 0.7	(2.2) 0.7
1,1,1,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	(0.05) 0.058	(0.05) 0.058
1,1,2,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Tetrachloroethylene	<0.05	<0.05	<0.05	<0.05	(2.3) 0.28	(2.3) 0.28
Toluene	<0.2	<0.2	<0.2	<0.2	(6) 2.3	(6) 2.3
1,1,1-Trichloroethane	<0.05	<0.05	<0.05	<0.05	(3.4) 0.38	(3.4) 0.38
1,1,2-Trichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Trichloroethylene	<0.05	<0.05	<0.05	<0.05	(0.52) 0.061	(0.52) 0.061
Trichlorofluoromethane	<0.05	<0.05	<0.05	<0.05	(5.8) 4	(5.8) 4
Vinyl Chloride	<0.02	<0.02	<0.02	<0.02	(0.022) 0.02	(0.022) 0.02
Xylenes	<0.05	<0.05	<0.05	<0.05	(25) 3.1	(25) 3.1
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	124	107	60	69	50-140	
Toluene-d8	97	107	86	89	50-140	
4-Bromofluorobenzene	67	67	73	82	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-10*** MW106 3.00-3.60m	***17-7469-12*** MW108 3.00-3.60m	***17-7469-13*** MW108 (Dupe) 3.00-3.60m		**Soil Standards [1]** Table 2 R/P/I	Table 3 R/P/I
	Concentration (µg/g)					
VOCs in Soil						
Acetone	<0.5	<0.5	<0.5		(28) 16	(28) 16
Benzene	<0.02	<0.02	<0.02		(0.17) 0.21	(0.17) 0.21
Bromodichloromethane	<0.05	<0.05	<0.05		(1.9) 1.5	13
Bromoform	<0.05	<0.05	<0.05		(0.26) 0.27	(0.26) 0.27
Bromomethane	<0.05	<0.05	<0.05		0.05	0.05
Carbon Tetrachloride	<0.05	<0.05	<0.05		(0.12) 0.05	(0.12) 0.05
Chlorobenzene	<0.05	<0.05	<0.05		(2.7) 2.4	(2.7) 2.4
Chloroform	<0.05	<0.05	<0.05		(0.18) 0.05	(0.18) 0.05
Dibromochloromethane	<0.05	<0.05	<0.05		(2.9) 2.3	9.4
1,2-Dichlorobenzene	<0.05	<0.05	<0.05		(1.7) 1.2	(4.3) 3.4
1,3-Dichlorobenzene	<0.05	<0.05	<0.05		(6) 4.8	(6) 4.8
1,4-Dichlorobenzene	<0.05	<0.05	<0.05		(0.097) 0.083	(0.097) 0.083
Dichlordifluoromethane	<0.05	<0.05	<0.05		(25) 16	(25) 16
1,1-Dichloroethane	<0.05	<0.05	<0.05		(0.6) 0.47	(11) 3.5
1,2-Dichloroethane	<0.05	<0.05	<0.05		0.05	0.05
1,1-Dichloroethylene	<0.05	<0.05	<0.05		0.05	0.05
c-1,2-Dichloroethylene	<0.05	<0.05	<0.05		(2.5) 1.9	(30) 3.4
t-1,2-Dichloroethylene	<0.05	<0.05	<0.05		(0.75) 0.084	(0.75) 0.084
1,2-Dichloropropane	<0.05	<0.05	<0.05		(0.085) 0.05	(0.085) 0.05
1,3-Dichloropropene (cis-+trans-)	<0.05	<0.05	<0.05		(0.081) 0.05	(0.083) 0.05
Ethylbenzene	<0.05	<0.05	<0.05		(1.6) 1.1	(15) 2
Ethylene Dibromide	<0.05	<0.05	<0.05		0.05	0.05
Hexane (n)	<0.05	<0.05	<0.05		(34) 2.8	(34) 2.8
Methyl Ethyl Ketone	<0.5	<0.5	<0.5		(44) 16	(44) 16
Methyl Isobutyl Ketone	<0.5	<0.5	<0.5		(4.3) 1.7	(4.3) 1.7
Methyl tert-butyl Ether	<0.05	<0.05	<0.05		(1.4) 0.75	(1.4) 0.75
Methylene Chloride	<0.05	<0.05	<0.05		(0.96) 0.1	(0.96) 0.1
Styrene	<0.05	<0.05	<0.05		(2.2) 0.7	(2.2) 0.7
1,1,1,2-Tetrachloroethane	<0.05	<0.05	<0.05		(0.05) 0.058	(0.05) 0.058
1,1,2,2-Tetrachloroethane	<0.05	<0.05	<0.05		0.05	0.05
Tetrachloroethylene	<0.05	<0.05	<0.05		(2.3) 0.28	(2.3) 0.28
Toluene	<0.2	<0.2	<0.2		(6) 2.3	(6) 2.3
1,1,1-Trichloroethane	<0.05	<0.05	<0.05		(3.4) 0.38	(3.4) 0.38
1,1,2-Trichloroethane	<0.05	<0.05	<0.05		0.05	0.05
Trichloroethylene	<0.05	<0.05	<0.05		(0.52) 0.061	(0.52) 0.061
Trichlorofluoromethane	<0.05	<0.05	<0.05		(5.8) 4	(5.8) 4
Vinyl Chloride	<0.02	<0.02	<0.02		(0.022) 0.02	(0.022) 0.02
Xylenes	<0.05	<0.05	<0.05		(25) 3.1	(25) 3.1
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	65	68	89		50-140	
Toluene-d8	82	81	99		50-140	
4-Bromofluorobenzene	82	75	67		50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
VOCs in Soil						
Acetone	<0.5	0.5	110	50-140	62	50-140
Benzene	<0.02	0.02	73	60-130	79	50-140
Bromodichloromethane	<0.05	0.05	107	50-140	75	50-140
Bromoform	<0.05	0.05	96	60-130	93	50-140
Bromomethane	<0.05	0.05	89	50-140	107	50-140
Carbon Tetrachloride	<0.05	0.05	105	60-130	104	50-140
Chlorobenzene	<0.05	0.05	105	60-130	108	50-140
Chloroform	<0.05	0.05	72	60-130	97	50-140
Dibromochloromethane	<0.05	0.05	107	60-130	98	50-140
1,2-Dichlorobenzene	<0.05	0.05	109	60-130	101	50-140
1,3-Dichlorobenzene	<0.05	0.05	119	60-130	102	50-140
1,4-Dichlorobenzene	<0.05	0.05	119	60-130	97	50-140
Dichlordifluoromethane	<0.05	0.05	72	50-140	89	50-140
1,1-Dichloroethane	<0.05	0.05	79	60-130	98	50-140
1,2-Dichloroethane	<0.05	0.05	78	60-130	73	50-140
1,1-Dichloroethylene	<0.05	0.05	77	60-130	102	50-140
c-1,2-Dichloroethylene	<0.05	0.05	79	60-130	97	50-140
t-1,2-Dichloroethylene	<0.05	0.05	75	60-130	92	50-140
1,2-Dichloropropane	<0.05	0.05	106	60-130	75	50-140
1,3-Dichloropropene (cis-+trans-)	<0.05	0.05	105	60-130	78	50-140
Ethylbenzene	<0.05	0.05	94	60-130	98	50-140
Ethylene Dibromide	<0.05	0.05	99	60-130	123	50-140
Hexane (n)	<0.05	0.05	82	60-130	93	50-140
Methyl Ethyl Ketone	<0.5	0.5	85	50-140	133	50-140
Methyl Isobutyl Ketone	<0.5	0.5	120	50-140	114	50-140
Methyl tert-butyl Ether	<0.05	0.05	74	60-130	83	50-140
Methylene Chloride	<0.05	0.05	98	60-130	75	50-140
Styrene	<0.05	0.05	123	60-130	80	50-140
1,1,1,2-Tetrachloroethane	<0.05	0.05	91	60-130	114	50-140
1,1,2,2-Tetrachloroethane	<0.05	0.05	108	60-130	116	50-140
Tetrachloroethylene	<0.05	0.05	79	60-130	78	50-140
Toluene	<0.2	0.2	82	60-130	76	50-140
1,1,1-Trichloroethane	<0.05	0.05	71	60-130	112	50-140
1,1,2-Trichloroethane	<0.05	0.05	78	60-130	77	50-140
Trichloroethylene	<0.05	0.05	101	60-130	74	50-140
Trichlorofluoromethane	<0.05	0.05	75	50-140	70	50-140
Vinyl Chloride	<0.02	0.02	102	50-140	84	50-140
Xylenes	<0.05	0.05	100	60-130	102	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
1,2-Dichloroethane-d4	105	60-140	76	60-140	73	60-140
Toluene-d8	103	60-140	74	60-140	94	60-140
4-Bromofluorobenzene	109	60-140	72	60-140	78	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
VOCs in Soil						
Acetone	0.0	0-50				
Benzene	0.0	0-50				
Bromodichloromethane	0.0	0-50				
Bromoform	0.0	0-50				
Bromomethane	0.0	0-50				
Carbon Tetrachloride	0.0	0-50				
Chlorobenzene	0.0	0-50				
Chloroform	0.0	0-50				
Dibromochloromethane	0.0	0-50				
1,2-Dichlorobenzene	0.0	0-50				
1,3-Dichlorobenzene	0.0	0-50				
1,4-Dichlorobenzene	0.0	0-50				
Dichlordifluoromethane	0.0	0-50				
1,1-Dichloroethane	0.0	0-50				
1,2-Dichloroethane	0.0	0-50				
1,1-Dichloroethylene	0.0	0-50				
c-1,2-Dichloroethylene	0.0	0-50				
t-1,2-Dichloroethylene	0.0	0-50				
1,2-Dichloropropane	0.0	0-50				
1,3-Dichloropropene (cis-+trans-)	0.0	0-50				
Ethylbenzene	0.0	0-50				
Ethylene Dibromide	0.0	0-50				
Hexane (n)	0.0	0-50				
Methyl Ethyl Ketone	0.0	0-50				
Methyl Isobutyl Ketone	0.0	0-50				
Methyl tert-butyl Ether	0.0	0-50				
Methylene Chloride	0.0	0-50				
Styrene	0.0	0-50				
1,1,1,2-Tetrachloroethane	0.0	0-50				
1,1,2,2-Tetrachloroethane	0.0	0-50				
Tetrachloroethylene	0.0	0-50				
Toluene	8.6	0-50				
1,1,1-Trichloroethane	0.0	0-50				
1,1,2-Trichloroethane	0.0	0-50				
Trichloroethylene	0.0	0-50				
Trichlorofluoromethane	0.0	0-50				
Vinyl Chloride	0.0	0-50				
Xylenes	0.0	0-50				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
1,2-Dichloroethane-d4	66	60-140				
Toluene-d8	88	60-140				
4-Bromofluorobenzene	71	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-1*** MW101 3.80-4.40m	***17-7469-2*** MW102 0.00-0.60m	***17-7469-3*** MW102 (Dupe) 0.00-0.60m	***17-7469-4*** MW102 3.65-3.95m	**Soil Standards [1]** **Table 2** **R/P/I**	**Table 3** **R/P/I**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	(0.17) 0.21	(0.17) 0.21
Toluene	<0.2	<0.2	<0.2	<0.2	(6) 2.3	(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	(1.6) 1.1	(15) 2
Xylenes	<0.05	<0.05	<0.05	<0.05	(25) 3.1	(25) 3.1
PHCs (F_1-F_4) in Soil						
F_1 (C_6 - C_{10})	<10	<10	<10	<10	(65) 55	(65) 55
F_2 (C_{10} - C_{16})	<10	<10	<10	<10	(150) 98	(150) 98
F_3 (C_{16} - C_{34})	<50	<50	<50	<50	(1300) 300	(1300) 300
F_4 (C_{34} - C_{50})	<50	<50	<50	<50	(5600) 2800	(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	124	61	108	107	60-140	
Toluene-d8	97	89	81	107	60-140	
4-Bromofluorobenzene	67	110	65	67	60-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-5*** MW103 0.75-1.35m	***17-7469-6*** MW103 3.80-4.40m	***17-7469-7*** MW104 0.45-1.05m	***17-7469-8*** MW104 3.00-3.60m	**Soil Standards [1]** **Table 2** **R/P/I**	**Table 3** **R/P/I**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	(0.17) 0.21	(0.17) 0.21
Toluene	<0.2	<0.2	<0.2	<0.2	(6) 2.3	(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	(1.6) 1.1	(15) 2
Xylenes	<0.05	<0.05	<0.05	<0.05	(25) 3.1	(25) 3.1
PHCs (F_1-F_4) in Soil						
F_1 (C_6 - C_{10})	<10	<10	<10	<10	(65) 55	(65) 55
F_2 (C_{10} - C_{16})	<10	<10	<10	<10	(150) 98	(150) 98
F_3 (C_{16} - C_{34})	<50	<50	<50	<50	(1300) 300	(1300) 300
F_4 (C_{34} - C_{50})	<50	<50	<50	<50	(5600) 2800	(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	62	60	121	69	60-140	
Toluene-d8	103	86	118	89	60-140	
4-Bromofluorobenzene	84	73	64	82	60-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-9*** MW105 0.75-1.35m	***17-7469-10*** MW106 3.00-3.60m	***17-7469-11*** MW107 0.00-0.60m	***17-7469-12*** MW108 3.00-3.60m	**Soil Standards [1]** **Table 2** **R/P/I**	**Table 3** **R/P/I**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	(0.17) 0.21	(0.17) 0.21
Toluene	<0.2	<0.2	<0.2	<0.2	(6) 2.3	(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	(1.6) 1.1	(15) 2
Xylenes	<0.05	<0.05	<0.05	<0.05	(25) 3.1	(25) 3.1
PHCs (F_1-F_4) in Soil						
F_1 (C_6 - C_{10})	<10	<10	<10	<10	(65) 55	(65) 55
F_2 (C_{10} - C_{16})	<10	<10	<10	<10	(150) 98	(150) 98
F_3 (C_{16} - C_{34})	<50	<50	<50	<50	(1300) 300	(1300) 300
F_4 (C_{34} - C_{50})	<50	<50	<50	<50	(5600) 2800	(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	65	65	135	68	60-140	
Toluene-d8	86	82	114	81	60-140	
4-Bromofluorobenzene	73	82	87	75	60-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-13*** MW108 (Dupe) 3.00-3.60m	***17-7469-14*** MW109 0.60-1.20m			**Soil Standards** [1] **Table 2** **R/P/I**	**Soil Standards** [1] **Table 3** **R/P/I**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02			(0.17) 0.21	(0.17) 0.21
Toluene	<0.2	<0.2			(6) 2.3	(6) 2.3
Ethylbenzene	<0.05	<0.05			(1.6) 1.1	(15) 2
Xylenes	<0.05	<0.05			(25) 3.1	(25) 3.1
PHCs (F_1-F_4) in Soil						
F_1 (C_6 - C_{10})	<10	<10			(65) 55	(65) 55
F_2 (C_{10} - C_{16})	<10	<10			(150) 98	(150) 98
F_3 (C_{16} - C_{34})	<50	<50			(1300) 300	(1300) 300
F_4 (C_{34} - C_{50})	<50	<50			(5600) 2800	(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes				
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	89	67			60-140	
Toluene-d8	99	76			60-140	
4-Bromofluorobenzene	67	70			60-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
BTEX in Soil						
Benzene	<0.02	0.02	73	60-130	79	50-140
Toluene	<0.2	0.2	82	60-130	76	50-140
Ethylbenzene	<0.05	0.05	94	60-130	98	50-140
Xylenes	<0.05	0.05	100	60-130	102	50-140
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	10	82	80-120	76	60-140
F2 (C_{10} - C_{16})	<10	10	107	80-120	87	60-140
F3 (C_{16} - C_{34})	<50	50	102	80-120	76	60-140
F4 (C_{34}-C_{50})	<50	50	98	80-120	60	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
1,2-Dichloroethane-d4	105	60-140	76	60-140	73	60-140
Toluene-d8	103	60-140	74	60-140	94	60-140
4-Bromofluorobenzene	109	60-140	72	60-140	78	60-140

LEGEND:

RL - Reporting Limit

LCS - Laboratory Control Sample

MS - Matrix Spike

AR - Acceptable Range

BTEX should be subtracted from F_1, Naphthalene from F_2 and selected PAHs from F_3 if BTEX/PAHs are analyzed, then report $F_{1\text{-BTEX}}$, $F_{2\text{-Naph.}}$ and $F_{3\text{-PAH}}$.

nC_{50} response factor was within 70% of nC_{10}+nC_{16}+nC_{34} average.

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Soil						
Benzene	0.0	0-50				
Toluene	8.6	0-50				
Ethylbenzene	0.0	0-50				
Xylenes	0.0	0-50				
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	3.9	0-30				
F2 (C_{10} - C_{16})	14	0-30				
F3 (C_{16} - C_{34})	7.0	0-30				
F4 (C_{34}-C_{50})	25	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
1,2-Dichloroethane-d4	66	60-140				
Toluene-d8	88	60-140				
4-Bromofluorobenzene	71	60-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-1*** MW101 3.80-4.40m	***17-7469-2*** MW102 0.00-0.60m	***17-7469-3*** MW102 (Dupe) 0.00-0.60m	***17-7469-4*** MW102 3.65-3.95m	**Soil Standards [1]** **Table 2** **R/P/I**	**Soil Standards [1]** **Table 3** **R/P/I**
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05	<0.05	(0.75) 0.6	(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	(3.4) 0.99	(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05		
Acenaphthylene	<0.05	<0.05	<0.05	<0.05	(0.17) 0.15	(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05	<0.05	(29) 7.9	(58) 7.9
Fluorene	<0.05	<0.05	<0.05	<0.05	(69) 62	(69) 62
Phenanthrene	<0.05	<0.05	<0.05	<0.05	(7.8) 6.2	(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05	<0.05	(0.74) 0.67	(0.74) 0.67
Fluoranthene	<0.05	<0.05	<0.05	<0.05	0.69	0.69
Pyrene	<0.05	<0.05	<0.05	<0.05	78	78
Benzo [a] anthracene	<0.05	<0.05	<0.05	<0.05	(0.63) 0.5	(0.63) 0.5
Chrysene	<0.05	<0.05	<0.05	<0.05	(7.8) 7	(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.78	0.78
Benzo [k] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.78	0.78
Benzo [a] pyrene	<0.05	<0.05	<0.05	<0.05	0.3	0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1	<0.1	<0.1	(0.48) 0.38	(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1	<0.1	<0.1	0.1	0.1
Benzo [g,h,i] perylene	<0.1	<0.1	<0.1	<0.1	(7.8) 6.6	(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	121	104	126	131	50-140	
Phenanthrene-d10	115	96	111	89	50-140	
Chrysene-d12	106	118	119	120	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-5*** MW103 0.75-1.35m	***17-7469-6*** MW103 3.80-4.40m	***17-7469-7*** MW104 0.45-1.05m	***17-7469-8*** MW104 3.00-3.60m	**Soil Standards [1]** **Table 2** **R/P/I**	**Soil Standards [1]** **Table 3** **R/P/I**
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05	<0.05	(0.75) 0.6	(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	(3.4) 0.99	(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05		
Acenaphthylene	<0.05	<0.05	<0.05	<0.05	(0.17) 0.15	(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05	<0.05	(29) 7.9	(58) 7.9
Fluorene	<0.05	<0.05	<0.05	<0.05	(69) 62	(69) 62
Phenanthrene	<0.05	<0.05	<0.05	<0.05	(7.8) 6.2	(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05	<0.05	(0.74) 0.67	(0.74) 0.67
Fluoranthene	<0.05	<0.05	<0.05	<0.05	0.69	0.69
Pyrene	<0.05	<0.05	<0.05	<0.05	78	78
Benzo [a] anthracene	<0.05	<0.05	<0.05	<0.05	(0.63) 0.5	(0.63) 0.5
Chrysene	<0.05	<0.05	<0.05	<0.05	(7.8) 7	(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.78	0.78
Benzo [k] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.78	0.78
Benzo [a] pyrene	<0.05	<0.05	<0.05	<0.05	0.3	0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1	<0.1	<0.1	(0.48) 0.38	(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1	<0.1	<0.1	0.1	0.1
Benzo [g,h,i] perylene	<0.1	<0.1	<0.1	<0.1	(7.8) 6.6	(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	89	133	103	93	50-140	
Phenanthrene-d10	80	107	100	105	50-140	
Chrysene-d12	98	126	118	120	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-9*** MW105 0.75-1.35m	***17-7469-10*** MW106 3.00-3.60m	***17-7469-11*** MW107 0.00-0.60m	***17-7469-12*** MW108 3.00-3.60m	**Soil Standards [1]** **Table 2** **R/P/I**	**Soil Standards [1]** **Table 3** **R/P/I**
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05	<0.05	(0.75) 0.6	(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	(3.4) 0.99	(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05		
Acenaphthylene	<0.05	<0.05	<0.05	<0.05	(0.17) 0.15	(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05	<0.05	(29) 7.9	(58) 7.9
Fluorene	<0.05	<0.05	<0.05	<0.05	(69) 62	(69) 62
Phenanthrene	<0.05	<0.05	<0.05	<0.05	(7.8) 6.2	(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05	<0.05	(0.74) 0.67	(0.74) 0.67
Fluoranthene	<0.05	<0.05	<0.05	<0.05	0.69	0.69
Pyrene	<0.05	<0.05	<0.05	<0.05	78	78
Benzo [a] anthracene	<0.05	<0.05	<0.05	<0.05	(0.63) 0.5	(0.63) 0.5
Chrysene	<0.05	<0.05	<0.05	<0.05	(7.8) 7	(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.78	0.78
Benzo [k] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.78	0.78
Benzo [a] pyrene	<0.05	<0.05	<0.05	<0.05	0.3	0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1	<0.1	<0.1	(0.48) 0.38	(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1	<0.1	<0.1	0.1	0.1
Benzo [g,h,i] perylene	<0.1	<0.1	<0.1	<0.1	(7.8) 6.6	(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	123	125	96	125	50-140	
Phenanthrene-d10	115	121	95	113	50-140	
Chrysene-d12	128	92	124	111	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-13*** MW108 (Dupe) 3.00-3.60m	***17-7469-14*** MW109 0.60-1.20m			**Soil Standards** [1] **Table 2** **R/P/I**	**Soil Standards** [1] **Table 3** **R/P/I**
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05			(0.75) 0.6	(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05			(3.4) 0.99	(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05				
Acenaphthylene	<0.05	<0.05			(0.17) 0.15	(0.17) 0.15
Acenaphthene	<0.05	<0.05			(29) 7.9	(58) 7.9
Fluorene	<0.05	<0.05			(69) 62	(69) 62
Phenanthrene	<0.05	<0.05			(7.8) 6.2	(7.8) 6.2
Anthracene	<0.05	<0.05			(0.74) 0.67	(0.74) 0.67
Fluoranthene	<0.05	<0.05			0.69	0.69
Pyrene	<0.05	<0.05			78	78
Benzo [a] anthracene	<0.05	<0.05			(0.63) 0.5	(0.63) 0.5
Chrysene	<0.05	<0.05			(7.8) 7	(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05			0.78	0.78
Benzo [k] fluoranthene	<0.05	<0.05			0.78	0.78
Benzo [a] pyrene	<0.05	<0.05			0.3	0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1			(0.48) 0.38	(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1			0.1	0.1
Benzo [g,h,i] perylene	<0.1	<0.1			(7.8) 6.6	(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	135	110			50-140	
Phenanthrene-d10	91	114			50-140	
Chrysene-d12	126	119			50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
PAHs in Soil						
Naphthalene	<0.05	0.05	121	50-140	111	50-140
2-Methylnaphthalene	<0.05	0.05	85	50-140	118	50-140
1-Methylnaphthalene	<0.05	0.05	87	50-140	114	50-140
Acenaphthylene	<0.05	0.05	100	50-140	111	50-140
Acenaphthene	<0.05	0.05	122	50-140	131	50-140
Fluorene	<0.05	0.05	123	50-140	111	50-140
Phenanthrene	<0.05	0.05	104	50-140	96	50-140
Anthracene	<0.05	0.05	110	50-140	62	50-140
Fluoranthene	<0.05	0.05	115	50-140	87	50-140
Pyrene	<0.05	0.05	104	50-140	96	50-140
Benzo [a] anthracene	<0.05	0.05	88	50-140	86	50-140
Chrysene	<0.05	0.05	108	50-140	86	50-140
Benzo [b] fluoranthene	<0.05	0.05	72	50-140	61	50-140
Benzo [k] fluoranthene	<0.05	0.05	86	50-140	87	50-140
Benzo [a] pyrene	<0.05	0.05	102	50-140	103	50-140
Indeno [1,2,3-cd] pyrene	<0.1	0.1	89	50-140	97	50-140
Dibenzo [a,h] anthracene	<0.1	0.1	81	50-140	74	50-140
Benzo [g,h,i] perylene	<0.1	0.1	86	50-140	78	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	92	50-140	123	50-140	116	50-140
Phenanthrene-d10	80	50-140	109	50-140	98	50-140
Chrysene-d12	116	50-140	120	50-140	115	50-140

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Soil						
Naphthalene	0.0	0-40				
2-Methylnaphthalene	0.0	0-40				
1-Methylnaphthalene	0.0	0-40				
Acenaphthylene	0.0	0-40				
Acenaphthene	0.0	0-40				
Fluorene	0.0	0-40				
Phenanthrene	0.0	0-40				
Anthracene	0.0	0-40				
Fluoranthene	0.0	0-40				
Pyrene	0.0	0-40				
Benzo [a] anthracene	0.0	0-40				
Chrysene	0.0	0-40				
Benzo [b] fluoranthene	0.0	0-40				
Benzo [k] fluoranthene	0.0	0-40				
Benzo [a] pyrene	0.0	0-40				
Indeno [1,2,3-cd] pyrene	0.0	0-40				
Dibenzo [a,h] anthracene	0.0	0-40				
Benzo [g,h,i] perylene	0.0	0-40				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	139	50-140				
Phenanthrene-d10	104	50-140				
Chrysene-d12	111	50-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-2*** MW102 0.00-0.60m	***17-7469-3*** MW102 (Dupe) 0.00-0.60m	***17-7469-5*** MW103 0.75-1.35m	***17-7469-7*** MW104 0.45-1.05m	**Soil Standards [1]** Table 2 R/P/I	Table 3 R/P/I
	Concentration (µg/g)					
PCBs in Soil	<0.02	<0.02	0.18	<0.02	0.35	0.35
Surrogate Recovery (%)						
Decachlorobiphenyl	114	100	93	107	60-140	

Parameter	***17-7469-9*** MW105 0.75-1.35m	***17-7469-10*** MW106 3.00-3.60m	***17-7469-11*** BH107 0.00-0.60m	***17-7469-14*** BH109 0.60-1.20m	**Soil Standards [1]** Table 2 R/P/I	Table 3 R/P/I
	Concentration (µg/g)					
PCBs in Soil	<0.02	<0.02	<0.02	<0.02	0.35	0.35
Surrogate Recovery (%)						
Decachlorobiphenyl	106	99	109	101	60-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
PCBs in Soil	<0.02	0.02	87	60-140	111	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Decachlorobiphenyl	101	60-140	80	60-140	109	60-140

Parameter	Duplicate	AR				
	RPD (%)					
PCBs in Soil	0.0	0-40				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Decachlorobiphenyl	78	60-140				

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-1*** MW101 3.80-4.40m	***17-7469-6*** MW103 3.80-4.40m	***17-7469-9*** MW105 0.75-1.35m			**Soil Standards** *
pH *(pH unit)*	8.85	8.95	8.74			(5-11) 5-9

* Surface soil pH value from 5 - 9, Sub-surface soil pH value from 5-11.

QA/QC Report

Parameter	**LCS**	**AR**	**Duplicate**	**AR**		
			Absolute Difference *(pH Unit)*			
pH *(pH unit)*	7.03	7.00-7.40	0.08	<0.3		

LEGEND:
LCS - Laboratory Control Sample
AR - Acceptable Range

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs, pH
Sample Description:	14 Soil Samples

Parameter	***17-7469-1*** MW101 3.80-4.40m	***17-7469-2*** MW102 0.00-0.60m	***17-7469-3*** MW102 (Dupe) 0.00-0.60m	***17-7469-4*** MW102 3.65-3.95m	***17-7469-5*** MW103 0.75-1.35m	***17-7469-6*** MW103 3.80-4.40m
Moisture Content (%)	6.9	11	12	7.2	10	5.7

Parameter	***17-7469-7*** MW104 0.45-1.05m	***17-7469-8*** MW104 3.00-3.60m	***17-7469-9*** MW105 0.75-1.35m	***17-7469-10*** MW106 3.00-3.60m	***17-7469-11*** MW107 0.00-0.60m	***17-7469-12*** MW108 3.00-3.60m
Moisture Content (%)	15	7.0	13	9.8	7.8	9.8

Parameter	***17-7469-13*** MW108 (Dupe) 3.00-3.60m	***17-7469-14*** MW109 0.60-1.20m				
Moisture Content (%)	10	12				

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
Moisture Content (%)	<0.1	0.1	100	70-130	3.2	0-20

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

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F.E. Job #: 17-7544
Project Name: Phase Two ESA
Project #: FE-P-17-8460
Date Sampled: 13, 14-Nov-17
Date Received: 15-Nov-17
Date Reported: 22-Nov-17
Location: 2093, 2097, 2101 Old Lakeshore & 2096, 2100 Lakeshore Rd Burlington, ON

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Water	8	N/A	16-Nov-17	Metals F-1	SM 3120-B
Mercury	Water	6	N/A	16-Nov-17	Metals F-1	SM 3120-B
VOCs	Water	9	N/A	17-Nov-17	VOCs F-6	SM 6200-B
PHCs (F1 & BTEX)	Water	8	N/A	17-Nov-17	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Water	8	16-Nov-17	17-Nov-17	PHCs F-7	CCME CWS
PAHs	Water	8	16-Nov-17	17-Nov-17	PAHs F-4	SM 6410B
PCBs	Water	6	16-Nov-17	16-Nov-17	PCBs F-5	SM 6630C

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:

Roger Lin, Ph. D., C. Chem.
Laboratory Manager

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
Ronggen (Roger) Lin
CHEMIST

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	10 Water Samples

Parameter	***17-7544-1*** MW101	***17-7544-2*** MW102	***17-7544-3*** MW103	***17-7544-4*** MW104	**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µg/L)					
Metals in Water						
Antimony	<0.5	<0.5	<0.5	<0.5	6	20,000
Arsenic	<1	<1	<1	<1	25	1,900
Barium	109	64	75	460	1,000	29,000
Beryllium	<0.5	<0.5	<0.5	<0.5	4	67
Boron	203	365	204	204	5,000	45,000
Cadmium	<0.5	<0.5	<0.5	<0.5	2.7	2.7
Chromium	15	11	12	15	50	810
Cobalt	<1	<1	<1	<1	3.8	66
Copper	<5	<5	<5	<5	87	87
Lead	<1	<1	<1	<1	10	25
Molybdenum	4.9	21	2.0	1.1	70	9,200
Nickel	2.9	1.8	3.6	4.0	100	490
Selenium	<5	<5	<5	<5	10	63
Silver	<0.3	<0.3	<0.3	<0.3	1.5	1.5
Thallium	<0.5	<0.5	<0.5	<0.5	2	510
Uranium	15	9.7	10	4.4	20	420
Vanadium	4.8	4.7	4.0	4.5	6.2	250
Zinc	<5	<5	<5	<5	1,100	1,100

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	10 Water Samples

Parameter	***17-7544-5*** MW105	***17-7544-6*** MW106	***17-7544-7*** MW106 Duplicate	***17-7544-8*** MW108	**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µg/L)					
Metals in Water						
Antimony	<0.5	<0.5	<0.5	<0.5	6	20,000
Arsenic	<1	<1	<1	<1	25	1,900
Barium	99	220	220	186	1,000	29,000
Beryllium	<0.5	<0.5	<0.5	<0.5	4	67
Boron	258	562	569	271	5,000	45,000
Cadmium	<0.5	<0.5	<0.5	<0.5	2.7	2.7
Chromium	11	7.7	8.5	9.4	50	810
Cobalt	<1	<1	<1	<1	3.8	66
Copper	6.6	<5	<5	<5	87	87
Lead	<1	<1	<1	<1	10	25
Molybdenum	2.9	13	14	5.7	70	9,200
Nickel	4.0	4.0	4.0	4.0	100	490
Selenium	<5	<5	<5	<5	10	63
Silver	<0.3	<0.3	<0.3	<0.3	1.5	1.5
Thallium	<0.5	<0.5	<0.5	<0.5	2	510
Uranium	9.6	11	10	7.7	20	420
Vanadium	3.8	3.2	3.4	3.4	6.2	250
Zinc	<5	<5	<5	<5	1,100	1,100

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/L)		Recovery (%)		Recovery (%)	
Metals in Water						
Antimony	<0.5	0.5	99	80-120	116	70-130
Arsenic	<1	1	116	80-120	124	70-130
Barium	<2	2	107	80-120	118	70-130
Beryllium	<0.5	0.5	107	80-120	82	70-130
Boron	<10	10	105	80-120	88	70-130
Cadmium	<0.5	0.5	100	80-120	105	70-130
Chromium	<10	10	109	80-120	91	70-130
Cobalt	<1	1	113	80-120	97	70-130
Copper	<5	5	106	80-120	104	70-130
Lead	<1	1	89	80-120	88	70-130
Molybdenum	<0.5	0.5	101	80-120	127	70-130
Nickel	<1	1	116	80-120	101	70-130
Selenium	<5	5	102	80-120	85	70-130
Silver	<0.3	0.3	90	80-120	103	70-130
Thallium	<0.5	0.5	99	80-120	88	70-130
Uranium	<2	2	88	80-120	94	70-130
Vanadium	<0.5	0.5	107	80-120	96	70-130
Zinc	<5	5	93	80-120	102	70-130

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Water						
Antimony	0.0	0-20				
Arsenic	0.0	0-20				
Barium	0.5	0-20				
Beryllium	0.0	0-20				
Boron	4.8	0-20				
Cadmium	0.0	0-20				
Chromium	0.0	0-20				
Cobalt	0.0	0-20				
Copper	0.0	0-20				
Lead	8.5	0-20				
Molybdenum	14	0-20				
Nickel	4.9	0-20				
Selenium	0.0	0-20				
Silver	0.0	0-20				
Thallium	0.0	0-20				
Uranium	4.1	0-20				
Vanadium	5.4	0-20				
Zinc	18	0-20				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	10 Water Samples

Parameter	***17-7544-2*** MW102	***17-7544-3*** MW103	***17-7544-4*** MW104	***17-7544-5*** MW105	**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µg/L)					
Mercury in Water	<0.1	<0.1	<0.1	<0.1	(1) 0.29	(2.8) 0.29

Parameter	***17-7544-6*** MW106	***17-7544-7*** MW106 Duplicate			**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µg/L)					
Mercury in Water	<0.1	<0.1			(1) 0.29	(2.8) 0.29

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**MS**	**AR**
	(µg/L)		**Recovery (%)**		**Recovery (%)**	
Mercury in Water	<0.1	0.1	112	80-120	101	70-130

Parameter	**Duplicate**	**AR**				
	RPD (%)					
Mercury in Water	0.0	0-20				

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	10 Water Samples

Parameter	***17-7544-1*** MW101	***17-7544-2*** MW102	***17-7544-3*** MW103	***17-7544-4*** MW104	**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µ g/L)					
VOCs in Water						
Acetone	<30	<30	<30	<30	2700	130000
Benzene	<0.5	<0.5	<0.5	<0.5	5	(430) 44
Bromodichloromethane	<2	<2	<2	<2	16	85000
Bromoform	<5	<5	<5	<5	25	(770) 380
Bromomethane	<0.5	<0.5	<0.5	<0.5	0.89	(56) 5.6
Carbon Tetrachloride	<0.2	<0.2	<0.2	<0.2	(5) 0.79	(8.4) 0.79
Chlorobenzene	<0.5	<0.5	<0.5	<0.5	30	630
Chloroform	<1	<1	<1	<1	(22) 2.4	(22) 2.4
Dibromochloromethane	<2	<2	<2	<2	25	82000
1,2-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	3	(9600) 4600
1,3-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	59	9600
1,4-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	1	(67) 8
Dichlordifluoromethane	<2	<2	<2	<2	590	4400
1,1-Dichloroethane	<0.5	<0.5	<0.5	<0.5	5	(3100) 320
1,2-Dichloroethane	<0.5	<0.5	<0.5	<0.5	(5) 1.6	(12) 1.6
1,1-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	(14) 1.6	(17) 1.6
c-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	(17) 1.6	(17) 1.6
t-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	(17) 1.6	(17) 1.6
1,2-Dichloropropane	<0.5	<0.5	<0.5	<0.5	5	(140) 16
1,3-Dichloropropene (cis-+trans-)	<0.5	<0.5	<0.5	<0.5	0.5	(45) 5.2
Ethylbenzene	<0.5	<0.5	<0.5	<0.5	2.4	2300
Ethylene Dibromide	<0.2	<0.2	<0.2	<0.2	0.2	(0.83) 0.25
Hexane (n)	<5	<5	<5	<5	(520) 51	(520) 51
Methyl Ethyl Ketone	<20	<20	<20	<20	1800	(1500000)470000
Methyl Isobutyl Ketone	<20	<20	<20	<20	640	(580000)140000
Methyl tert-butyl Ether	<2	<2	<2	<2	15	(1400) 190
Methylene Chloride	<5	<5	<5	<5	50	(5500) 610
Styrene	<0.5	<0.5	<0.5	<0.5	5.4	(9100) 1300
1,1,1,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	1.1	(28) 3.3
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	1	(15) 3.2
Tetrachloroethylene	<0.5	<0.5	<0.5	<0.5	(17) 1.6	(17) 1.6
Toluene	<0.5	<0.5	<0.5	<0.5	24	18000
1,1,1-Trichloroethane	<0.5	<0.5	<0.5	<0.5	200	(6700) 640
1,1,2-Trichloroethane	<0.5	<0.5	<0.5	<0.5	(5) 4.7	(30) 4.7
Trichloroethylene	<0.5	<0.5	<0.5	<0.5	(5) 1.6	(17) 1.6
Trichlorofluoromethane	<5	<5	<5	<5	150	2500
Vinyl Chloride	<0.5	<0.5	<0.5	<0.5	(1.7) 0.5	(1.7) 0.5
Xylenes	<0.5	<0.5	<0.5	<0.5	300	4200
Surrogate Recovery (%)						
Bromochloromethane	105	97	78	77	60-140	
1,4-Difluorobenzene	107	97	77	69	60-140	
1,4-Dichlorobutane	107	98	77	80	60-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	10 Water Samples

Parameter	***17-7544-6*** MW106	***17-7544-7*** MW106 Duplicate	***17-7544-8*** MW108	***17-7544-9*** Travel Blank 13-Nov	**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µ g/L)					
VOCs in Water						
Acetone	<30	<30	<30	<30	2700	130000
Benzene	<0.5	<0.5	<0.5	<0.5	5	(430) 44
Bromodichloromethane	<2	<2	<2	<2	16	85000
Bromoform	<5	<5	<5	<5	25	(770) 380
Bromomethane	<0.5	<0.5	<0.5	<0.5	0.89	(56) 5.6
Carbon Tetrachloride	<0.2	<0.2	<0.2	<0.2	(5) 0.79	(8.4) 0.79
Chlorobenzene	<0.5	<0.5	<0.5	<0.5	30	630
Chloroform	<1	<1	<1	<1	(22) 2.4	(22) 2.4
Dibromochloromethane	<2	<2	<2	<2	25	82000
1,2-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	3	(9600) 4600
1,3-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	59	9600
1,4-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	1	(67) 8
Dichlordifluoromethane	<2	<2	<2	<2	590	4400
1,1-Dichloroethane	<0.5	<0.5	<0.5	<0.5	5	(3100) 320
1,2-Dichloroethane	<0.5	<0.5	<0.5	<0.5	(5) 1.6	(12) 1.6
1,1-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	(14) 1.6	(17) 1.6
c-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	(17) 1.6	(17) 1.6
t-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	(17) 1.6	(17) 1.6
1,2-Dichloropropane	<0.5	<0.5	<0.5	<0.5	5	(140) 16
1,3-Dichloropropene (cis-+trans-)	<0.5	<0.5	<0.5	<0.5	0.5	(45) 5.2
Ethylbenzene	<0.5	<0.5	<0.5	<0.5	2.4	2300
Ethylene Dibromide	<0.2	<0.2	<0.2	<0.2	0.2	(0.83) 0.25
Hexane (n)	<5	<5	<5	<5	(520) 51	(520) 51
Methyl Ethyl Ketone	<20	<20	<20	<20	1800	(1500000)470000
Methyl Isobutyl Ketone	<20	<20	<20	<20	640	(580000)140000
Methyl tert-butyl Ether	<2	<2	<2	<2	15	(1400) 190
Methylene Chloride	<5	<5	<5	<5	50	(5500) 610
Styrene	<0.5	<0.5	<0.5	<0.5	5.4	(9100) 1300
1,1,1,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	1.1	(28) 3.3
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	1	(15) 3.2
Tetrachloroethylene	<0.5	<0.5	<0.5	<0.5	(17) 1.6	(17) 1.6
Toluene	<0.5	<0.5	<0.5	<0.5	24	18000
1,1,1-Trichloroethane	<0.5	<0.5	<0.5	<0.5	200	(6700) 640
1,1,2-Trichloroethane	<0.5	<0.5	<0.5	<0.5	(5) 4.7	(30) 4.7
Trichloroethylene	<0.5	<0.5	<0.5	<0.5	(5) 1.6	(17) 1.6
Trichlorofluoromethane	<5	<5	<5	<5	150	2500
Vinyl Chloride	<0.5	<0.5	<0.5	<0.5	(1.7) 0.5	(1.7) 0.5
Xylenes	<0.5	<0.5	<0.5	<0.5	300	4200
Surrogate Recovery (%)						
Bromochloromethane	104	79	77	106	60-140	
1,4-Difluorobenzene	102	77	73	108	60-140	
1,4-Dichlorobutane	108	84	82	111	60-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	10 Water Samples

Parameter	***17-7544-10*** Travel Blank 14-Nov				**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µg/L)					
VOCs in Water						
Acetone	<30				2700	130000
Benzene	<0.5				5	(430) 44
Bromodichloromethane	<2				16	85000
Bromoform	<5				25	(770) 380
Bromomethane	<0.5				0.89	(56) 5.6
Carbon Tetrachloride	<0.2				(5) 0.79	(8.4) 0.79
Chlorobenzene	<0.5				30	630
Chloroform	<1				(22) 2.4	(22) 2.4
Dibromochloromethane	<2				25	82000
1,2-Dichlorobenzene	<0.5				3	(9600) 4600
1,3-Dichlorobenzene	<0.5				59	9600
1,4-Dichlorobenzene	<0.5				1	(67) 8
Dichlordifluoromethane	<2				590	4400
1,1-Dichloroethane	<0.5				5	(3100) 320
1,2-Dichloroethane	<0.5				(5) 1.6	(12) 1.6
1,1-Dichloroethylene	<0.5				(14) 1.6	(17) 1.6
c-1,2-Dichloroethylene	<0.5				(17) 1.6	(17) 1.6
t-1,2-Dichloroethylene	<0.5				(17) 1.6	(17) 1.6
1,2-Dichloropropane	<0.5				5	(140) 16
1,3-Dichloropropene (cis-+trans-)	<0.5				0.5	(45) 5.2
Ethylbenzene	<0.5				2.4	2300
Ethylene Dibromide	<0.2				0.2	(0.83) 0.25
Hexane (n)	<5				(520) 51	(520) 51
Methyl Ethyl Ketone	<20				1800	(1500000)470000
Methyl Isobutyl Ketone	<20				640	(580000)140000
Methyl tert-butyl Ether	<2				15	(1400) 190
Methylene Chloride	<5				50	(5500) 610
Styrene	<0.5				5.4	(9100) 1300
1,1,1,2-Tetrachloroethane	<0.5				1.1	(28) 3.3
1,1,2,2-Tetrachloroethane	<0.5				1	(15) 3.2
Tetrachloroethylene	<0.5				(17) 1.6	(17) 1.6
Toluene	<0.5				24	18000
1,1,1-Trichloroethane	<0.5				200	(6700) 640
1,1,2-Trichloroethane	<0.5				(5) 4.7	(30) 4.7
Trichloroethylene	<0.5				(5) 1.6	(17) 1.6
Trichlorofluoromethane	<5				150	2500
Vinyl Chloride	<0.5				(1.7) 0.5	(1.7) 0.5
Xylenes	<0.5				300	4200
Surrogate Recovery (%)						
Bromochloromethane	89				60-140	
1,4-Difluorobenzene	82				60-140	
1,4-Dichlorobutane	95				60-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(ug/L)		Recovery (%)		Recovery (%)	
VOCs in Water						
Acetone	<30	30	81	50-140	107	50-140
Benzene	<0.5	0.5	95	60-130	95	50-140
Bromodichloromethane	<2	2	97	50-140	103	50-140
Bromoform	<5	5	109	60-130	105	50-140
Bromomethane	<0.5	0.5	91	50-140	95	50-140
Carbon Tetrachloride	<0.2	0.2	102	60-130	111	50-140
Chlorobenzene	<0.5	0.5	126	60-130	107	50-140
Chloroform	<1	1	92	60-130	94	50-140
Dibromochloromethane	<2	2	93	60-130	93	50-140
1,2-Dichlorobenzene	<0.5	0.5	100	60-130	80	50-140
1,3-Dichlorobenzene	<0.5	0.5	114	60-130	119	50-140
1,4-Dichlorobenzene	<0.5	0.5	109	60-130	99	50-140
Dichlordifluoromethane	<2	2	69	50-140	89	50-140
1,1-Dichloroethane	<0.5	0.5	93	60-130	100	50-140
1,2-Dichloroethane	<0.5	0.5	110	60-130	79	50-140
1,1-Dichloroethylene	<0.5	0.5	91	60-130	117	50-140
c-1,2-Dichloroethylene	<0.5	0.5	110	60-130	77	50-140
t-1,2-Dichloroethylene	<0.5	0.5	84	60-130	77	50-140
1,2-Dichloropropane	<0.5	0.5	111	60-130	131	50-140
1,3-Dichloropropene (cis-+trans-)	<0.5	0.5	104	60-130	79	50-140
Ethylbenzene	<0.5	0.5	81	60-130	114	50-140
Ethylene Dibromide	<0.2	0.2	100	60-130	96	50-140
Hexane (n)	<5	5	82	60-130	91	50-140
Methyl Ethyl Ketone	<20	20	114	50-140	111	50-140
Methyl Isobutyl Ketone	<20	20	102	50-140	98	50-140
Methyl tert-butyl Ether	<2	2	74	60-130	85	50-140
Methylene Chloride	<5	5	100	60-130	88	50-140
Styrene	<0.5	0.5	87	60-130	87	50-140
1,1,1,2-Tetrachloroethane	<0.5	0.5	98	60-130	74	50-140
1,1,2,2-Tetrachloroethane	<0.5	0.5	100	60-130	84	50-140
Tetrachloroethylene	<0.5	0.5	112	60-130	111	50-140
Toluene	<0.5	0.5	98	60-130	100	50-140
1,1,1-Trichloroethane	<0.5	0.5	98	60-130	107	50-140
1,1,2-Trichloroethane	<0.5	0.5	112	60-130	123	50-140
Trichloroethylene	<0.5	0.5	97	60-130	102	50-140
Trichlorofluoromethane	<5	5	83	50-140	109	50-140
Vinyl Chloride	<0.5	0.5	114	50-140	110	50-140
Xylenes	<0.5	0.5	80	60-130	100	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Bromocholoromethane	92	60-140	108	60-140	80	60-140
1,4-Difluorobenzene	89	60-140	102	60-140	87	60-140
1,4-Dichlorobutane	101	60-140	110	60-140	79	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
VOCs in Water						
Acetone	0.0	0-30				
Benzene	4.0	0-30				
Bromodichloromethane	0.0	0-30				
Bromoform	0.0	0-30				
Bromomethane	0.0	0-30				
Carbon Tetrachloride	0.0	0-30				
Chlorobenzene	0.0	0-30				
Chloroform	0.0	0-30				
Dibromochloromethane	0.0	0-30				
1,2-Dichlorobenzene	0.0	0-30				
1,3-Dichlorobenzene	0.0	0-30				
1,4-Dichlorobenzene	0.0	0-30				
Dichlordifluoromethane	0.0	0-30				
1,1-Dichloroethane	0.0	0-30				
1,2-Dichloroethane	0.0	0-30				
1,1-Dichloroethylene	0.0	0-30				
c-1,2-Dichloroethylene	0.0	0-30				
t-1,2-Dichloroethylene	0.0	0-30				
1,2-Dichloropropane	0.0	0-30				
1,3-Dichloropropene (cis-+trans-)	0.0	0-30				
Ethylbenzene	2.0	0-30				
Ethylene Dibromide	0.0	0-30				
Hexane (n)	0.0	0-30				
Methyl Ethyl Ketone	0.0	0-30				
Methyl Isobutyl Ketone	0.0	0-30				
Methyl tert-butyl Ether	0.0	0-30				
Methylene Chloride	0.0	0-30				
Styrene	0.0	0-30				
1,1,1,2-Tetrachloroethane	0.0	0-30				
1,1,2,2-Tetrachloroethane	0.0	0-30				
Tetrachloroethylene	0.0	0-30				
Toluene	1.0	0-30				
1,1,1-Trichloroethane	0.0	0-30				
1,1,2-Trichloroethane	0.0	0-30				
Trichloroethylene	0.0	0-30				
Trichlorofluoromethane	0.0	0-30				
Vinyl Chloride	0.0	0-30				
Xylenes	2.0	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Bromocholoromethane	89	60-140				
1,4-Difluorobenzene	79	60-140				
1,4-Dichlorobutane	86	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	10 Water Samples

Parameter	***17-7544-1*** MW101	***17-7544-2*** MW102	***17-7544-3*** MW103	***17-7544-4*** MW104	**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µg/L)					
BTEX in Water						
Benzene	<0.5	<0.5	<0.5	<0.5	5	(430) 44
Toluene	<0.5	<0.5	<0.5	<0.5	24	18000
Ethylbenzene	<0.5	<0.5	<0.5	<0.5	2.4	2300
Xylenes	<0.5	<0.5	<0.5	<0.5	300	4200
PHCs (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25	<25	<25	<25	750	750
F2 (C_{10} - C_{16})	<100	<100	<100	<100	150	150
F3 (C_{16} - C_{34})	<100	<100	<100	<100	500	500
F4 (>C_{34})	<100	<100	<100	<100	500	500
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
Bromochloromethane	105	97	78	77	60-140	
1,4-Difluorobenzene	107	97	77	69	60-140	
1,4-Dichlorobutane	107	98	77	80	60-140	

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	10 Water Samples

Parameter	***17-7544-5*** MW105	***17-7544-6*** MW106	***17-7544-7*** MW106 Duplicate	***17-7544-8*** MW108	**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µg/L)					
BTEX in Water						
Benzene	<0.5	<0.5	<0.5	<0.5	5	(430) 44
Toluene	<0.5	<0.5	<0.5	<0.5	24	18000
Ethylbenzene	<0.5	<0.5	<0.5	<0.5	2.4	2300
Xylenes	<0.5	<0.5	<0.5	<0.5	300	4200
PHCs (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25	<25	<25	<25	750	750
F2 (C_{10} - C_{16})	<100	<100	<100	<100	150	150
F3 (C_{16} - C_{34})	<100	<100	<100	<100	500	500
F4 (>C_{34})	<100	<100	<100	<100	500	500
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
Bromochloromethane	104	79	79	77	60-140	
1,4-Difluorobenzene	102	77	77	73	60-140	
1,4-Dichlorobutane	108	84	84	82	60-140	

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(ug/L)		Recovery (%)		Recovery (%)	
BTEX in Water						
Benzene	<0.5	0.5	95	60-130	95	50-140
Toluene	<0.5	0.5	98	60-130	100	50-140
Ethylbenzene	<0.5	0.5	81	60-130	114	50-140
Xylenes	<0.5	0.5	80	60-130	100	50-140
PHC (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25	25	94	60-140	96	60-140
F2 (C_{10} - C_{16})	<100	100	98	60-140	82	60-140
F3 (C_{16} - C_{34})	<100	100	101	60-140	73	60-140
F4 (>C_{34})	<100	100	105	60-140	88	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Bromochloromethane	117	60-140	112	60-140	80	60-140
1,4-Difluorobenzene	114	60-140	107	60-140	87	60-140
1,4-Dichlorobutane	102	60-140	116	60-140	79	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Water						
Benzene	4.0	0-30				
Toluene	1.0	0-30				
Ethylbenzene	2.0	0-30				
Xylenes	2.0	0-30				
PHC (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	7.0	0-30				
F2 (C_{10} - C_{16})	9.0	0-30				
F3 (C_{16} - C_{34})	7.0	0-30				
F4 (>C_{34})	25	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Bromochloromethane	88	60-140				
1,4-Difluorobenzene	83	60-140				
1,4-Dichlorobutane	104	60-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	10 Water Samples

Parameter	***17-7544-1*** MW101	***17-7544-2*** MW102	***17-7544-3*** MW103	***17-7544-4*** MW104	**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µg/L)					
PAHs in Water						
Naphthalene	<2	<2	<2	<2	11	(6400) 1400
2-Methylnaphthalene	<1	<1	<1	<1	3.2	1800
1-Methylnaphthalene	<1	<1	<1	<1		
Acenaphthylene	<1	<1	<1	<1	1	1.8
Acenaphthene	<1	<1	<1	<1	4.1	(1700) 600
Fluorene	<0.5	<0.5	<0.5	<0.5	120	400
Phenanthrene	<0.1	<0.1	<0.1	<0.1	1	580
Anthracene	<0.1	<0.1	<0.1	<0.1	2.4	2.4
Fluoranthene	<0.4	<0.4	<0.4	<0.4	0.41	130
Pyrene	<0.2	<0.2	<0.2	<0.2	4.1	68
Benzo [a] anthracene	<0.2	<0.2	<0.2	<0.2	1	4.7
Chrysene	<0.1	<0.1	<0.1	<0.1	0.1	1
Benzo [b] fluoranthene	<0.1	<0.1	<0.1	<0.1	0.1	0.75
Benzo [k] fluoranthene	<0.1	<0.1	<0.1	<0.1	0.1	0.4
Benzo [a] pyrene	<0.01	<0.01	<0.01	<0.01	0.01	0.81
Indeno [1,2,3-cd] pyrene	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Dibenzo [a,h] anthracene	<0.2	<0.2	<0.2	<0.2	0.2	0.52
Benzo [g,h,i] perylene	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Surrogate Recovery (%)						
Naphthalene-d8	68	85	63	57	50-140	
Phenanthrene-d10	62	71	56	53	50-140	
Chrysene-d12	63	79	68	65	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	10 Water Samples

Parameter	***17-7544-5*** MW105	***17-7544-6*** MW106	***17-7544-7*** MW106 Duplicate	***17-7544-8*** MW108	**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µg/L)					
PAHs in Water						
Naphthalene	<2	<2	<2	<2	11	(6400) 1400
2-Methylnaphthalene	<1	<1	<1	<1	3.2	1800
1-Methylnaphthalene	<1	<1	<1	<1		
Acenaphthylene	<1	<1	<1	<1	1	1.8
Acenaphthene	<1	<1	<1	<1	4.1	(1700) 600
Fluorene	<0.5	<0.5	<0.5	<0.5	120	400
Phenanthrene	<0.1	<0.1	<0.1	<0.1	1	580
Anthracene	<0.1	<0.1	<0.1	<0.1	2.4	2.4
Fluoranthene	<0.4	<0.4	<0.4	<0.4	0.41	130
Pyrene	<0.2	<0.2	<0.2	<0.2	4.1	68
Benzo [a] anthracene	<0.2	<0.2	<0.2	<0.2	1	4.7
Chrysene	<0.1	<0.1	<0.1	<0.1	0.1	1
Benzo [b] fluoranthene	<0.1	<0.1	<0.1	<0.1	0.1	0.75
Benzo [k] fluoranthene	<0.1	<0.1	<0.1	<0.1	0.1	0.4
Benzo [a] pyrene	<0.01	<0.01	<0.01	<0.01	0.01	0.81
Indeno [1,2,3-cd] pyrene	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Dibenzo [a,h] anthracene	<0.2	<0.2	<0.2	<0.2	0.2	0.52
Benzo [g,h,i] perylene	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Surrogate Recovery (%)						
Naphthalene-d8	50	68	59	71	50-140	
Phenanthrene-d10	53	54	59	54	50-140	
Chrysene-d12	63	69	71	67	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/L)		Recovery (%)		Recovery (%)	
PAHs in Water						
Naphthalene	<2	2	81	50-140	88	50-140
2-Methylnaphthalene	<1	1	67	50-140	75	50-140
1-Methylnaphthalene	<1	1	64	50-140	76	50-140
Acenaphthylene	<1	1	59	50-140	85	50-140
Acenaphthene	<1	1	90	50-140	83	50-140
Fluorene	<0.5	0.5	69	50-140	82	50-140
Phenanthrene	<0.1	0.1	78	50-140	97	50-140
Anthracene	<0.1	0.1	70	50-140	96	50-140
Fluoranthene	<0.4	0.4	63	50-140	94	50-140
Pyrene	<0.2	0.2	72	50-140	97	50-140
Benzo [a] anthracene	<0.2	0.2	59	50-140	77	50-140
Chrysene	<0.1	0.1	69	50-140	90	50-140
Benzo [b] fluoranthene	<0.1	0.1	65	50-140	72	50-140
Benzo [k] fluoranthene	<0.1	0.1	81	50-140	99	50-140
Benzo [a] pyrene	<0.01	0.01	96	50-140	102	50-140
Indeno [1,2,3-cd] pyrene	<0.2	0.2	73	50-140	83	50-140
Dibenzo [a,h] anthracene	<0.2	0.2	77	50-140	83	50-140
Benzo [g,h,i] perylene	<0.2	0.2	79	50-140	98	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	51	50-140	84	50-140	93	50-140
Phenanthrene-d10	55	50-140	62	50-140	84	50-140
Chrysene-d12	72	50-140	94	50-140	90	50-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Water						
Naphthalene	3.9	0-30				
2-Methylnaphthalene	5.3	0-30				
1-Methylnaphthalene	8.1	0-30				
Acenaphthylene	18	0-30				
Acenaphthene	3.9	0-30				
Fluorene	8.9	0-30				
Phenanthrene	11	0-30				
Anthracene	15	0-30				
Fluoranthene	20	0-30				
Pyrene	15	0-30				
Benzo [a] anthracene	13	0-30				
Chrysene	13	0-30				
Benzo [b] fluoranthene	4.8	0-30				
Benzo [k] fluoranthene	9.8	0-30				
Benzo [a] pyrene	2.6	0-30				
Indeno [1,2,3-cd] pyrene	6.6	0-30				
Dibenzo [a,h] anthracene	3.6	0-30				
Benzo [g,h,i] perylene	10.7	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	93	50-140				
Phenanthrene-d10	84	50-140				
Chrysene-d12	90	50-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	10 Water Samples

Parameter	***17-7544-2*** MW102	***17-7544-3*** MW103	***17-7544-4*** MW104	***17-7544-5*** MW105	**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µg/L)					
PCBs in Water	<1.0	<1.0	<1.0	<1.0	3	(15) 7.8
Surrogate Recovery (%)						
Decachlorobiphenyl	79	83	90	82	60-140	

Parameter	***17-7544-6*** MW106	***17-7544-7*** MW106 Duplicate			**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µg/L)					
PCBs in Water	<1.0	<1.0			3	(15) 7.8
Surrogate Recovery (%)						
Decachlorobiphenyl	82	92			60-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/L)		Recovery (%)		Recovery (%)	
PCBs in Water	<1.0	1.0	108	60-140	107	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Decachlorobiphenyl	92	60-140	89	60-140	96	60-140

Parameter	Duplicate	AR				
	RPD (%)					
PCBs in Water	0.0	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Decachlorobiphenyl	96	60-140				

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

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F.E. Job #: 17-7613
Project Name: Phase Two ESA
Project #: FE-P-17-8460
Date Sampled: 24-Nov-17
Date Received: 24-Nov-17
Date Reported: 27-Nov-17
Location: 2093, 2097, 2101 Old Lakeshore & 2096, 2100 Lakeshore Rd Burlington, ON

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Water	2	N/A	27-Nov-17	Metals F-1	SM 3120-B
VOCs	Water	3	N/A	27-Nov-17	VOCs F-6	SM 6200-B
PHCs (F1 & BTEX)	Water	2	N/A	27-Nov-17	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Water	2	27-Nov-17	28-Nov-17	PHCs F-7	CCME CWS
PAHs	Water	2	27-Nov-17	27-Nov-17	PAHs F-4	SM 6410B
PCBs	Water	2	27-Nov-17	27-Nov-17	PCBs F-5	SM 6630C

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:



Roger Lin, Ph. D., C. Chem.
Laboratory Manager

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	3 Water Samples

Parameter	***17-7613-1*** BH3(MW)	***17-7613-2*** BH3(MW) Duplicate			**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µ g/L)					
Metals in Water						
Antimony	<0.5	<0.5			6	20,000
Arsenic	<1	<1			25	1,900
Barium	92	86			1,000	29,000
Beryllium	<0.5	<0.5			4	67
Boron	895	974			5,000	45,000
Cadmium	<0.5	<0.5			2.7	2.7
Chromium	<10	<10			50	810
Cobalt	<1	<1			3.8	66
Copper	<5	<5			87	87
Lead	<1	<1			10	25
Molybdenum	9.0	8.0			70	9,200
Nickel	2.4	2.2			100	490
Selenium	<5	<5			10	63
Silver	<0.3	<0.3			1.5	1.5
Thallium	<0.5	<0.5			2	510
Uranium	7.3	7.6			20	420
Vanadium	2.4	2.2			6.2	250
Zinc	<5	5.4			1,100	1,100

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/L)		Recovery (%)		Recovery (%)	
Metals in Water						
Antimony	<0.5	0.5	97	80-120	109	70-130
Arsenic	<1	1	111	80-120	109	70-130
Barium	<2	2	99	80-120	125	70-130
Beryllium	<0.5	0.5	93	80-120	87	70-130
Boron	<10	10	88	80-120	78	70-130
Cadmium	<0.5	0.5	97	80-120	99	70-130
Chromium	<10	10	112	80-120	90	70-130
Cobalt	<1	1	114	80-120	95	70-130
Copper	<5	5	118	80-120	93	70-130
Lead	<1	1	87	80-120	86	70-130
Molybdenum	<0.5	0.5	105	80-120	92	70-130
Nickel	<1	1	118	80-120	95	70-130
Selenium	<5	5	113	80-120	101	70-130
Silver	<0.3	0.3	91	80-120	78	70-130
Thallium	<0.5	0.5	88	80-120	92	70-130
Uranium	<2	2	85	80-120	109	70-130
Vanadium	<0.5	0.5	111	80-120	94	70-130
Zinc	<5	5	95	80-120	106	70-130

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Water						
Antimony	0.0	0-20				
Arsenic	0.0	0-20				
Barium	8.8	0-20				
Beryllium	0.0	0-20				
Boron	6.3	0-20				
Cadmium	0.0	0-20				
Chromium	0.0	0-20				
Cobalt	0.0	0-20				
Copper	0.0	0-20				
Lead	0.0	0-20				
Molybdenum	11	0-20				
Nickel	8.7	0-20				
Selenium	0.0	0-20				
Silver	0.0	0-20				
Thallium	0.0	0-20				
Uranium	3.5	0-20				
Vanadium	6.5	0-20				
Zinc	4.4	0-20				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	3 Water Samples

Parameter	***17-7613-1*** BH3(MW)	***17-7613-2*** BH3(MW) Duplicate	***17=7613-3*** Trip Blank		**Ground Water Standards [1]** Table 2 All Types	Table 3 All Types
	Concentration (µ g/L)					
VOCs in Water						
Acetone	<30	<30	<30		2700	130000
Benzene	<0.5	<0.5	<0.5		5	(430) 44
Bromodichloromethane	<2	<2	<2		16	85000
Bromoform	<5	<5	<5		25	(770) 380
Bromomethane	<0.5	<0.5	<0.5		0.89	(56) 5.6
Carbon Tetrachloride	<0.2	<0.2	<0.2		(5) 0.79	(8.4) 0.79
Chlorobenzene	<0.5	<0.5	<0.5		30	630
Chloroform	<1	<1	<1		(22) 2.4	(22) 2.4
Dibromochloromethane	<2	<2	<2		25	82000
1,2-Dichlorobenzene	<0.5	<0.5	<0.5		3	(9600) 4600
1,3-Dichlorobenzene	<0.5	<0.5	<0.5		59	9600
1,4-Dichlorobenzene	<0.5	<0.5	<0.5		1	(67) 8
Dichlordifluoromethane	<2	<2	<2		590	4400
1,1-Dichloroethane	<0.5	<0.5	<0.5		5	(3100) 320
1,2-Dichloroethane	<0.5	<0.5	<0.5		(5) 1.6	(12) 1.6
1,1-Dichloroethylene	<0.5	<0.5	<0.5		(14) 1.6	(17) 1.6
c-1,2-Dichloroethylene	<0.5	<0.5	<0.5		(17) 1.6	(17) 1.6
t-1,2-Dichloroethylene	<0.5	<0.5	<0.5		(17) 1.6	(17) 1.6
1,2-Dichloropropane	<0.5	<0.5	<0.5		5	(140) 16
1,3-Dichloropropene (cis-+trans-)	<0.5	<0.5	<0.5		0.5	(45) 5.2
Ethylbenzene	<0.5	<0.5	<0.5		2.4	2300
Ethylene Dibromide	<0.2	<0.2	<0.2		0.2	(0.83) 0.25
Hexane (n)	<5	<5	<5		(520) 51	(520) 51
Methyl Ethyl Ketone	<20	<20	<20		1800	(1500000)470000
Methyl Isobutyl Ketone	<20	<20	<20		640	(580000)140000
Methyl tert-butyl Ether	<2	<2	<2		15	(1400) 190
Methylene Chloride	<5	<5	<5		50	(5500) 610
Styrene	<0.5	<0.5	<0.5		5.4	(9100) 1300
1,1,1,2-Tetrachloroethane	<0.5	<0.5	<0.5		1.1	(28) 3.3
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<0.5		1	(15) 3.2
Tetrachloroethylene	<0.5	<0.5	<0.5		(17) 1.6	(17) 1.6
Toluene	<0.5	<0.5	<0.5		24	18000
1,1,1-Trichloroethane	<0.5	<0.5	<0.5		200	(6700) 640
1,1,2-Trichloroethane	<0.5	<0.5	<0.5		(5) 4.7	(30) 4.7
Trichloroethylene	<0.5	<0.5	<0.5		(5) 1.6	(17) 1.6
Trichlorofluoromethane	<5	<5	<5		150	2500
Vinyl Chloride	<0.5	<0.5	<0.5		(1.7) 0.5	(1.7) 0.5
Xylenes	<0.5	<0.5	<0.5		300	4200
Surrogate Recovery (%)						
Bromochloromethane	91	120	109		60-140	
1,4-Difluorobenzene	92	122	112		60-140	
1,4-Dichlorobutane	86	115	111		60-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(ug/L)		Recovery (%)		Recovery (%)	
VOCs in Water						
Acetone	<30	30	81	50-140	107	50-140
Benzene	<0.5	0.5	95	60-130	95	50-140
Bromodichloromethane	<2	2	97	50-140	103	50-140
Bromoform	<5	5	109	60-130	105	50-140
Bromomethane	<0.5	0.5	91	50-140	95	50-140
Carbon Tetrachloride	<0.2	0.2	87	60-130	110	50-140
Chlorobenzene	<0.5	0.5	89	60-130	98	50-140
Chloroform	<1	1	92	60-130	94	50-140
Dibromochloromethane	<2	2	93	60-130	93	50-140
1,2-Dichlorobenzene	<0.5	0.5	100	60-130	80	50-140
1,3-Dichlorobenzene	<0.5	0.5	90	60-130	97	50-140
1,4-Dichlorobenzene	<0.5	0.5	88	60-130	115	50-140
Dichlordifluoromethane	<2	2	69	50-140	89	50-140
1,1-Dichloroethane	<0.5	0.5	93	60-130	100	50-140
1,2-Dichloroethane	<0.5	0.5	98	60-130	130	50-140
1,1-Dichloroethylene	<0.5	0.5	88	60-130	121	50-140
c-1,2-Dichloroethylene	<0.5	0.5	110	60-130	77	50-140
t-1,2-Dichloroethylene	<0.5	0.5	103	60-130	127	50-140
1,2-Dichloropropane	<0.5	0.5	95	60-130	139	50-140
1,3-Dichloropropene (cis-+trans-)	<0.5	0.5	104	60-130	79	50-140
Ethylbenzene	<0.5	0.5	88	60-130	108	50-140
Ethylene Dibromide	<0.2	0.2	100	60-130	96	50-140
Hexane (n)	<5	5	82	60-130	91	50-140
Methyl Ethyl Ketone	<20	20	114	50-140	111	50-140
Methyl Isobutyl Ketone	<20	20	102	50-140	98	50-140
Methyl tert-butyl Ether	<2	2	74	60-130	85	50-140
Methylene Chloride	<5	5	100	60-130	88	50-140
Styrene	<0.5	0.5	87	60-130	87	50-140
1,1,1,2-Tetrachloroethane	<0.5	0.5	98	60-130	74	50-140
1,1,2,2-Tetrachloroethane	<0.5	0.5	100	60-130	84	50-140
Tetrachloroethylene	<0.5	0.5	97	60-130	118	50-140
Toluene	<0.5	0.5	98	60-130	100	50-140
1,1,1-Trichloroethane	<0.5	0.5	98	60-130	107	50-140
1,1,2-Trichloroethane	<0.5	0.5	96	60-130	125	50-140
Trichloroethylene	<0.5	0.5	97	60-130	102	50-140
Trichlorofluoromethane	<5	5	83	50-140	109	50-140
Vinyl Chloride	<0.5	0.5	114	50-140	110	50-140
Xylenes	<0.5	0.5	80	60-130	100	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Bromocholoromethane	100	60-140	110	60-140	80	60-140
1,4-Difluorobenzene	92	60-140	112	60-140	87	60-140
1,4-Dichlorobutane	111	60-140	119	60-140	79	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
VOCs in Water						
Acetone	0.0	0-30				
Benzene	4.0	0-30				
Bromodichloromethane	0.0	0-30				
Bromoform	0.0	0-30				
Bromomethane	0.0	0-30				
Carbon Tetrachloride	0.0	0-30				
Chlorobenzene	0.0	0-30				
Chloroform	0.0	0-30				
Dibromochloromethane	0.0	0-30				
1,2-Dichlorobenzene	0.0	0-30				
1,3-Dichlorobenzene	0.0	0-30				
1,4-Dichlorobenzene	0.0	0-30				
Dichlordifluoromethane	0.0	0-30				
1,1-Dichloroethane	0.0	0-30				
1,2-Dichloroethane	0.0	0-30				
1,1-Dichloroethylene	0.0	0-30				
c-1,2-Dichloroethylene	0.0	0-30				
t-1,2-Dichloroethylene	0.0	0-30				
1,2-Dichloropropane	0.0	0-30				
1,3-Dichloropropene (cis-+trans-)	0.0	0-30				
Ethylbenzene	2.0	0-30				
Ethylene Dibromide	0.0	0-30				
Hexane (n)	0.0	0-30				
Methyl Ethyl Ketone	0.0	0-30				
Methyl Isobutyl Ketone	0.0	0-30				
Methyl tert-butyl Ether	0.0	0-30				
Methylene Chloride	0.0	0-30				
Styrene	0.0	0-30				
1,1,1,2-Tetrachloroethane	0.0	0-30				
1,1,2,2-Tetrachloroethane	0.0	0-30				
Tetrachloroethylene	0.0	0-30				
Toluene	1.0	0-30				
1,1,1-Trichloroethane	0.0	0-30				
1,1,2-Trichloroethane	0.0	0-30				
Trichloroethylene	0.0	0-30				
Trichlorofluoromethane	0.0	0-30				
Vinyl Chloride	0.0	0-30				
Xylenes	2.0	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Bromocholoromethane	89	60-140				
1,4-Difluorobenzene	79	60-140				
1,4-Dichlorobutane	86	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	3 Water Samples

Parameter	***17-7613-1*** BH3(MW)	***17-7613-2*** BH3(MW) Duplicate			**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µ g/L)					
BTEX in Water						
Benzene	<0.5	<0.5			5	(430) 44
Toluene	<0.5	<0.5			24	18000
Ethylbenzene	<0.5	<0.5			2.4	2300
Xylenes	<0.5	<0.5			300	4200
PHCs (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25	<25			750	750
F2 (C_{10} - C_{16})	<100	<100			150	150
F3 (C_{16} - C_{34})	<100	<100			500	500
F4 (>C_{34})	<100	<100			500	500
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes				
Surrogate Recovery (%)						
Bromochloromethane	91	120			60-140	
1,4-Difluorobenzene	92	122			60-140	
1,4-Dichlorobutane	86	115			60-140	

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(ug/L)		Recovery (%)		Recovery (%)	
BTEX in Water						
Benzene	<0.5	0.5	95	60-130	93	50-140
Toluene	<0.5	0.5	98	60-130	83	50-140
Ethylbenzene	<0.5	0.5	81	60-130	108	50-140
Xylenes	<0.5	0.5	80	60-130	100	50-140
PHC (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25	25	94	60-140	96	60-140
F2 (C_{10} - C_{16})	<100	100	98	60-140	82	60-140
F3 (C_{16} - C_{34})	<100	100	101	60-140	73	60-140
F4 (>C_{34})	<100	100	105	60-140	88	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Bromochloromethane	100	60-140	110	60-140	80	60-140
1,4-Difluorobenzene	92	60-140	112	60-140	87	60-140
1,4-Dichlorobutane	111	60-140	119	60-140	79	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Water						
Benzene	4.0	0-30				
Toluene	1.0	0-30				
Ethylbenzene	2.0	0-30				
Xylenes	2.0	0-30				
PHC (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	7.0	0-30				
F2 (C_{10} - C_{16})	9.0	0-30				
F3 (C_{16} - C_{34})	6.0	0-30				
F4 (>C_{34})	5	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Bromochloromethane	88	60-140				
1,4-Difluorobenzene	83	60-140				
1,4-Dichlorobutane	104	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	3 Water Samples

Parameter	***17-7613-1*** BH3(MW)	***17-7613-2*** BH3(MW) Duplicate			**Ground Water Standards [1]**	
					Table 2	**Table 3**
					All Types	**All Types**
	Concentration (µ g/L)					
PAHs in Water						
Naphthalene	<2	<2			11	(6400) 1400
2-Methylnaphthalene	<1	<1			3.2	1800
1-Methylnaphthalene	<1	<1				
Acenaphthylene	<1	<1			1	1.8
Acenaphthene	<1	<1			4.1	(1700) 600
Fluorene	<0.5	<0.5			120	400
Phenanthrene	<0.1	<0.1			1	580
Anthracene	<0.1	<0.1			2.4	2.4
Fluoranthene	<0.4	<0.4			0.41	130
Pyrene	<0.2	<0.2			4.1	68
Benzo [a] anthracene	<0.2	<0.2			1	4.7
Chrysene	<0.1	<0.1			0.1	1
Benzo [b] fluoranthene	<0.1	<0.1			0.1	0.75
Benzo [k] fluoranthene	<0.1	<0.1			0.1	0.4
Benzo [a] pyrene	<0.01	<0.01			0.01	0.81
Indeno [1,2,3-cd] pyrene	<0.2	<0.2			0.2	0.2
Dibenzo [a,h] anthracene	<0.2	<0.2			0.2	0.52
Benzo [g,h,i] perylene	<0.2	<0.2			0.2	0.2
Surrogate Recovery (%)						
Naphthalene-d8	54	59			50-140	
Phenanthrene-d10	64	52			50-140	
Chrysene-d12	83	76			50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/L)		Recovery (%)		Recovery (%)	
PAHs in Water						
Naphthalene	<2	2	65	50-140	81	50-140
2-Methylnaphthalene	<1	1	72	50-140	67	50-140
1-Methylnaphthalene	<1	1	73	50-140	64	50-140
Acenaphthylene	<1	1	76	50-140	59	50-140
Acenaphthene	<1	1	77	50-140	90	50-140
Fluorene	<0.5	0.5	98	50-140	69	50-140
Phenanthrene	<0.1	0.1	87	50-140	78	50-140
Anthracene	<0.1	0.1	79	50-140	70	50-140
Fluoranthene	<0.4	0.4	79	50-140	63	50-140
Pyrene	<0.2	0.2	91	50-140	72	50-140
Benzo [a] anthracene	<0.2	0.2	75	50-140	59	50-140
Chrysene	<0.1	0.1	87	50-140	69	50-140
Benzo [b] fluoranthene	<0.1	0.1	77	50-140	65	50-140
Benzo [k] fluoranthene	<0.1	0.1	90	50-140	81	50-140
Benzo [a] pyrene	<0.01	0.01	106	50-140	96	50-140
Indeno [1,2,3-cd] pyrene	<0.2	0.2	86	50-140	73	50-140
Dibenzo [a,h] anthracene	<0.2	0.2	83	50-140	77	50-140
Benzo [g,h,i] perylene	<0.2	0.2	99	50-140	79	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	52	50-140	51	50-140	70	50-140
Phenanthrene-d10	108	50-140	79	50-140	65	50-140
Chrysene-d12	83	50-140	100	50-140	91	50-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Water						
Naphthalene	7.9	0-30				
2-Methylnaphthalene	9.3	0-30				
1-Methylnaphthalene	12	0-30				
Acenaphthylene	22	0-30				
Acenaphthene	0.1	0-30				
Fluorene	13	0-30				
Phenanthrene	6.6	0-30				
Anthracene	2.4	0-30				
Fluoranthene	2.1	0-30				
Pyrene	3.0	0-30				
Benzo [a] anthracene	4.7	0-30				
Chrysene	4.9	0-30				
Benzo [b] fluoranthene	9.5	0-30				
Benzo [k] fluoranthene	4.6	0-30				
Benzo [a] pyrene	12	0-30				
Indeno [1,2,3-cd] pyrene	7.8	0-30				
Dibenzo [a,h] anthracene	11	0-30				
Benzo [g,h,i] perylene	3.7	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	84	50-140				
Phenanthrene-d10	62	50-140				
Chrysene-d12	104	50-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs, PAHs, PCBs
Sample Description:	3 Water Samples

Parameter	***17-7613-1*** BH3(MW)	***17-7613-2*** BH3(MW) Duplicate			**Ground Water Standards** [1] **Table 2** **All Types**	**Ground Water Standards** [1] **Table 3** **All Types**
	Concentration (µg/L)					
PCBs in Water	<1.0	<1.0			3	(15) 7.8
Surrogate Recovery (%)						
Decachlorobiphenyl	87	78			60-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/L)		Recovery (%)		Recovery (%)	
PCBs in Water	<1.0	1.0	66	60-140	72	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Decachlorobiphenyl	100	60-140	70	60-140	60	60-140

Parameter	Duplicate	AR				
	RPD (%)					
PCBs in Water	8.7	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Decachlorobiphenyl	60	60-140				

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

FISHER ENVIRONMENTAL
ATTN: MARIUS VOINEA
15-400 ESNA PARK DRIVE
MARKHAM ON --

Date Received: 12-OCT-17
Report Date: 27-OCT-17 07:02 (MT)
Version: FINAL

Client Phone: 905-475-7755

Certificate of Analysis

Lab Work Order #: L2006307

Project P.O. #: NOT SUBMITTED
Job Reference: 17-8409
C of C Numbers: 15-611631
Legal Site Desc:

Mathy Mahadeva
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

GRAIN SIZE DETERMINATIONS

Client:	FISHER ENVIRONMENTAL	Sample Location:	
Project Number:	23379	Sample ID:	BH3-SS2 (2.5' - 4,5')
Sampler:		Sample Depth:	
Technician:	CB6	Date Sampled:	06-10-17
Lab ID Number:	L2006307-1	Date Submitted:	12-10-17
		Date Completed:	26-10-17

Total Sample Weight	174	grams	Specific Gravity:	2.650	
Hydro. Sample Weight	50.000	grams	Liquid Specific Gravity:	1.000	
% Past #10	0.948	* 100	Grav Factor:	1.606	
Sub Factor	3.300				

Sieve Size	Weight Retained (grams)	Percent Retained	Diameter (mm)	Cum. % Retained	Cum. % Passing
38.1 mm. DIA.:	0.000	0.000	38.100	0.000	100.000
25.4 mm. DIA.:	0.000	0.000	25.400	0.000	100.000
19.0 mm. DIA.:	0.000	0.000	19.000	0.000	100.000
9.5 mm. DIA.:	6.000	3.448	9.500	3.448	96.552
NO. 4 SIEVE :	0.000	0.000	4.500	3.448	96.552
NO. 10 SIEVE :	3.000	1.724	2.000	5.172	94.828
NO. 20 SIEVE :	2.000	3.793	0.850	8.966	91.034
NO. 40 SIEVE :	1.000	1.897	0.425	10.862	89.138
NO. 60 SIEVE :	1.000	1.897	0.250	12.759	87.241
NO. 100 SIEVE:	1.000	1.897	0.150	14.655	85.345
NO. 200 SIEVE:	2.000	3.793	0.075	18.448	81.552

Time (min)	Hydrometer Reading	Temperature (C)	Diameter (mm)	% Suspended (Subsample)	% Suspended (Total Sample)
1.00	24.0	19.8	0.043	67.650	64.151
2.00	23.0	19.8	0.031	64.438	61.105
4.00	23.0	19.8	0.022	64.438	61.105
8.00	22.0	19.8	0.016	61.226	58.059
15.00	21.0	19.9	0.012	58.077	55.073
30.00	20.0	19.9	0.008	54.865	52.027
60.00	19.0	19.5	0.006	51.402	48.743
120.00	16.0	20.3	0.004	42.267	40.080
240.00	15.0	20.0	0.003	38.867	36.856
480.00	15.0	20.0	0.002	38.867	36.856
1440.00	13.0	20.0	0.001	32.442	30.764

GRAIN SIZE	% BY WT.	DIA. RANGE (mm)
% GRAVEL :	3.45	> 4.5
% COARSE SAND :	1.72	2.0 - 4.5
% MEDIUM SAND :	5.69	0.425 - 2.0
% FINE SAND :	7.59	0.075 - 0.425
% SILT :	45.75	0.075 - 0.002
% CLAY :	35.80	< 0.002
% CLAY :	44.01	< 0.005

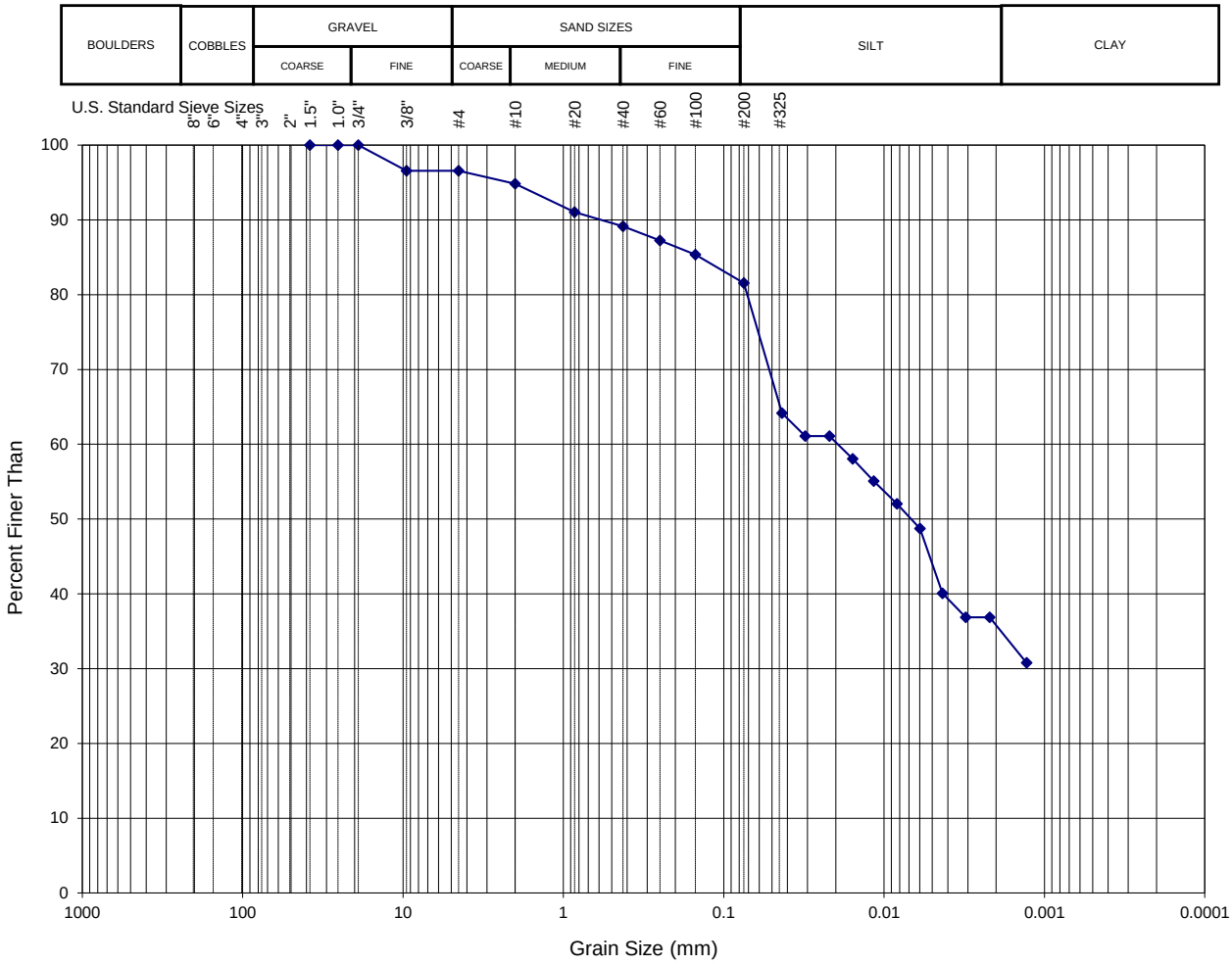
ALS Environmental

WATERLOO

PARTICLE SIZE DISTRIBUTION CURVE

ASTM METHOD D422-63

Project Name:	FISHER ENVIRONMENTAL
Project Number:	23379
Sample Location:	
Sample Number:	BH3-SS2 (2.5' - 4,5')
Sample Depth:	
Lab ID Number:	L2006307-1
Technician:	CB6
Sampler:	
Dates:	
Collected On:	06-10-17
Analyzed:	26-10-17



DESCRIPTION	SOIL CLASSIFICATION DESCRIPTIVE MODIFIERS		SUMMARY		
SILT AND CLAY WITH SAND, TRACE GRAVEL	AND	36 - 50 %	GRAVEL	3	%
FINE GRAINED	ADJECTIVE (e.g. sandy)	21 - 35 %	SAND	15	%
ESTIMATED HAZEN NUMBER: 4.56E-08 cm/s	WITH	11 - 20 %	SILT + CLAY	82	%
NOTE: UNIFIED SOIL CLASSIFICATION SYSTEM	TRACE	1 - 10 %			

GRAIN SIZE DETERMINATIONS

Client:	FISHER ENVIRONMENTAL	Sample Location:	
Project Number:	23379	Sample ID:	BH4-SS3 (5' - 7')
Sampler:		Sample Depth:	
Technician:	CB6	Date Sampled:	06-10-17
Lab ID Number:	L2006307-2	Date Submitted:	12-10-17
		Date Completed:	26-10-17

Total Sample Weight	226	grams	Specific Gravity:	2.650	
Hydro. Sample Weight	50.000	grams	Liquid Specific Gravity:	1.000	
% Past #10	0.951	* 100	Grav Factor:	1.606	
Sub Factor	4.300				

Sieve Size	Weight Retained (grams)	Percent Retained	Diameter (mm)	Cum. % Retained	Cum. % Passing
38.1 mm. DIA.:	0.000	0.000	38.100	0.000	100.000
25.4 mm. DIA.:	0.000	0.000	25.400	0.000	100.000
19.0 mm. DIA.:	0.000	0.000	19.000	0.000	100.000
9.5 mm. DIA.:	6.000	2.655	9.500	2.655	97.345
NO. 4 SIEVE :	1.000	0.442	4.500	3.097	96.903
NO. 10 SIEVE :	4.000	1.770	2.000	4.867	95.133
NO. 20 SIEVE :	0.000	0.000	0.850	4.867	95.133
NO. 40 SIEVE :	1.000	1.903	0.425	6.770	93.230
NO. 60 SIEVE :	0.000	0.000	0.250	6.770	93.230
NO. 100 SIEVE:	1.000	1.903	0.150	8.673	91.327
NO. 200 SIEVE:	2.000	3.805	0.075	12.478	87.522

Time (min)	Hydrometer Reading	Temperature (C)	Diameter (mm)	% Suspended (Subsample)	% Suspended (Total Sample)
1.00	30.0	19.8	0.040	86.923	82.692
2.00	28.0	19.8	0.029	80.499	76.581
4.00	27.0	19.8	0.021	77.287	73.525
8.00	26.0	19.8	0.015	74.075	70.469
15.00	24.0	19.9	0.011	67.713	64.417
30.00	22.0	19.9	0.008	61.289	58.306
60.00	21.0	19.5	0.006	57.826	55.012
120.00	18.0	20.3	0.004	48.691	46.321
240.00	16.0	20.0	0.003	42.079	40.031
480.00	16.0	20.0	0.002	42.079	40.031
1440.00	15.0	20.0	0.001	38.867	36.975

GRAIN SIZE	% BY WT.	DIA. RANGE (mm)
% GRAVEL :	3.10	> 4.5
% COARSE SAND :	1.77	2.0 - 4.5
% MEDIUM SAND :	1.90	0.425 - 2.0
% FINE SAND :	5.71	0.075 - 0.425
% SILT :	47.95	0.075 - 0.002
% CLAY :	39.57	< 0.002
% CLAY :	50.89	< 0.005

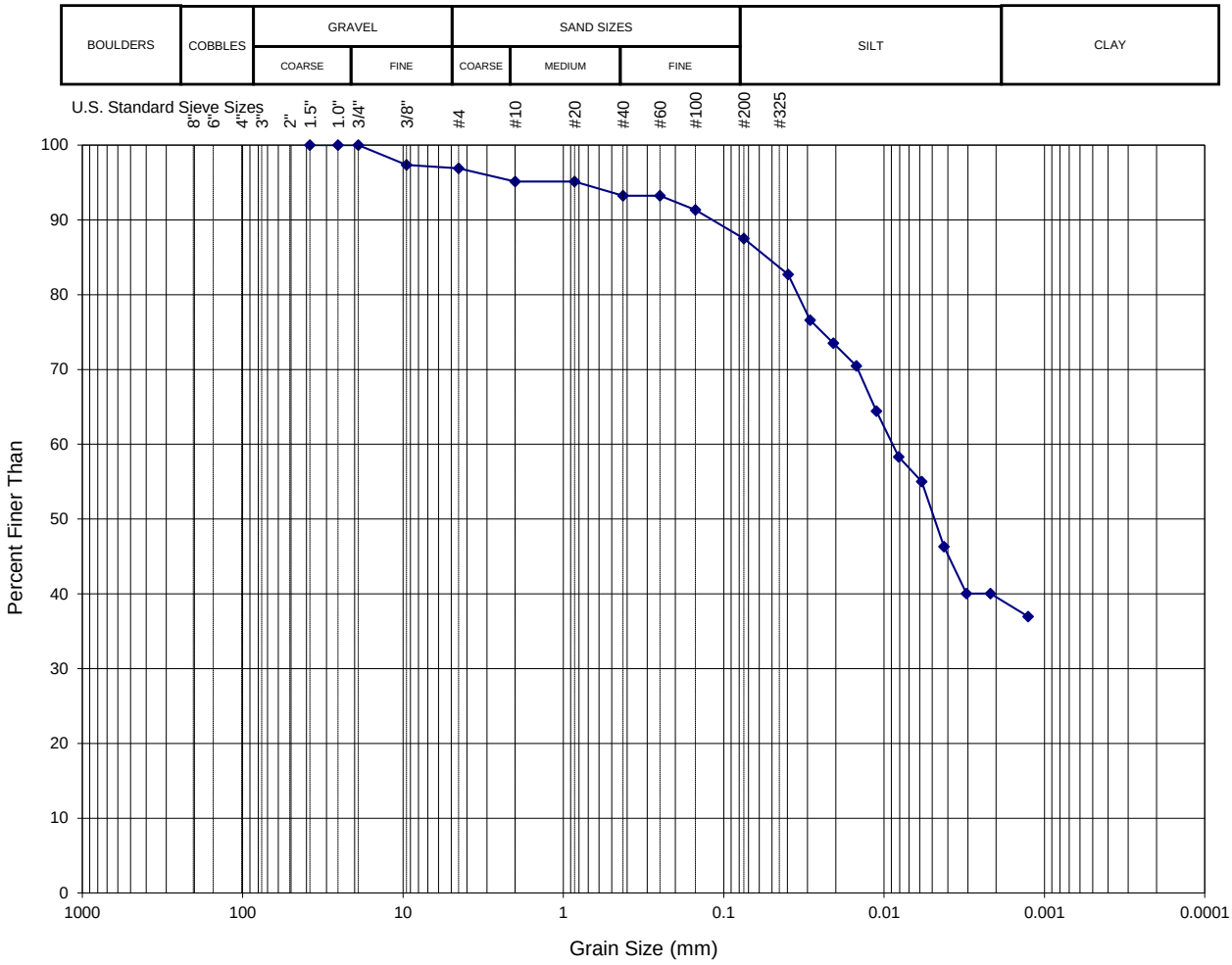
ALS Environmental

WATERLOO

PARTICLE SIZE DISTRIBUTION CURVE

ASTM METHOD D422-63

Project Name:	FISHER ENVIRONMENTAL
Project Number:	23379
Sample Location:	
Sample Number:	BH4-SS3 (5' - 7')
Sample Depth:	
Lab ID Number:	L2006307-2
Technician:	CB6
Sampler:	
Dates:	
Collected On:	06-10-17
Analyzed:	26-10-17



DESCRIPTION	SOIL CLASSIFICATION DESCRIPTIVE MODIFIERS		SUMMARY		
SILT AND CLAY TRACE SAND, TRACE GRAVEL	AND	36 - 50 %	GRAVEL	3	%
FINE GRAINED	ADJECTIVE (e.g. sandy)	21 - 35 %	SAND	9	%
ESTIMATED HAZEN NUMBER: 1.19E-10 cm/s	WITH	11 - 20 %	SILT + CLAY	88	%
NOTE: UNIFIED SOIL CLASSIFICATION SYSTEM	TRACE	1 - 10 %			

GRAIN SIZE DETERMINATIONS

Client:	FISHER ENVIRONMENTAL	Sample Location:	
Project Number:	23379	Sample ID:	BH5-SS2 (2.5' - 4,5')
Sampler:		Sample Depth:	
Technician:	CB6	Date Sampled:	06-10-17
Lab ID Number:	L2006307-3	Date Submitted:	12-10-17
		Date Completed:	26-10-17

Total Sample Weight	183	grams	Specific Gravity:	2.650	
Hydro. Sample Weight	50.000	grams	Liquid Specific Gravity:	1.000	
% Past #10	1.000	* 100	Grav Factor:	1.606	
Sub Factor	3.660				

Sieve Size	Weight Retained (grams)	Percent Retained	Diameter (mm)	Cum. % Retained	Cum. % Passing
38.1 mm. DIA.:	0.000	0.000	38.100	0.000	100.000
25.4 mm. DIA.:	0.000	0.000	25.400	0.000	100.000
19.0 mm. DIA.:	0.000	0.000	19.000	0.000	100.000
9.5 mm. DIA.:	0.000	0.000	9.500	0.000	100.000
NO. 4 SIEVE :	0.000	0.000	4.500	0.000	100.000
NO. 10 SIEVE :	0.000	0.000	2.000	0.000	100.000
NO. 20 SIEVE :	1.000	2.000	0.850	2.000	98.000
NO. 40 SIEVE :	1.000	2.000	0.425	4.000	96.000
NO. 60 SIEVE :	1.000	2.000	0.250	6.000	94.000
NO. 100 SIEVE:	1.000	2.000	0.150	8.000	92.000
NO. 200 SIEVE:	4.000	8.000	0.075	16.000	84.000

Time (min)	Hydrometer Reading	Temperature (C)	Diameter (mm)	% Suspended (Subsample)	% Suspended (Total Sample)
1.00	26.0	19.8	0.042	74.075	74.075
2.00	25.0	19.8	0.030	70.863	70.863
4.00	24.0	19.8	0.022	67.650	67.650
8.00	24.0	19.8	0.015	67.650	67.650
15.00	23.0	19.9	0.011	64.501	64.501
30.00	22.0	19.9	0.008	61.289	61.289
60.00	20.0	19.5	0.006	54.614	54.614
120.00	18.0	20.3	0.004	48.691	48.691
240.00	16.0	20.0	0.003	42.079	42.079
480.00	16.0	20.0	0.002	42.079	42.079
1440.00	15.0	20.0	0.001	38.867	38.867

GRAIN SIZE	% BY WT.	DIA. RANGE (mm)
% GRAVEL :	0.00	> 4.5
% COARSE SAND :	0.00	2.0 - 4.5
% MEDIUM SAND :	4.00	0.425 - 2.0
% FINE SAND :	12.00	0.075 - 0.425
% SILT :	42.40	0.075 - 0.002
% CLAY :	41.60	< 0.002
% CLAY :	51.69	< 0.005

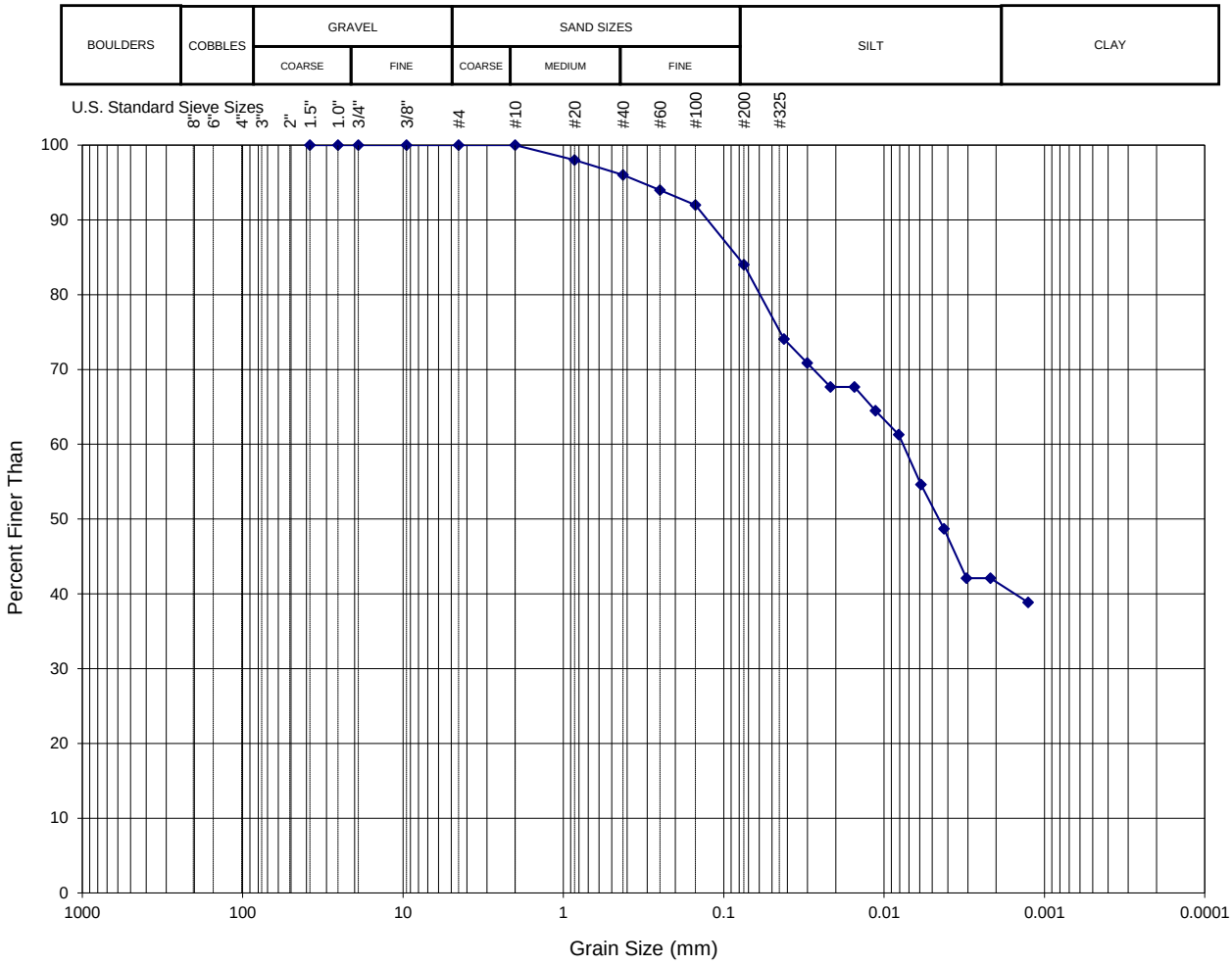
ALS Environmental

WATERLOO

PARTICLE SIZE DISTRIBUTION CURVE

ASTM METHOD D422-63

Project Name:	FISHER ENVIRONMENTAL
Project Number:	23379
Sample Location:	
Sample Number:	BH5-SS2 (2.5' - 4,5')
Sample Depth:	
Lab ID Number:	L2006307-3
Technician:	CB6
Sampler:	
Dates:	
Collected On:	06-10-17
Analyzed:	26-10-17



DESCRIPTION	SOIL CLASSIFICATION DESCRIPTIVE MODIFIERS		SUMMARY		
SILT AND CLAY WITH SAND	AND	36 - 50 %	GRAVEL	0	%
FINE GRAINED	ADJECTIVE (e.g. sandy)	21 - 35 %	SAND	16	%
ESTIMATED HAZEN NUMBER: 1.00E-10 cm/s	WITH	11 - 20 %	SILT + CLAY	84	%
NOTE: UNIFIED SOIL CLASSIFICATION SYSTEM	TRACE	1 - 10 %			

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www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

L2006307-COFC

COC Number: 15 - 611631

Page 1 of 1

Report To	Contact and company name below will appear on the final report	Report Format / Distribution	Select Service Level below - Please confirm all E&P TATs with your AM - surcharges will apply
Company:	FISHER ENVIRONMENTAL LTD.	Select Report Format: ☒ PDF ☐ EXCEL ☐ EDD (DIGITAL)	Regular [R] ☒ Standard TAT if received by 3 pm - business days - no surcharges apply
Contact:	MARIUS VOINEA	Quality Control (QC) Report with Report ☒ YES ☐ NO	PRIORITY (Business Days): 4 day [P4] ☐ / 3 day [P3] ☐ / 2 day [P2] ☐ — EMERGENCY: 1 Business day [E1] ☐ / Same Day, Weekend or Statutory holiday [E0] ☐
Phone:	(905) 475-7755	☐ Compare Results to Criteria on Report - provide details below if box checked	
	Company address below will appear on the final report	Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX	
Street:	400 ESNA PARK DR, #15	Email 1 or Fax	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm
City/Province:	MARKHAM, ON	Email 2 marius@fisherenvironmental.com	For tests that can not be performed according to the service level selected, you will be contacted.
Postal Code:	L3R 3K2	Email 3	
Invoice To	Same as Report To ☒ YES ☐ NO	Invoice Distribution	Analysis Request
	Copy of Invoice with Report ☐ YES ☐ NO	Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
Company:		Email 1 or Fax	
Contact:		Email 2	

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:		AFE/Cost Center:	PO#
Job #:	17-8409	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	
ALS Lab Work Order # (lab use only)	L2006307	ALS Contact: M	Sampler:

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	GRAIN SIZE + HYDROMETER	Number of Containers
1	BH3-SS2 (2.5'-4.5')	6/10/17		SOIL	X	1
2	BH4-SS3 (5'-7')	"		SOIL	X	1
3	BH5-SS2 (2.5'-4.5')	"		SOIL	X	1

Drinking Water (DW) Samples' (client use)	Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)
Are samples taken from a Regulated DW System? ☐ YES ☒ NO	
Are samples for human drinking water use? ☐ YES ☐ NO	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
21.3			18.1		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: MARIUS VOINEA	Date: Oct. 12/2017	Time: 2:10	Received by: CB	Date: Oct/12/17	Time: 14:10	Received by: RW	Date: 04-12-2017	Time: 16:00

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

FISHER ENVIRONMENTAL LABORATORIES

FULL RANGE ANALYTICAL SERVICES • SOIL/WATER/AIR TESTING • ENVIRONMENTAL COMPLIANCE PACKAGES • 24 HOUR EMERGENCY RESPONSE • CALA ACCREDITED

400 ESNA PARK DRIVE #15
MARKHAM, ONT. L3R 3K2
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F.E. Job #: 19-1840
Project Name: Phase II ESA
Project ID: FE-P-19-9254
Date Sampled: 1-Feb-19
Date Received: 1-Feb-19
Date Reported: 15-Feb-19
Location: 2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Soil	13	5-Feb-19	5-Feb-19	Metals F-18	SM 3125-B
Mercury	Soil	6	5-Feb-19	5-Feb-19	Metals F-1	SM 3120-B
VOCs	Soil	3	1-Feb-19	5-Feb-19	VOCs F-14	SW-846, 8260C
PHCs (F1 & BTEX)	Soil	13	1-Feb-19	5-Feb-19	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Soil	13	7-Feb-19	12-Feb-19	PHCs F-7	CCME CWS
PAHs	Soil	13	7-Feb-19	8-Feb-19	PAHs F-4	SM 6410-B
PCBs	Soil	6	6-Feb-19	6-Feb-19	PCBs F-5	SM 6630C
EC	Soil	13	5-Feb-19	5-Feb-19	pH-EC-SAR F-16	SW-846, 9050A
SAR	Soil	13	5-Feb-19	8-Feb-19	pH-EC-SAR F-16	SW-846, 6010C
Moisture Content	Soil	13	N/A	4-Feb-19	Support Procedures F-99	Carter (1993)

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:



Roger Lin, Ph. D., C. Chem.
Laboratory Manager

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-1*** BH203 0.00-0.60m	***19-1840-2*** BH203 1.50-2.10m	***19-1840-3*** BH206 0.00-0.60m	***19-1840-4*** BH206 1.50-2.10m	***19-1840-5*** BH207 0.00-0.60m	**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	<1	7.5
Arsenic	3.6	5.6	14	3.1	4.2	18
Barium	92	142	133	110	91	390
Beryllium	<2	<2	<2	<2	<2	(5) 4
Boron	<5	<5	<5	<5	<5	120
Cadmium	**1.4**	<1	1.0	<1	<1	1.2
Chromium	21	18	11	12	11	160
Cobalt	12	12	5.4	9.4	6.3	22
Copper	31	94	40	31	19	(180) 140
Lead	43	16	**248**	<10	**162**	120
Molybdenum	<2	<2	<2	<2	<2	6.9
Nickel	22	26	13	23	12	(130) 100
Selenium	<1	<1	<1	<1	<1	2.4
Silver	<0.5	<0.5	<0.5	<0.5	<0.5	(25) 20
Thallium	<1	<1	<1	<1	<1	1
Uranium	<1	<1	<1	<1	<1	23
Vanadium	27	24	17	17	17	86
Zinc	**549**	90	**430**	56	236	340

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Soil Standards (Table 3, R/P/I, Coarse Textured)

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-6*** BH207 1.50-2.10m	***19-1840-7*** BH208 0.75-1.35m	***19-1840-8*** BH208 1.50-2.10m	***19-1840-9*** BH209 0.00-0.60m	***19-1840-10*** BH209 1.50-2.10m	**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	<1	7.5
Arsenic	3.4	4.0	2.7	5.9	3.2	18
Barium	146	99	104	76	133	390
Beryllium	<2	<2	<2	<2	<2	(5) 4
Boron	<5	<5	<5	<5	<5	120
Cadmium	<1	<1	<1	<1	<1	1.2
Chromium	12	13	14	24	13	160
Cobalt	9.3	12	9.0	4.1	11	22
Copper	32	70	25	19	48	(180) 140
Lead	10	<10	19	76	<10	120
Molybdenum	<2	<2	<2	<2	<2	6.9
Nickel	22	26	23	9.7	27	(130) 100
Selenium	<1	<1	<1	<1	<1	2.4
Silver	<0.5	<0.5	<0.5	<0.5	<0.5	(25) 20
Thallium	<1	<1	<1	<1	<1	1
Uranium	<1	<1	<1	<1	<1	23
Vanadium	15	17	20	25	17	86
Zinc	60	67	78	164	68	340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-11*** BH211 0.00-0.60m	***19-1840-12*** BH211 1.50-2.10m	***19-1840-13*** BH211 (Dupe) 1.50-2.10m			**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1			7.5
Arsenic	3.7	3.5	3.2			18
Barium	74	113	111			390
Beryllium	<2	<2	<2			(5) 4
Boron	<5	<5	<5			120
Cadmium	<1	<1	<1			1.2
Chromium	9.6	11	11			160
Cobalt	4.6	10	9.6			22
Copper	18	45	44			(180) 140
Lead	78	<10	<10			120
Molybdenum	<2	<2	<2			6.9
Nickel	9.3	22	23			(130) 100
Selenium	<1	<1	<1			2.4
Silver	<0.5	<0.5	<0.5			(25) 20
Thallium	<1	<1	<1			1
Uranium	<1	<1	<1			23
Vanadium	14	15	14			86
Zinc	76	64	62			340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
Metals in Soil						
Antimony	<1	1	102	80-120	101	70-130
Arsenic	<1	1	117	80-120	96	70-130
Barium	<5	5	93	80-120	93	70-130
Beryllium	<2	2	104	80-120	91	70-130
Boron	<5	5	99	80-120	85	70-130
Cadmium	<1	1	103	80-120	102	70-130
Chromium	<5	5	103	80-120	70	70-130
Cobalt	<2	2	84	80-120	92	70-130
Copper	<5	5	91	80-120	93	70-130
Lead	<10	10	99	80-120	100	70-130
Molybdenum	<2	2	113	80-120	91	70-130
Nickel	<5	5	109	80-120	89	70-130
Selenium	<1	1	98	80-120	75	70-130
Silver	<0.5	0.5	113	80-120	89	70-130
Thallium	<1	1	102	80-120	107	70-130
Uranium	<1	1	96	80-120	107	70-130
Vanadium	<10	10	106	80-120	71	70-130
Zinc	<30	30	88	80-120	110	70-130

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Soil						
Antimony	0.0	0-30				
Arsenic	23	0-30				
Barium	0.4	0-30				
Beryllium	0.0	0-30				
Boron	0.0	0-30				
Cadmium	0.0	0-30				
Chromium	5.2	0-30				
Cobalt	6.1	0-30				
Copper	3.6	0-30				
Lead	0.0	0-30				
Molybdenum	0.0	0-30				
Nickel	4.3	0-30				
Selenium	0.0	0-30				
Silver	0.0	0-30				
Thallium	0.0	0-30				
Uranium	0.0	0-30				
Vanadium	3.8	0-30				
Zinc	6.6	0-30				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-1*** BH203 0.00-0.60m	***19-1840-2*** BH203 1.50-2.10m	***19-1840-7*** BH208 0.75-1.35m	***19-1840-8*** BH208 1.50-2.10m	***19-1840-9*** BH209 0.00-0.60m	**Soil Standards [1]**
	Concentration (µg/g)					
Mercury in Soil	0.13	<0.1	<0.1	<0.1	0.15	(1.8) 0.27

Parameter	***19-1840-10*** BH209 1.50-2.10m					**Soil Standards [1]**
	Concentration (µg/g)					
Mercury in Soil	<0.1					(1.8) 0.27

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**MS**	**AR**
	(µg/g)		**Recovery (%)**		**Recovery (%)**	
Mercury in Soil	<0.1	0.1	102	80-120	112	70-130

Parameter	**Duplicate**	**AR**				
	RPD (%)					
Mercury in Soil	0.0	0-30				

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-10*** BH209 1.50-2.10m	***19-1840-12*** BH211 1.50-2.10m	***19-1840-13*** BH211 (Dupe) 1.50-2.10m			**Soil Standards [1]**
	Concentration (µg/g)					
VOCs in Soil						
Acetone	<0.5	<0.5	<0.5			(28) 16
Benzene	<0.02	<0.02	<0.02			(0.17) 0.21
Bromodichloromethane	<0.05	<0.05	<0.05			13
Bromoform	<0.05	<0.05	<0.05			(0.26) 0.27
Bromomethane	<0.05	<0.05	<0.05			0.05
Carbon Tetrachloride	<0.05	<0.05	<0.05			(0.12) 0.05
Chlorobenzene	<0.05	<0.05	<0.05			(2.7) 2.4
Chloroform	<0.05	<0.05	<0.05			(0.18) 0.05
Dibromochloromethane	<0.05	<0.05	<0.05			9.4
1,2-Dichlorobenzene	<0.05	<0.05	<0.05			(4.3) 3.4
1,3-Dichlorobenzene	<0.05	<0.05	<0.05			(6) 4.8
1,4-Dichlorobenzene	<0.05	<0.05	<0.05			(0.097) 0.083
Dichlordifluoromethane	<0.05	<0.05	<0.05			(25) 16
1,1-Dichloroethane	<0.05	<0.05	<0.05			(11) 3.5
1,2-Dichloroethane	<0.05	<0.05	<0.05			0.05
1,1-Dichloroethylene	<0.05	<0.05	<0.05			0.05
c-1,2-Dichloroethylene	<0.05	<0.05	<0.05			(30) 3.4
t-1,2-Dichloroethylene	<0.05	<0.05	<0.05			(0.75) 0.084
1,2-Dichloropropane	<0.05	<0.05	<0.05			(0.085) 0.05
1,3-Dichloropropene (cis-+trans-)	<0.05	<0.05	<0.05			(0.083) 0.05
Ethylbenzene	<0.05	<0.05	<0.05			(15) 2
Ethylene Dibromide	<0.05	<0.05	<0.05			0.05
Hexane (n)	<0.05	<0.05	<0.05			(34) 2.8
Methyl Ethyl Ketone	<0.5	<0.5	<0.5			(44) 16
Methyl Isobutyl Ketone	<0.5	<0.5	<0.5			(4.3) 1.7
Methyl tert-butyl Ether	<0.05	<0.05	<0.05			(1.4) 0.75
Methylene Chloride	<0.05	<0.05	<0.05			(0.96) 0.1
Styrene	<0.05	<0.05	<0.05			(2.2) 0.7
1,1,1,2-Tetrachloroethane	<0.05	<0.05	<0.05			(0.05) 0.058
1,1,2,2-Tetrachloroethane	<0.05	<0.05	<0.05			0.05
Tetrachloroethylene	<0.05	<0.05	<0.05			(2.3) 0.28
Toluene	<0.2	<0.2	<0.2			(6) 2.3
1,1,1-Trichloroethane	<0.05	<0.05	<0.05			(3.4) 0.38
1,1,2-Trichloroethane	<0.05	<0.05	<0.05			0.05
Trichloroethylene	<0.05	<0.05	<0.05			(0.52) 0.061
Trichlorofluoromethane	<0.05	<0.05	<0.05			(5.8) 4
Vinyl Chloride	<0.02	<0.02	<0.02			(0.022) 0.02
Xylenes	<0.05	<0.05	<0.05			(25) 3.1
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	138	134	106			50-140
Toluene-d8	138	135	91			50-140
4-Bromofluorobenzene	136	136	123			50-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
VOCs in Soil						
Acetone	<0.5	0.5	100	50-140	100	50-140
Benzene	<0.02	0.02	77	60-130	76	50-140
Bromodichloromethane	<0.05	0.05	94	50-140	77	50-140
Bromoform	<0.05	0.05	78	60-130	100	50-140
Bromomethane	<0.05	0.05	100	50-140	100	50-140
Carbon Tetrachloride	<0.05	0.05	111	60-130	100	50-140
Chlorobenzene	<0.05	0.05	100	60-130	100	50-140
Chloroform	<0.05	0.05	81	60-130	120	50-140
Dibromochloromethane	<0.05	0.05	89	60-130	125	50-140
1,2-Dichlorobenzene	<0.05	0.05	91	60-130	100	50-140
1,3-Dichlorobenzene	<0.05	0.05	73	60-130	100	50-140
1,4-Dichlorobenzene	<0.05	0.05	100	60-130	100	50-140
Dichlorodifluoromethane	<0.05	0.05	91	50-140	100	50-140
1,1-Dichloroethane	<0.05	0.05	71	60-130	100	50-140
1,2-Dichloroethane	<0.05	0.05	78	60-130	100	50-140
1,1-Dichloroethylene	<0.05	0.05	98	60-130	100	50-140
c-1,2-Dichloroethylene	<0.05	0.05	78	60-130	100	50-140
t-1,2-Dichloroethylene	<0.05	0.05	82	60-130	100	50-140
1,2-Dichloropropane	<0.05	0.05	104	60-130	100	50-140
1,3-Dichloropropene (cis-+trans-)	<0.05	0.05	82	60-130	100	50-140
Ethylbenzene	<0.05	0.05	110	60-130	134	50-140
Ethylene Dibromide	<0.05	0.05	126	60-130	100	50-140
Hexane (n)	<0.05	0.05	100	60-130	100	50-140
Methyl Ethyl Ketone	<0.5	0.5	100	50-140	100	50-140
Methyl Isobutyl Ketone	<0.5	0.5	100	50-140	100	50-140
Methyl tert-butyl Ether	<0.05	0.05	100	60-130	100	50-140
Methylene Chloride	<0.05	0.05	82	60-130	71	50-140
Styrene	<0.05	0.05	92	60-130	100	50-140
1,1,1,2-Tetrachloroethane	<0.05	0.05	121	60-130	100	50-140
1,1,2,2-Tetrachloroethane	<0.05	0.05	88	60-130	100	50-140
Tetrachloroethylene	<0.05	0.05	91	60-130	70	50-140
Toluene	<0.2	0.2	86	60-130	85	50-140
1,1,1-Trichloroethane	<0.05	0.05	101	60-130	117	50-140
1,1,2-Trichloroethane	<0.05	0.05	105	60-130	100	50-140
Trichloroethylene	<0.05	0.05	78	60-130	83	50-140
Trichlorofluoromethane	<0.05	0.05	89	50-140	100	50-140
Vinyl Chloride	<0.02	0.02	79	50-140	100	50-140
Xylenes	<0.05	0.05	107	60-130	116	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
1,2-Dichloroethane-d4	120	60-140	66	60-140	64	60-140
Toluene-d8	119	60-140	113	60-140	62	60-140
4-Bromofluorobenzene	72	60-140	137	60-140	63	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
VOCs in Soil						
Acetone	0.0	0-50				
Benzene	0.0	0-50				
Bromodichloromethane	0.0	0-50				
Bromoform	0.0	0-50				
Bromomethane	0.0	0-50				
Carbon Tetrachloride	0.0	0-50				
Chlorobenzene	0.0	0-50				
Chloroform	0.0	0-50				
Dibromochloromethane	0.0	0-50				
1,2-Dichlorobenzene	0.0	0-50				
1,3-Dichlorobenzene	0.0	0-50				
1,4-Dichlorobenzene	0.0	0-50				
Dichlorodifluoromethane	0.0	0-50				
1,1-Dichloroethane	0.0	0-50				
1,2-Dichloroethane	0.0	0-50				
1,1-Dichloroethylene	0.0	0-50				
c-1,2-Dichloroethylene	0.0	0-50				
t-1,2-Dichloroethylene	0.0	0-50				
1,2-Dichloropropane	0.0	0-50				
1,3-Dichloropropene (cis-+trans-)	0.0	0-50				
Ethylbenzene	0.0	0-50				
Ethylene Dibromide	0.0	0-50				
Hexane (n)	0.0	0-50				
Methyl Ethyl Ketone	0.0	0-50				
Methyl Isobutyl Ketone	0.0	0-50				
Methyl tert-butyl Ether	0.0	0-50				
Methylene Chloride	0.0	0-50				
Styrene	0.0	0-50				
1,1,1,2-Tetrachloroethane	0.0	0-50				
1,1,2,2-Tetrachloroethane	0.0	0-50				
Tetrachloroethylene	0.0	0-50				
Toluene	14	0-50				
1,1,1-Trichloroethane	0.0	0-50				
1,1,2-Trichloroethane	0.0	0-50				
Trichloroethylene	0.0	0-50				
Trichlorofluoromethane	0.0	0-50				
Vinyl Chloride	0.0	0-50				
Xylenes	0.0	0-50				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
1,2-Dichloroethane-d4	138	60-140				
Toluene-d8	138	60-140				
4-Bromofluorobenzene	136	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-1*** BH203 0.00-0.60m	***19-1840-2*** BH203 1.50-2.10m	***19-1840-3*** BH206 0.00-0.60m	***19-1840-4*** BH206 1.50-2.10m	***19-1840-5*** BH207 0.00-0.60m	**Soil Standards [1]**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	<0.02	(0.17) 0.21
Toluene	<0.2	<0.2	<0.2	<0.2	<0.2	(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	<0.05	(15) 2
Xylenes	<0.05	<0.05	<0.05	<0.05	<0.05	(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10	<10	<10	<10	(65) 55
F2 (C_{10} - C_{16})	<10	<10	<10	<10	<10	(150) 98
F3 (C_{16} - C_{34})	<50	<50	56	<50	<50	(1300) 300
F4 (C_{34}-C_{50})	<50	<50	<50	<50	<50	(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes	Yes	
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	114	138	138	89	131	60-140
Toluene-d8	102	135	135	79	113	60-140
4-Bromofluorobenzene	93	129	134	121	131	60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-6*** BH207 1.50-2.10m	***19-1840-7*** BH208 0.75-1.35m	***19-1840-8*** BH208 1.50-2.10m	***19-1840-9*** BH209 0.00-0.60m	***19-1840-10*** BH209 1.50-2.10m	**Soil Standards [1]**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	<0.02	(0.17) 0.21
Toluene	<0.2	<0.2	<0.2	<0.2	<0.2	(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	<0.05	(15) 2
Xylenes	<0.05	<0.05	<0.05	<0.05	<0.05	(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10	<10	<10	<10	(65) 55
F2 (C_{10} - C_{16})	<10	<10	<10	<10	<10	(150) 98
F3 (C_{16} - C_{34})	<50	<50	<50	57	<50	(1300) 300
F4 (C_{34}-C_{50})	<50	<50	<50	<50	<50	(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes	Yes	
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	138	123	138	138	138	60-140
Toluene-d8	138	102	138	129	138	60-140
4-Bromofluorobenzene	132	137	129	131	136	60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-11*** BH211 0.00-0.60m	***19-1840-12*** BH211 1.50-2.10m	***19-1840-13*** BH211 (Dupe) 1.50-2.10m			**Soil Standards [1]**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02			(0.17) 0.21
Toluene	<0.2	<0.2	<0.2			(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05			(15) 2
Xylenes	<0.05	<0.05	<0.05			(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10	<10			(65) 55
F2 (C_{10} - C_{16})	<10	<10	<10			(150) 98
F3 (C_{16} - C_{34})	76	<50	<50			(1300) 300
F4 (C_{34}-C_{50})	<50	<50	<50			(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes			
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	104	134	106			60-140
Toluene-d8	86	135	91			60-140
4-Bromofluorobenzene	124	136	123			60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
BTEX in Soil						
Benzene	<0.02	0.02	77	60-130	76	50-140
Toluene	<0.2	0.2	86	60-130	85	50-140
Ethylbenzene	<0.05	0.05	110	60-130	134	50-140
Xylenes	<0.05	0.05	107	60-130	116	50-140
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	10	86	80-120	85	60-140
F2 (C_{10} - C_{16})	<10	10	117	80-120	111	60-140
F3 (C_{16} - C_{34})	<50	50	118	80-120	80	60-140
F4 (C_{34}-C_{50})	<50	50	102	80-120	93	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
1,2-Dichloroethane-d4	120	60-140	66	60-140	64	60-140
Toluene-d8	119	60-140	113	60-140	62	60-140
4-Bromofluorobenzene	72	60-140	137	60-140	63	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

BTEX should be subtracted from F_1, Naphthalene from F_2 and selected PAHs from F_3 if BTEX/PAHs are analyzed, then report $F_{1\text{-BTEX}}$, $F_{2\text{-Naph.}}$ and $F_{3\text{-PAH}}$. nC_{50} response factor was within 70% of nC_{10}+nC_{16}+nC_{34} average.

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Soil						
Benzene	0.0	0-50				
Toluene	14	0-50				
Ethylbenzene	0.0	0-50				
Xylenes	0.0	0-50				
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	7	0-30				
F2 (C_{10} - C_{16})	0.0	0-30				
F3 (C_{16} - C_{34})	26	0-30				
F4 (C_{34}-C_{50})	22	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
1,2-Dichloroethane-d4	138	60-140				
Toluene-d8	138	60-140				
4-Bromofluorobenzene	136	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-1*** BH203 0.00-0.60m	***19-1840-2*** BH203 1.50-2.10m	***19-1840-3*** BH206 0.00-0.60m	***19-1840-4*** BH206 1.50-2.10m	***19-1840-5*** BH207 0.00-0.60m	**Soil Standards** [1]
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	
Acenaphthylene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05	<0.05	<0.05	(58) 7.9
Fluorene	<0.05	<0.05	<0.05	<0.05	<0.05	(69) 62
Phenanthrene	<0.05	<0.05	<0.05	<0.05	0.11	(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.74) 0.67
Fluoranthene	<0.05	<0.05	<0.05	<0.05	0.21	0.69
Pyrene	<0.05	<0.05	<0.05	<0.05	0.15	78
Benzo [a] anthracene	<0.05	<0.05	<0.05	<0.05	0.07	(0.63) 0.5
Chrysene	<0.05	<0.05	<0.05	<0.05	0.1	(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.07	0.78
Benzo [k] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.07	0.78
Benzo [a] pyrene	<0.05	<0.05	<0.05	<0.05	0.08	0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1	<0.1	<0.1	<0.1	(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Benzo [g,h,i] perylene	<0.1	<0.1	<0.1	<0.1	<0.1	(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	115	120	93	97	109	50-140
Phenanthrene-d10	111	105	96	90	100	50-140
Chrysene-d12	93	109	100	88	99	50-140

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Soil Standards (Table 3, R/P/I, Coarse Textured).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-6*** BH207 1.50-2.10m	***19-1840-7*** BH208 0.75-1.35m	***19-1840-8*** BH208 1.50-2.10m	***19-1840-9*** BH209 0.00-0.60m	***19-1840-10*** BH209 1.50-2.10m	**Soil Standards** [1]
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	
Acenaphthylene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05	<0.05	<0.05	(58) 7.9
Fluorene	<0.05	<0.05	<0.05	<0.05	<0.05	(69) 62
Phenanthrene	0.11	<0.05	<0.05	0.15	<0.05	(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.74) 0.67
Fluoranthene	0.16	<0.05	<0.05	0.16	<0.05	0.69
Pyrene	0.1	<0.05	<0.05	0.13	<0.05	78
Benzo [a] anthracene	<0.05	<0.05	<0.05	0.07	<0.05	(0.63) 0.5
Chrysene	<0.05	<0.05	<0.05	0.08	<0.05	(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05	<0.05	<0.05	<0.05	0.78
Benzo [k] fluoranthene	<0.05	<0.05	<0.05	<0.05	<0.05	0.78
Benzo [a] pyrene	<0.05	<0.05	<0.05	<0.05	<0.05	0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1	<0.1	<0.1	<0.1	(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Benzo [g,h,i] perylene	<0.1	<0.1	<0.1	<0.1	<0.1	(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	88	102	101	85	102	50-140
Phenanthrene-d10	93	100	107	105	96	50-140
Chrysene-d12	102	101	85	105	95	50-140

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Soil Standards (Table 3, R/P/I, Coarse Textured).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-11*** BH211 0.00-0.60m	***19-1840-12*** BH211 1.50-2.10m	***19-1840-13*** BH211 (Dupe) 1.50-2.10m			**Soil Standards [1]**
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05			(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05			(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05			
Acenaphthylene	<0.05	<0.05	<0.05			(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05			(58) 7.9
Fluorene	<0.05	<0.05	<0.05			(69) 62
Phenanthrene	0.34	<0.05	<0.05			(7.8) 6.2
Anthracene	0.08	<0.05	<0.05			(0.74) 0.67
Fluoranthene	0.41	<0.05	<0.05			0.69
Pyrene	0.35	<0.05	<0.05			78
Benzo [a] anthracene	0.17	<0.05	<0.05			(0.63) 0.5
Chrysene	0.18	<0.05	<0.05			(7.8) 7
Benzo [b] fluoranthene	0.15	<0.05	<0.05			0.78
Benzo [k] fluoranthene	0.15	<0.05	<0.05			0.78
Benzo [a] pyrene	0.17	<0.05	<0.05			0.3
Indeno [1,2,3-cd] pyrene	0.14	<0.1	<0.1			(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1	<0.1			0.1
Benzo [g,h,i] perylene	0.1	<0.1	<0.1			(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	81	79	123			50-140
Phenanthrene-d10	107	93	84			50-140
Chrysene-d12	114	97	107			50-140

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Soil Standards (Table 3, R/P/I, Coarse Textured).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
PAHs in Soil						
Naphthalene	<0.05	0.05	127	50-140	89	50-140
2-Methylnaphthalene	<0.05	0.05	127	50-140	114	50-140
1-Methylnaphthalene	<0.05	0.05	127	50-140	140	50-140
Acenaphthylene	<0.05	0.05	91	50-140	108	50-140
Acenaphthene	<0.05	0.05	85	50-140	105	50-140
Fluorene	<0.05	0.05	121	50-140	89	50-140
Phenanthrene	<0.05	0.05	128	50-140	136	50-140
Anthracene	<0.05	0.05	102	50-140	126	50-140
Fluoranthene	<0.05	0.05	118	50-140	86	50-140
Pyrene	<0.05	0.05	107	50-140	102	50-140
Benzo [a] anthracene	<0.05	0.05	116	50-140	92	50-140
Chrysene	<0.05	0.05	90	50-140	113	50-140
Benzo [b] fluoranthene	<0.05	0.05	94	50-140	85	50-140
Benzo [k] fluoranthene	<0.05	0.05	94	50-140	85	50-140
Benzo [a] pyrene	<0.05	0.05	97	50-140	86	50-140
Indeno [1,2,3-cd] pyrene	<0.1	0.1	113	50-140	81	50-140
Dibenzo [a,h] anthracene	<0.1	0.1	128	50-140	86	50-140
Benzo [g,h,i] perylene	<0.1	0.1	115	50-140	94	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	103	50-140	120	50-140	91	50-140
Phenanthrene-d10	108	50-140	132	50-140	113	50-140
Chrysene-d12	101	50-140	96	50-140	103	50-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Soil						
Naphthalene	0.0	0-40				
2-Methylnaphthalene	0.0	0-40				
1-Methylnaphthalene	0.0	0-40				
Acenaphthylene	0.0	0-40				
Acenaphthene	0.0	0-40				
Fluorene	0.0	0-40				
Phenanthrene	0.0	0-40				
Anthracene	0.0	0-40				
Fluoranthene	0.0	0-40				
Pyrene	0.0	0-40				
Benzo [a] anthracene	0.0	0-40				
Chrysene	0.0	0-40				
Benzo [b] fluoranthene	0.0	0-40				
Benzo [k] fluoranthene	0.0	0-40				
Benzo [a] pyrene	0.0	0-40				
Indeno [1,2,3-cd] pyrene	0.0	0-40				
Dibenzo [a,h] anthracene	0.0	0-40				
Benzo [g,h,i] perylene	0.0	0-40				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	118	50-140				
Phenanthrene-d10	73	50-140				
Chrysene-d12	89	50-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-1*** BH203 0.00-0.60m	***19-1840-2*** BH203 1.50-2.10m	***19-1840-7*** BH208 0.75-1.35m	***19-1840-8*** BH208 1.50-2.10m	***19-1840-9*** BH209 0.00-0.60m	**Soil Standards [1]**
	Concentration (µg/g)					
PCBs in Soil	<0.02	<0.02	<0.02	<0.02	<0.02	0.35
Surrogate Recovery (%)						
Decachlorobiphenyl	105	92	85	102	112	60-140

Parameter	***19-1840-10*** BH209 1.50-2.10m					**Soil Standards [1]**
	Concentration (µg/g)					
PCBs in Soil	<0.02					0.35
Surrogate Recovery (%)						
Decachlorobiphenyl	103					60-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
PCBs in Soil	<0.02	0.02	113	60-140	116	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Decachlorobiphenyl	103	60-140	90	60-140	90	60-140

Parameter	Duplicate	AR				
	RPD (%)					
PCBs in Soil	0.0	0-40				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Decachlorobiphenyl	103	60-140				

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-1*** BH203 0.00-0.60m	***19-1840-2*** BH203 1.50-2.10m	***19-1840-3*** BH206 0.00-0.60m	***19-1840-4*** BH206 1.50-2.10m	***19-1840-5*** BH207 0.00-0.60m	**Soil Standards [1]**
***EC** (mS/cm)*	**0.83**	0.41	0.24	0.28	**1.6**	0.7

Parameter	***19-1840-6*** BH207 1.50-2.10m	***19-1840-7*** BH208 0.75-1.35m	***19-1840-8*** BH208 1.50-2.10m	***19-1840-9*** BH209 0.00-0.60m	***19-1840-10*** BH209 1.50-2.10m	**Soil Standards [1]**
***EC** (mS/cm)*	0.28	0.17	0.20	**3.2**	0.59	0.7

Parameter	***19-1840-11*** BH211 0.00-0.60m	***19-1840-12*** BH211 1.50-2.10m	***19-1840-13*** BH211 (Dupe) 1.50-2.10m			**Soil Standards [1]**
***EC** (mS/cm)*	**2.3**	0.29	0.29			0.7

Bold: Result exceeds limit noted in Soil Standards (Table 3, R/P/I, Coarse Textured).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
***EC** (mS/cm)*	<0.01	0.01	101	90-110	9.5	0-10

LEGEND:

RL - Reporting Limit

LCS - Laboratory Control Sample

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-1*** BH203 0.00-0.60m	***19-1840-2*** BH203 1.50-2.10m	***19-1840-3*** BH206 0.00-0.60m	***19-1840-4*** BH206 1.50-2.10m	***19-1840-5*** BH207 0.00-0.60m	**Soil Standards [1]**
SAR *(no unit)*	3.5	1.5	1.0	1.1	**8.1**	5

Parameter	***19-1840-6*** BH207 1.50-2.10m	***19-1840-7*** BH208 0.75-1.35m	***19-1840-8*** BH208 1.50-2.10m	***19-1840-9*** BH209 0.00-0.60m	***19-1840-10*** BH209 1.50-2.10m	**Soil Standards [1]**
SAR *(no unit)*	0.80	0.69	0.87	1.7	4.4	5

Parameter	***19-1840-11*** BH211 0.00-0.60m	***19-1840-12*** BH211 1.50-2.10m	***19-1840-13*** BH211 (Dupe) 1.50-2.10m			**Soil Standards [1]**
SAR *(no unit)*	**10**	0.75	0.74			5

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**LCS**	**AR**	**Duplicate**	**AR**		
			RPD (%)			
SAR *(no unit)*	0.42	0.30-0.50	2.1	0-30		

LEGEND:
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	13 Soil Samples

Parameter	***19-1840-1*** BH203 0.00-0.60m	***19-1840-2*** BH203 1.50-2.10m	***19-1840-3*** BH206 0.00-0.60m	***19-1840-4*** BH206 1.50-2.10m	***19-1840-5*** BH207 0.00-0.60m	***19-1840-6*** BH207 1.50-2.10m
Moisture Content (%)	18	20	13	10	17	13

Parameter	***19-1840-7*** BH208 0.75-1.35m	***19-1840-8*** BH208 1.50-2.10m	***19-1840-9*** BH209 0.00-0.60m	***19-1840-10*** BH209 1.50-2.10m	***19-1840-11*** BH211 0.00-0.60m	***19-1840-12*** BH211 1.50-2.10m
Moisture Content (%)	11	13	13	13	20	12

Parameter	***19-1840-13*** BH211 (Dupe) 1.50-2.10m					
Moisture Content (%)	11					

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
Moisture Content (%)	<0.1	0.1	99	70-130	3.7	0-20

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

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F.E. Job #: 19-1892
Project Name: Phase II ESA
Project ID: FE-P-19-9254
Date Sampled: 4, 6, 7-Feb-19
Date Received: 7-Feb-19
Date Reported: 15-Feb-19
Location: 2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Soil	8	11-Feb-19	11-Feb-19	Metals F-18	SM 3125-B
Mercury	Soil	2	11-Feb-19	11-Feb-19	Metals F-1	SM 3120-B
VOCs	Soil	1	7-Feb-19	12-Feb-19	VOCs F-14	SW-846, 8260C
PHCs (F1 & BTEX)	Soil	8	7-Feb-19	12-Feb-19	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Soil	8	8-Feb-19	14-Feb-19	PHCs F-7	CCME CWS
PAHs	Soil	8	13-Feb-19	14-Feb-19	PAHs F-4	SM 6410-B
PCBs	Soil	2	11-Feb-19	11-Feb-19	PCBs F-5	SM 6630C
EC	Soil	8	11-Feb-19	11-Feb-19	pH-EC-SAR F-16	SW-846, 9050A
SAR	Soil	8	11-Feb-19	14-Feb-19	pH-EC-SAR F-16	SW-846, 6010C
Moisture Content	Soil	8	N/A	8-Feb-19	Support Procedures F-99	Carter (1993)

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:

Roger Lin, Ph. D., C. Chem.
Laboratory Manager

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
Ronggen (Roger) Lin
CHEMIST

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-1892-1*** BH201 0.00-0.60m	***19-1892-2*** BH201 1.50-2.10m	***19-1892-3*** BH205 0.00-0.60m	***19-1892-4*** BH205 1.50-2.10m	***19-1892-5*** BH205 (Dupe) 1.50-2.10m	**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	<1	7.5
Arsenic	4.0	3.7	5.7	3.7	3.6	18
Barium	90	79	99	85	82	390
Beryllium	<2	<2	<2	<2	<2	(5) 4
Boron	7.4	9.9	11	12	13	120
Cadmium	<1	<1	<1	<1	<1	1.2
Chromium	14	19	20	19	20	160
Cobalt	6.1	13	8.9	13	13	22
Copper	23	41	34	48	56	(180) 140
Lead	115	<10	**210**	<10	<10	120
Molybdenum	<2	<2	<2	<2	<2	6.9
Nickel	12	27	20	28	28	(130) 100
Selenium	<1	<1	1.1	<1	<1	2.4
Silver	<0.5	<0.5	<0.5	<0.5	<0.5	(25) 20
Thallium	<1	<1	<1	<1	<1	1
Uranium	<1	<1	<1	<1	<1	23
Vanadium	24	29	31	30	30	86
Zinc	131	49	292	55	49	340

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Soil Standards (Table 3, R/P/I, Coarse Textured)

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-1892-6*** BH215 0.90-1.50m	***19-1892-7*** BH215 1.80-2.25m	***19-1892-8*** BH217 0.60-0.90m			**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1			7.5
Arsenic	3.9	4.6	3.9			18
Barium	84	95	192			390
Beryllium	<2	<2	<2			(5) 4
Boron	14	14	13			120
Cadmium	<1	<1	<1			1.2
Chromium	26	31	28			160
Cobalt	14	15	13			22
Copper	96	49	44			(180) 140
Lead	<10	<10	**203**			120
Molybdenum	<2	<2	<2			6.9
Nickel	30	32	28			(130) 100
Selenium	<1	<1	<1			2.4
Silver	<0.5	<0.5	<0.5			(25) 20
Thallium	<1	<1	<1			1
Uranium	<1	<1	1.1			23
Vanadium	35	37	38			86
Zinc	55	63	332			340

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Soil Standards (Table 3, R/P/I, Coarse Textured)

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
Metals in Soil						
Antimony	<1	1	97	80-120	100	70-130
Arsenic	<1	1	92	80-120	100	70-130
Barium	<5	5	106	80-120	85	70-130
Beryllium	<2	2	100	80-120	99	70-130
Boron	<5	5	85	80-120	86	70-130
Cadmium	<1	1	105	80-120	106	70-130
Chromium	<5	5	98	80-120	76	70-130
Cobalt	<2	2	81	80-120	87	70-130
Copper	<5	5	84	80-120	79	70-130
Lead	<10	10	102	80-120	103	70-130
Molybdenum	<2	2	98	80-120	92	70-130
Nickel	<5	5	106	80-120	75	70-130
Selenium	<1	1	102	80-120	86	70-130
Silver	<0.5	0.5	103	80-120	93	70-130
Thallium	<1	1	101	80-120	108	70-130
Uranium	<1	1	107	80-120	109	70-130
Vanadium	<10	10	88	80-120	85	70-130
Zinc	<30	30	96	80-120	101	70-130

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Soil						
Antimony	0.0	0-30				
Arsenic	3.5	0-30				
Barium	3.6	0-30				
Beryllium	0.0	0-30				
Boron	0.0	0-30				
Cadmium	0.0	0-30				
Chromium	0.5	0-30				
Cobalt	0.0	0-30				
Copper	2.5	0-30				
Lead	3.2	0-30				
Molybdenum	0.0	0-30				
Nickel	5.8	0-30				
Selenium	0.0	0-30				
Silver	0.0	0-30				
Thallium	0.0	0-30				
Uranium	0.0	0-30				
Vanadium	0.4	0-30				
Zinc	1.1	0-30				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-1892-1*** BH201 0.00-0.60m	***19-1892-2*** BH201 1.50-2.10m				**Soil Standards** [1]
	Concentration (µg/g)					
Mercury in Soil	0.14	<0.1				(1.8) 0.27

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**MS**	**AR**
	(µg/g)		**Recovery (%)**		**Recovery (%)**	
Mercury in Soil	<0.1	0.1	105	80-120	126	70-130

Parameter	**Duplicate**	**AR**				
	RPD (%)					
Mercury in Soil	2.1	0-30				

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-1892-2*** BH201 1.50-2.10m					**Soil Standards** [1]
	Concentration (µg/g)					
VOCs in Soil						
Acetone	<0.5					(28) 16
Benzene	<0.02					(0.17) 0.21
Bromodichloromethane	<0.05					13
Bromoform	<0.05					(0.26) 0.27
Bromomethane	<0.05					0.05
Carbon Tetrachloride	<0.05					(0.12) 0.05
Chlorobenzene	<0.05					(2.7) 2.4
Chloroform	<0.05					(0.18) 0.05
Dibromochloromethane	<0.05					9.4
1,2-Dichlorobenzene	<0.05					(4.3) 3.4
1,3-Dichlorobenzene	<0.05					(6) 4.8
1,4-Dichlorobenzene	<0.05					(0.097) 0.083
Dichlordifluoromethane	<0.05					(25) 16
1,1-Dichloroethane	<0.05					(11) 3.5
1,2-Dichloroethane	<0.05					0.05
1,1-Dichloroethylene	<0.05					0.05
c-1,2-Dichloroethylene	<0.05					(30) 3.4
t-1,2-Dichloroethylene	<0.05					(0.75) 0.084
1,2-Dichloropropane	<0.05					(0.085) 0.05
1,3-Dichloropropene (cis-+trans-)	<0.05					(0.083) 0.05
Ethylbenzene	<0.05					(15) 2
Ethylene Dibromide	<0.05					0.05
Hexane (n)	<0.05					(34) 2.8
Methyl Ethyl Ketone	<0.5					(44) 16
Methyl Isobutyl Ketone	<0.5					(4.3) 1.7
Methyl tert-butyl Ether	<0.05					(1.4) 0.75
Methylene Chloride	<0.05					(0.96) 0.1
Styrene	<0.05					(2.2) 0.7
1,1,1,2-Tetrachloroethane	<0.05					(0.05) 0.058
1,1,2,2-Tetrachloroethane	<0.05					0.05
Tetrachloroethylene	<0.05					(2.3) 0.28
Toluene	<0.2					(6) 2.3
1,1,1-Trichloroethane	<0.05					(3.4) 0.38
1,1,2-Trichloroethane	<0.05					0.05
Trichloroethylene	<0.05					(0.52) 0.061
Trichlorofluoromethane	<0.05					(5.8) 4
Vinyl Chloride	<0.02					(0.022) 0.02
Xylenes	<0.05					(25) 3.1
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	109					50-140
Toluene-d8	86					50-140
4-Bromofluorobenzene	125					50-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
VOCs in Soil						
Acetone	<0.5	0.5	100	50-140	100	50-140
Benzene	<0.02	0.02	72	60-130	75	50-140
Bromodichloromethane	<0.05	0.05	77	50-140	78	50-140
Bromoform	<0.05	0.05	112	60-130	93	50-140
Bromomethane	<0.05	0.05	100	50-140	100	50-140
Carbon Tetrachloride	<0.05	0.05	100	60-130	70	50-140
Chlorobenzene	<0.05	0.05	100	60-130	112	50-140
Chloroform	<0.05	0.05	108	60-130	106	50-140
Dibromochloromethane	<0.05	0.05	118	60-130	107	50-140
1,2-Dichlorobenzene	<0.05	0.05	100	60-130	79	50-140
1,3-Dichlorobenzene	<0.05	0.05	100	60-130	88	50-140
1,4-Dichlorobenzene	<0.05	0.05	100	60-130	110	50-140
Dichlorodifluoromethane	<0.05	0.05	100	50-140	96	50-140
1,1-Dichloroethane	<0.05	0.05	100	60-130	97	50-140
1,2-Dichloroethane	<0.05	0.05	100	60-130	72	50-140
1,1-Dichloroethylene	<0.05	0.05	100	60-130	103	50-140
c-1,2-Dichloroethylene	<0.05	0.05	100	60-130	112	50-140
t-1,2-Dichloroethylene	<0.05	0.05	100	60-130	112	50-140
1,2-Dichloropropane	<0.05	0.05	100	60-130	98	50-140
1,3-Dichloropropene (cis-+trans-)	<0.05	0.05	100	60-130	104	50-140
Ethylbenzene	<0.05	0.05	102	60-130	111	50-140
Ethylene Dibromide	<0.05	0.05	100	60-130	102	50-140
Hexane (n)	<0.05	0.05	100	60-130	100	50-140
Methyl Ethyl Ketone	<0.5	0.5	100	50-140	100	50-140
Methyl Isobutyl Ketone	<0.5	0.5	100	50-140	100	50-140
Methyl tert-butyl Ether	<0.05	0.05	100	60-130	100	50-140
Methylene Chloride	<0.05	0.05	105	60-130	118	50-140
Styrene	<0.05	0.05	100	60-130	104	50-140
1,1,1,2-Tetrachloroethane	<0.05	0.05	100	60-130	108	50-140
1,1,2,2-Tetrachloroethane	<0.05	0.05	100	60-130	103	50-140
Tetrachloroethylene	<0.05	0.05	73	60-130	79	50-140
Toluene	<0.2	0.2	110	60-130	92	50-140
1,1,1-Trichloroethane	<0.05	0.05	93	60-130	11	50-140
1,1,2-Trichloroethane	<0.05	0.05	100	60-130	73	50-140
Trichloroethylene	<0.05	0.05	108	60-130	79	50-140
Trichlorofluoromethane	<0.05	0.05	100	50-140	103	50-140
Vinyl Chloride	<0.02	0.02	100	50-140	130	50-140
Xylenes	<0.05	0.05	84	60-130	108	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
1,2-Dichloroethane-d4	92	60-140	72	60-140	73	60-140
Toluene-d8	82	60-140	61	60-140	76	60-140
4-Bromofluorobenzene	62	60-140	63	60-140	129	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
VOCs in Soil						
Acetone	0.0	0-50				
Benzene	0.0	0-50				
Bromodichloromethane	0.0	0-50				
Bromoform	0.0	0-50				
Bromomethane	0.0	0-50				
Carbon Tetrachloride	0.0	0-50				
Chlorobenzene	0.0	0-50				
Chloroform	0.0	0-50				
Dibromochloromethane	0.0	0-50				
1,2-Dichlorobenzene	0.0	0-50				
1,3-Dichlorobenzene	0.0	0-50				
1,4-Dichlorobenzene	0.0	0-50				
Dichlorodifluoromethane	0.0	0-50				
1,1-Dichloroethane	0.0	0-50				
1,2-Dichloroethane	0.0	0-50				
1,1-Dichloroethylene	0.0	0-50				
c-1,2-Dichloroethylene	0.0	0-50				
t-1,2-Dichloroethylene	0.0	0-50				
1,2-Dichloropropane	0.0	0-50				
1,3-Dichloropropene (cis-+trans-)	0.0	0-50				
Ethylbenzene	0.0	0-50				
Ethylene Dibromide	0.0	0-50				
Hexane (n)	0.0	0-50				
Methyl Ethyl Ketone	0.0	0-50				
Methyl Isobutyl Ketone	0.0	0-50				
Methyl tert-butyl Ether	0.0	0-50				
Methylene Chloride	0.0	0-50				
Styrene	0.0	0-50				
1,1,1,2-Tetrachloroethane	0.0	0-50				
1,1,2,2-Tetrachloroethane	0.0	0-50				
Tetrachloroethylene	0.0	0-50				
Toluene	20	0-50				
1,1,1-Trichloroethane	0.0	0-50				
1,1,2-Trichloroethane	0.0	0-50				
Trichloroethylene	0.0	0-50				
Trichlorofluoromethane	0.0	0-50				
Vinyl Chloride	0.0	0-50				
Xylenes	0.0	0-50				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
1,2-Dichloroethane-d4	88	60-140				
Toluene-d8	68	60-140				
4-Bromofluorobenzene	89	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-1892-1*** BH201 0.00-0.60m	***19-1892-2*** BH201 1.50-2.10m	***19-1892-3*** BH205 0.00-0.60m	***19-1892-4*** BH205 1.50-2.10m	***19-1892-5*** BH205 (Dupe) 1.50-2.10m	**Soil Standards [1]**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	<0.02	(0.17) 0.21
Toluene	<0.2	<0.2	<0.2	<0.2	<0.2	(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	<0.05	(15) 2
Xylenes	<0.05	<0.05	<0.05	<0.05	<0.05	(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10	<10	<10	<10	(65) 55
F2 (C_{10} - C_{16})	<10	<10	<10	<10	<10	(150) 98
F3 (C_{16} - C_{34})	<50	<50	90	<50	<50	(1300) 300
F4 (C_{34}-C_{50})	<50	<50	<50	<50	<50	(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes	Yes	
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	96	109	66	76	106	60-140
Toluene-d8	79	86	61	62	80	60-140
4-Bromofluorobenzene	96	125	61	102	104	60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-1892-6*** BH215 0.90-1.50m	***19-1892-7*** BH215 1.80-2.25m	***19-1892-8*** BH217 0.60-0.90m			**Soil Standards [1]**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02			(0.17) 0.21
Toluene	<0.2	<0.2	<0.2			(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05			(15) 2
Xylenes	<0.05	<0.05	<0.05			(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10	<10			(65) 55
F2 (C_{10} - C_{16})	<10	<10	<10			(150) 98
F3 (C_{16} - C_{34})	<50	<50	<50			(1300) 300
F4 (C_{34}-C_{50})	<50	<50	<50			(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes			
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	101	98	81			60-140
Toluene-d8	82	75	61			60-140
4-Bromofluorobenzene	107	102	83			60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
BTEX in Soil						
Benzene	<0.02	0.02	72	60-130	75	50-140
Toluene	<0.2	0.2	110	60-130	92	50-140
Ethylbenzene	<0.05	0.05	102	60-130	111	50-140
Xylenes	<0.05	0.05	84	60-130	108	50-140
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	10	110	80-120	92	60-140
F2 (C_{10} - C_{16})	<10	10	117	80-120	118	60-140
F3 (C_{16} - C_{34})	<50	50	118	80-120	127	60-140
F4 (C_{34}-C_{50})	<50	50	102	80-120	124	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
1,2-Dichloroethane-d4	92	60-140	72	60-140	73	60-140
Toluene-d8	82	60-140	61	60-140	76	60-140
4-Bromofluorobenzene	62	60-140	63	60-140	129	60-140

LEGEND:

RL - Reporting Limit

LCS - Laboratory Control Sample

MS - Matrix Spike

AR - Acceptable Range

BTEX should be subtracted from F_1, Naphthalene from F_2 and selected PAHs from F_3 if BTEX/PAHs are analyzed, then report $F_{1\text{-BTEX}}$, $F_{2\text{-Naph.}}$ and $F_{3\text{-PAH}}$. nC_{50} response factor was within 70% of nC_{10}+nC_{16}+nC_{34} average.

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Soil						
Benzene	0.0	0-50				
Toluene	20	0-50				
Ethylbenzene	0.0	0-50				
Xylenes	0.0	0-50				
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	6.2	0-30				
F2 (C_{10} - C_{16})	0.0	0-30				
F3 (C_{16} - C_{34})	26	0-30				
F4 (C_{34}-C_{50})	22	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
1,2-Dichloroethane-d4	88	60-140				
Toluene-d8	68	60-140				
4-Bromofluorobenzene	89	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-1892-1*** BH201 0.00-0.60m	***19-1892-2*** BH201 1.50-2.10m	***19-1892-3*** BH205 0.00-0.60m	***19-1892-4*** BH205 1.50-2.10m	***19-1892-5*** BH205 (Dupe) 1.50-2.10m	**Soil Standards** [1]
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	
Acenaphthylene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05	<0.05	<0.05	(58) 7.9
Fluorene	<0.05	<0.05	<0.05	<0.05	<0.05	(69) 62
Phenanthrene	<0.05	<0.05	<0.05	<0.05	<0.05	(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.74) 0.67
Fluoranthene	0.11	<0.05	0.31	<0.05	<0.05	0.69
Pyrene	0.09	<0.05	0.29	<0.05	<0.05	78
Benzo [a] anthracene	<0.05	<0.05	0.10	<0.05	<0.05	(0.63) 0.5
Chrysene	<0.05	<0.05	0.16	<0.05	<0.05	(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05	0.10	<0.05	<0.05	0.78
Benzo [k] fluoranthene	<0.05	<0.05	0.10	<0.05	<0.05	0.78
Benzo [a] pyrene	<0.05	<0.05	0.09	<0.05	<0.05	0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1	<0.1	<0.1	<0.1	(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Benzo [g,h,i] perylene	<0.1	<0.1	<0.1	<0.1	<0.1	(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	137	112	128	112	104	50-140
Phenanthrene-d10	102	75	103	102	103	50-140
Chrysene-d12	106	102	105	106	109	50-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-1892-6*** BH215 0.90-1.50m	***19-1892-7*** BH215 1.80-2.25m	***19-1892-8*** BH217 0.60-0.90m			**Soil Standards [1]**
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05			(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05			(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05			
Acenaphthylene	<0.05	<0.05	<0.05			(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05			(58) 7.9
Fluorene	<0.05	<0.05	<0.05			(69) 62
Phenanthrene	<0.05	<0.05	<0.05			(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05			(0.74) 0.67
Fluoranthene	<0.05	<0.05	<0.05			0.69
Pyrene	<0.05	<0.05	<0.05			78
Benzo [a] anthracene	<0.05	<0.05	<0.05			(0.63) 0.5
Chrysene	<0.05	<0.05	<0.05			(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05	<0.05			0.78
Benzo [k] fluoranthene	<0.05	<0.05	<0.05			0.78
Benzo [a] pyrene	<0.05	<0.05	<0.05			0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1	<0.1			(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1	<0.1			0.1
Benzo [g,h,i] perylene	<0.1	<0.1	<0.1			(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	118	103	116			50-140
Phenanthrene-d10	81	91	109			50-140
Chrysene-d12	96	107	77			50-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
PAHs in Soil						
Naphthalene	<0.05	0.05	97	50-140	76	50-140
2-Methylnaphthalene	<0.05	0.05	101	50-140	81	50-140
1-Methylnaphthalene	<0.05	0.05	84	50-140	96	50-140
Acenaphthylene	<0.05	0.05	95	50-140	92	50-140
Acenaphthene	<0.05	0.05	101	50-140	86	50-140
Fluorene	<0.05	0.05	102	50-140	98	50-140
Phenanthrene	<0.05	0.05	117	50-140	115	50-140
Anthracene	<0.05	0.05	113	50-140	98	50-140
Fluoranthene	<0.05	0.05	103	50-140	103	50-140
Pyrene	<0.05	0.05	107	50-140	103	50-140
Benzo [a] anthracene	<0.05	0.05	77	50-140	85	50-140
Chrysene	<0.05	0.05	116	50-140	85	50-140
Benzo [b] fluoranthene	<0.05	0.05	95	50-140	75	50-140
Benzo [k] fluoranthene	<0.05	0.05	93	50-140	73	50-140
Benzo [a] pyrene	<0.05	0.05	89	50-140	69	50-140
Indeno [1,2,3-cd] pyrene	<0.1	0.1	95	50-140	91	50-140
Dibenzo [a,h] anthracene	<0.1	0.1	90	50-140	87	50-140
Benzo [g,h,i] perylene	<0.1	0.1	92	50-140	93	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	117	50-140	125	50-140	106	50-140
Phenanthrene-d10	98	50-140	99	50-140	90	50-140
Chrysene-d12	123	50-140	102	50-140	85	50-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Soil						
Naphthalene	0.0	0-40				
2-Methylnaphthalene	0.0	0-40				
1-Methylnaphthalene	0.0	0-40				
Acenaphthylene	0.0	0-40				
Acenaphthene	0.0	0-40				
Fluorene	0.0	0-40				
Phenanthrene	0.0	0-40				
Anthracene	0.0	0-40				
Fluoranthene	0.0	0-40				
Pyrene	0.0	0-40				
Benzo [a] anthracene	0.0	0-40				
Chrysene	0.0	0-40				
Benzo [b] fluoranthene	0.0	0-40				
Benzo [k] fluoranthene	0.0	0-40				
Benzo [a] pyrene	0.0	0-40				
Indeno [1,2,3-cd] pyrene	0.0	0-40				
Dibenzo [a,h] anthracene	0.0	0-40				
Benzo [g,h,i] perylene	0.0	0-40				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	107	50-140				
Phenanthrene-d10	65	50-140				
Chrysene-d12	104	50-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-1892-1*** BH201 0.00-0.60m	***19-1892-2*** BH201 1.50-2.10m				**Soil Standards [1]**
	Concentration (µg/g)					
PCBs in Soil	<0.02	<0.02				0.35
Surrogate Recovery (%)						
Decachlorobiphenyl	91	106				60-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**MS**	**AR**
	(µg/g)		**Recovery (%)**		**Recovery (%)**	
PCBs in Soil	<0.02	0.02	110	60-140	105	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Decachlorobiphenyl	113	60-140	111	60-140	110	60-140

Parameter	**Duplicate**	**AR**				
	RPD (%)					
PCBs in Soil	0.0	0-40				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Decachlorobiphenyl	110	60-140				

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-1892-1*** BH201 0.00-0.60m	***19-1892-2*** BH201 1.50-2.10m	***19-1892-3*** BH205 0.00-0.60m	***19-1892-4*** BH205 1.50-2.10m	***19-1892-5*** BH205 (Dupe) 1.50-2.10m	**Soil Standards [1]**
***EC** (mS/cm)*	0.57	0.29	0.21	0.14	0.15	0.7

Parameter	***19-1892-6*** BH215 0.90-1.50m	***19-1892-7*** BH215 1.80-2.25m	***19-1892-8*** BH217 0.60-0.90m			**Soil Standards [1]**
***EC** (mS/cm)*	0.20	0.17	0.19			0.7

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
***EC** (mS/cm)*	<0.01	0.01	101	90-110	9.5	0-10

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-1892-1*** BH201 0.00-0.60m	***19-1892-2*** BH201 1.50-2.10m	***19-1892-3*** BH205 0.00-0.60m	***19-1892-4*** BH205 1.50-2.10m	***19-1892-5*** BH205 (Dupe) 1.50-2.10m	**Soil Standards [1]**
SAR *(no unit)*	2.8	1.6	0.72	0.33	0.34	5

Parameter	***19-1892-6*** BH215 0.90-1.50m	***19-1892-7*** BH215 1.80-2.25m	***19-1892-8*** BH217 0.60-0.90m			**Soil Standards [1]**
SAR *(no unit)*	0.46	0.44	1.1			5

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**LCS**	**AR**	**Duplicate**	**AR**		
			RPD (%)			
SAR *(no unit)*	0.40	0.30-0.50	1.11	0-30		

LEGEND:
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-1892-1*** BH201 0.00-0.60m	***19-1892-2*** BH201 1.50-2.10m	***19-1892-3*** BH205 0.00-0.60m	***19-1892-4*** BH205 1.50-2.10m	***19-1892-5*** BH205 (Dupe) 1.50-2.10m	***19-1892-6*** BH215 0.90-1.50m
Moisture Content (%)	20	14	20	10	11	11

Parameter	***19-1892-7*** BH215 1.80-2.25m	***19-1892-8*** BH217 0.60-0.90m				
Moisture Content (%)	12	17				

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
Moisture Content (%)	<0.1	0.1	99	70-130	3.7	0-20

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

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F.E. Job #: 19-1916
Project Name: Phase II ESA
Project ID: FE-P-19-9254
Date Sampled: 8-Feb-19
Date Received: 11-Feb-19
Date Reported: 20-Feb-19
Location: 2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Soil	2	13-Feb-19	19-Feb-19	Metals F-18	SM 3125-B
VOCs	Soil	1	11-Feb-19	14-Feb-19	VOCs F-14	SW-846, 8260C
PHCs (F1 & BTEX)	Soil	2	11-Feb-19	14-Feb-19	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Soil	2	12-Feb-19	14-Feb-19	PHCs F-7	CCME CWS
PAHs	Soil	2	15-Feb-19	15-Feb-19	PAHs F-4	SM 6410-B
EC	Soil	2	12-Feb-19	12-Feb-19	pH-EC-SAR F-16	SW-846, 9050A
SAR	Soil	2	12-Feb-19	14-Feb-19	pH-EC-SAR F-16	SW-846, 6010C
Moisture Content	Soil	2	N/A	12-Feb-19	Support Procedures F-99	Carter (1993)

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:



Roger Lin, Ph. D., C. Chem.
Laboratory Manager



Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-1916-1*** MW218 0.90-1.20m	***19-1916-2*** MW218 1.20-1.65m				**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1				7.5
Arsenic	3.6	3.9				18
Barium	87	96				390
Beryllium	<2	<2				(5) 4
Boron	11	11				120
Cadmium	<1	<1				1.2
Chromium	16	16				160
Cobalt	9.5	9.8				22
Copper	33	38				(180) 140
Lead	<10	<10				120
Molybdenum	<2	<2				6.9
Nickel	21	22				(130) 100
Selenium	<1	1.1				2.4
Silver	<0.5	<0.5				(25) 20
Thallium	<1	<1				1
Uranium	<1	<1				23
Vanadium	24	23				86
Zinc	52	51				340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
Metals in Soil						
Antimony	<1	1	97	80-120	91	70-130
Arsenic	<1	1	101	80-120	97	70-130
Barium	<5	5	109	80-120	113	70-130
Beryllium	<2	2	99	80-120	94	70-130
Boron	<5	5	84	80-120	72	70-130
Cadmium	<1	1	106	80-120	95	70-130
Chromium	<5	5	104	80-120	88	70-130
Cobalt	<2	2	112	80-120	96	70-130
Copper	<5	5	112	80-120	118	70-130
Lead	<10	10	103	80-120	97	70-130
Molybdenum	<2	2	101	80-120	81	70-130
Nickel	<5	5	111	80-120	88	70-130
Selenium	<1	1	108	80-120	77	70-130
Silver	<0.5	0.5	106	80-120	87	70-130
Thallium	<1	1	104	80-120	103	70-130
Uranium	<1	1	102	80-120	104	70-130
Vanadium	<10	10	107	80-120	89	70-130
Zinc	<30	30	118	80-120	97	70-130

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Soil						
Antimony	0.0	0-30				
Arsenic	0.4	0-30				
Barium	5.5	0-30				
Beryllium	0.0	0-30				
Boron	23	0-30				
Cadmium	0.0	0-30				
Chromium	2.6	0-30				
Cobalt	1.4	0-30				
Copper	6.8	0-30				
Lead	0.0	0-30				
Molybdenum	0.0	0-30				
Nickel	1.2	0-30				
Selenium	0.0	0-30				
Silver	0.0	0-30				
Thallium	0.0	0-30				
Uranium	0.0	0-30				
Vanadium	0.4	0-30				
Zinc	0.2	0-30				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-1916-2*** MW218 1.20-1.65m					**Soil Standards** [1]
	Concentration (µg/g)					
VOCs in Soil						
Acetone	<0.5					(28) 16
Benzene	<0.02					(0.17) 0.21
Bromodichloromethane	<0.05					13
Bromoform	<0.05					(0.26) 0.27
Bromomethane	<0.05					0.05
Carbon Tetrachloride	<0.05					(0.12) 0.05
Chlorobenzene	<0.05					(2.7) 2.4
Chloroform	<0.05					(0.18) 0.05
Dibromochloromethane	<0.05					9.4
1,2-Dichlorobenzene	<0.05					(4.3) 3.4
1,3-Dichlorobenzene	<0.05					(6) 4.8
1,4-Dichlorobenzene	<0.05					(0.097) 0.083
Dichlordifluoromethane	<0.05					(25) 16
1,1-Dichloroethane	<0.05					(11) 3.5
1,2-Dichloroethane	<0.05					0.05
1,1-Dichloroethylene	<0.05					0.05
c-1,2-Dichloroethylene	<0.05					(30) 3.4
t-1,2-Dichloroethylene	<0.05					(0.75) 0.084
1,2-Dichloropropane	<0.05					(0.085) 0.05
1,3-Dichloropropene (cis-+trans-)	<0.05					(0.083) 0.05
Ethylbenzene	<0.05					(15) 2
Ethylene Dibromide	<0.05					0.05
Hexane (n)	<0.05					(34) 2.8
Methyl Ethyl Ketone	<0.5					(44) 16
Methyl Isobutyl Ketone	<0.5					(4.3) 1.7
Methyl tert-butyl Ether	<0.05					(1.4) 0.75
Methylene Chloride	<0.05					(0.96) 0.1
Styrene	<0.05					(2.2) 0.7
1,1,1,2-Tetrachloroethane	<0.05					(0.05) 0.058
1,1,2,2-Tetrachloroethane	<0.05					0.05
Tetrachloroethylene	<0.05					(2.3) 0.28
Toluene	<0.2					(6) 2.3
1,1,1-Trichloroethane	<0.05					(3.4) 0.38
1,1,2-Trichloroethane	<0.05					0.05
Trichloroethylene	<0.05					(0.52) 0.061
Trichlorofluoromethane	<0.05					(5.8) 4
Vinyl Chloride	<0.02					(0.022) 0.02
Xylenes	<0.05					(25) 3.1
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	80					50-140
Toluene-d8	62					50-140
4-Bromofluorobenzene	64					50-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
VOCs in Soil						
Acetone	<0.5	0.5	100	50-140	100	50-140
Benzene	<0.02	0.02	72	60-130	75	50-140
Bromodichloromethane	<0.05	0.05	77	50-140	78	50-140
Bromoform	<0.05	0.05	112	60-130	93	50-140
Bromomethane	<0.05	0.05	100	50-140	100	50-140
Carbon Tetrachloride	<0.05	0.05	100	60-130	70	50-140
Chlorobenzene	<0.05	0.05	100	60-130	112	50-140
Chloroform	<0.05	0.05	108	60-130	106	50-140
Dibromochloromethane	<0.05	0.05	118	60-130	107	50-140
1,2-Dichlorobenzene	<0.05	0.05	100	60-130	79	50-140
1,3-Dichlorobenzene	<0.05	0.05	100	60-130	88	50-140
1,4-Dichlorobenzene	<0.05	0.05	100	60-130	110	50-140
Dichlorodifluoromethane	<0.05	0.05	100	50-140	96	50-140
1,1-Dichloroethane	<0.05	0.05	100	60-130	97	50-140
1,2-Dichloroethane	<0.05	0.05	100	60-130	72	50-140
1,1-Dichloroethylene	<0.05	0.05	100	60-130	103	50-140
c-1,2-Dichloroethylene	<0.05	0.05	100	60-130	112	50-140
t-1,2-Dichloroethylene	<0.05	0.05	100	60-130	112	50-140
1,2-Dichloropropane	<0.05	0.05	100	60-130	98	50-140
1,3-Dichloropropene (cis-+trans-)	<0.05	0.05	100	60-130	104	50-140
Ethylbenzene	<0.05	0.05	102	60-130	111	50-140
Ethylene Dibromide	<0.05	0.05	100	60-130	102	50-140
Hexane (n)	<0.05	0.05	100	60-130	100	50-140
Methyl Ethyl Ketone	<0.5	0.5	100	50-140	100	50-140
Methyl Isobutyl Ketone	<0.5	0.5	100	50-140	100	50-140
Methyl tert-butyl Ether	<0.05	0.05	100	60-130	100	50-140
Methylene Chloride	<0.05	0.05	105	60-130	118	50-140
Styrene	<0.05	0.05	100	60-130	104	50-140
1,1,1,2-Tetrachloroethane	<0.05	0.05	100	60-130	108	50-140
1,1,2,2-Tetrachloroethane	<0.05	0.05	100	60-130	103	50-140
Tetrachloroethylene	<0.05	0.05	73	60-130	79	50-140
Toluene	<0.2	0.2	110	60-130	92	50-140
1,1,1-Trichloroethane	<0.05	0.05	93	60-130	11	50-140
1,1,2-Trichloroethane	<0.05	0.05	100	60-130	73	50-140
Trichloroethylene	<0.05	0.05	108	60-130	79	50-140
Trichlorofluoromethane	<0.05	0.05	100	50-140	103	50-140
Vinyl Chloride	<0.02	0.02	100	50-140	130	50-140
Xylenes	<0.05	0.05	84	60-130	108	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
1,2-Dichloroethane-d4	92	60-140	72	60-140	73	60-140
Toluene-d8	82	60-140	61	60-140	76	60-140
4-Bromofluorobenzene	62	60-140	63	60-140	129	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

Client: Core FSC Lakeshore LP ***F.E. Job #:*** 19-1916

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
VOCs in Soil						
Acetone	0.0	0-50				
Benzene	0.0	0-50				
Bromodichloromethane	0.0	0-50				
Bromoform	0.0	0-50				
Bromomethane	0.0	0-50				
Carbon Tetrachloride	0.0	0-50				
Chlorobenzene	0.0	0-50				
Chloroform	0.0	0-50				
Dibromochloromethane	0.0	0-50				
1,2-Dichlorobenzene	0.0	0-50				
1,3-Dichlorobenzene	0.0	0-50				
1,4-Dichlorobenzene	0.0	0-50				
Dichlorodifluoromethane	0.0	0-50				
1,1-Dichloroethane	0.0	0-50				
1,2-Dichloroethane	0.0	0-50				
1,1-Dichloroethylene	0.0	0-50				
c-1,2-Dichloroethylene	0.0	0-50				
t-1,2-Dichloroethylene	0.0	0-50				
1,2-Dichloropropane	0.0	0-50				
1,3-Dichloropropene (cis-+trans-)	0.0	0-50				
Ethylbenzene	0.0	0-50				
Ethylene Dibromide	0.0	0-50				
Hexane (n)	0.0	0-50				
Methyl Ethyl Ketone	0.0	0-50				
Methyl Isobutyl Ketone	0.0	0-50				
Methyl tert-butyl Ether	0.0	0-50				
Methylene Chloride	0.0	0-50				
Styrene	0.0	0-50				
1,1,1,2-Tetrachloroethane	0.0	0-50				
1,1,2,2-Tetrachloroethane	0.0	0-50				
Tetrachloroethylene	0.0	0-50				
Toluene	20	0-50				
1,1,1-Trichloroethane	0.0	0-50				
1,1,2-Trichloroethane	0.0	0-50				
Trichloroethylene	0.0	0-50				
Trichlorofluoromethane	0.0	0-50				
Vinyl Chloride	0.0	0-50				
Xylenes	0.0	0-50				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
1,2-Dichloroethane-d4	88	60-140				
Toluene-d8	68	60-140				
4-Bromofluorobenzene	86	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-1916-1*** MW218 0.90-1.20m	***19-1916-2*** MW218 1.20-1.65m				**Soil Standards [1]**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02				(0.17) 0.21
Toluene	<0.2	<0.2				(6) 2.3
Ethylbenzene	<0.05	<0.05				(15) 2
Xylenes	<0.05	<0.05				(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10				(65) 55
F2 (C_{10} - C_{16})	<10	<10				(150) 98
F3 (C_{16} - C_{34})	<50	<50				(1300) 300
F4 (C_{34}-C_{50})	<50	<50				(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes				
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	76	80				60-140
Toluene-d8	63	62				60-140
4-Bromofluorobenzene	61	64				60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
BTEX in Soil						
Benzene	<0.02	0.02	72	60-130	75	50-140
Toluene	<0.2	0.2	110	60-130	92	50-140
Ethylbenzene	<0.05	0.05	102	60-130	111	50-140
Xylenes	<0.05	0.05	84	60-130	108	50-140
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	10	110	80-120	92	60-140
F2 (C_{10} - C_{16})	<10	10	117	80-120	118	60-140
F3 (C_{16} - C_{34})	<50	50	118	80-120	127	60-140
F4 (C_{34}-C_{50})	<50	50	102	80-120	124	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
1,2-Dichloroethane-d4	92	60-140	72	60-140	73	60-140
Toluene-d8	82	60-140	61	60-140	76	60-140
4-Bromofluorobenzene	62	60-140	63	60-140	129	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

BTEX should be subtracted from F_1, Naphthalene from F_2 and selected PAHs from F_3 if BTEX/PAHs are analyzed, then report $F_{1\text{-BTEX}}$, $F_{2\text{-Naph.}}$ and $F_{3\text{-PAH}}$. nC_{50} response factor was within 70% of nC_{10}+nC_{16}+nC_{34} average.

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Soil						
Benzene	0.0	0-50				
Toluene	20	0-50				
Ethylbenzene	0.0	0-50				
Xylenes	0.0	0-50				
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	6.2	0-30				
F2 (C_{10} - C_{16})	0.0	0-30				
F3 (C_{16} - C_{34})	26	0-30				
F4 (C_{34}-C_{50})	22	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
1,2-Dichloroethane-d4	88	60-140				
Toluene-d8	68	60-140				
4-Bromofluorobenzene	89	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-1916-1*** MW218 0.90-1.20m	***19-1916-2*** MW218 1.20-1.65m				**Soil Standards** [1]
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05				(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05				(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05				
Acenaphthylene	<0.05	<0.05				(0.17) 0.15
Acenaphthene	<0.05	<0.05				(58) 7.9
Fluorene	<0.05	<0.05				(69) 62
Phenanthrene	<0.05	<0.05				(7.8) 6.2
Anthracene	<0.05	<0.05				(0.74) 0.67
Fluoranthene	<0.05	<0.05				0.69
Pyrene	<0.05	<0.05				78
Benzo [a] anthracene	<0.05	<0.05				(0.63) 0.5
Chrysene	<0.05	<0.05				(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05				0.78
Benzo [k] fluoranthene	<0.05	<0.05				0.78
Benzo [a] pyrene	<0.05	<0.05				0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1				(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1				0.1
Benzo [g,h,i] perylene	<0.1	<0.1				(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	102	125				50-140
Phenanthrene-d10	106	93				50-140
Chrysene-d12	107	86				50-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
PAHs in Soil						
Naphthalene	<0.05	0.05	74	50-140	77	50-140
2-Methylnaphthalene	<0.05	0.05	99	50-140	86	50-140
1-Methylnaphthalene	<0.05	0.05	82	50-140	83	50-140
Acenaphthylene	<0.05	0.05	106	50-140	102	50-140
Acenaphthene	<0.05	0.05	100	50-140	102	50-140
Fluorene	<0.05	0.05	120	50-140	138	50-140
Phenanthrene	<0.05	0.05	104	50-140	136	50-140
Anthracene	<0.05	0.05	95	50-140	129	50-140
Fluoranthene	<0.05	0.05	120	50-140	132	50-140
Pyrene	<0.05	0.05	109	50-140	138	50-140
Benzo [a] anthracene	<0.05	0.05	86	50-140	110	50-140
Chrysene	<0.05	0.05	99	50-140	114	50-140
Benzo [b] fluoranthene	<0.05	0.05	121	50-140	114	50-140
Benzo [k] fluoranthene	<0.05	0.05	93	50-140	88	50-140
Benzo [a] pyrene	<0.05	0.05	97	50-140	92	50-140
Indeno [1,2,3-cd] pyrene	<0.1	0.1	108	50-140	95	50-140
Dibenzo [a,h] anthracene	<0.1	0.1	113	50-140	90	50-140
Benzo [g,h,i] perylene	<0.1	0.1	107	50-140	103	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	117	50-140	130	50-140	128	50-140
Phenanthrene-d10	98	50-140	106	50-140	138	50-140
Chrysene-d12	123	50-140	109	50-140	111	50-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Soil						
Naphthalene	0.0	0-40				
2-Methylnaphthalene	0.0	0-40				
1-Methylnaphthalene	0.0	0-40				
Acenaphthylene	0.0	0-40				
Acenaphthene	0.0	0-40				
Fluorene	0.0	0-40				
Phenanthrene	0.0	0-40				
Anthracene	0.0	0-40				
Fluoranthene	0.0	0-40				
Pyrene	0.0	0-40				
Benzo [a] anthracene	0.0	0-40				
Chrysene	0.0	0-40				
Benzo [b] fluoranthene	0.0	0-40				
Benzo [k] fluoranthene	0.0	0-40				
Benzo [a] pyrene	0.0	0-40				
Indeno [1,2,3-cd] pyrene	0.0	0-40				
Dibenzo [a,h] anthracene	0.0	0-40				
Benzo [g,h,i] perylene	0.0	0-40				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	140	50-140				
Phenanthrene-d10	99	50-140				
Chrysene-d12	108	50-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-1916-1*** MW218 0.90-1.20m	***19-1916-2*** MW218 1.20-1.65m				**Soil Standards [1]**
***EC** (mS/cm)*	0.13	0.14				0.7

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
***EC** (mS/cm)*	<0.01	0.01	101	90-110	9.5	0-10

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-1916-1*** MW218 0.90-1.20m	***19-1916-2*** MW218 1.20-1.65m				**Soil Standards [1]**
SAR *(no unit)*	0.29	0.33				5

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**LCS**	**AR**	**Duplicate**	**AR**		
			RPD (%)			
SAR *(no unit)*	0.40	0.30-0.50	1.11	0-30		

LEGEND:
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-1916-1*** MW218 0.90-1.20m	***19-1916-2*** MW218 1.20-1.65m				
Moisture Content (%)	15	12				

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
Moisture Content (%)	<0.1	0.1	99	70-130	3.7	0-20

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

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F.E. Job #: 19-1956
Project Name: Phase II ESA
Project ID: FE-P-19-9254
Date Sampled: 14-Feb-19
Date Received: 15-Feb-19
Date Reported: 25-Feb-19
Location: 2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Soil	11	19-Feb-19	21-Feb-19	Metals F-18	SM 3125-B
Mercury	Soil	3	19-Feb-19	21-Feb-19	Metals F-1	SM 3120-B
PHCs (F1 & BTEX)	Soil	11	15-Feb-19	21-Feb-19	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Soil	11	19-Feb-19	21-Feb-19	PHCs F-7	CCME CWS
PAHs	Soil	11	19-Feb-19	20-Feb-19	PAHs F-4	SM 6410-B
PCBs	Soil	3	21-Feb-19	21-Feb-19	PCBs F-5	SM 6630C
EC	Soil	11	22-Feb-19	22-Feb-19	pH-EC-SAR F-16	SW-846, 9050A
SAR	Soil	11	22-Feb-19	25-Feb-19	pH-EC-SAR F-16	SW-846, 6010C
Moisture Content	Soil	11	N/A	20-Feb-19	Support Procedures F-99	Carter (1993)

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:



Roger Lin, Ph. D., C. Chem.
Laboratory Manager

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	11 Soil Samples

Parameter	***19-1956-1*** BH202 0.00-0.60m	***19-1956-2*** BH202 1.50-2.10m	***19-1956-3*** BH204 0.00-0.60m	***19-1956-4*** BH204 1.50-2.10m	***19-1956-5*** BH210 0.00-0.60m	**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	3.4	<1	<1	<1	<1	7.5
Arsenic	11	4.4	7.9	4.1	4.0	18
Barium	106	156	131	79	74	390
Beryllium	<2	<2	<2	<2	<2	(5) 4
Boron	16	9.0	6.9	8.9	<5	120
Cadmium	**4.9**	<1	<1	<1	<1	1.2
Chromium	16	18	12	14	12	160
Cobalt	5.4	12	5.4	10	4.5	22
Copper	49	51	29	54	19	(180) 140
Lead	**744**	13	**222**	<10	87	120
Molybdenum	<2	<2	<2	<2	<2	6.9
Nickel	13	27	11	22	9.4	(130) 100
Selenium	1.2	<1	1.3	<1	<1	2.4
Silver	<0.5	<0.5	<0.5	<0.5	<0.5	(25) 20
Thallium	<1	<1	<1	<1	<1	1
Uranium	<1	<1	<1	<1	<1	23
Vanadium	18	27	20	22	21	86
Zinc	**4,341**	75	**392**	60	67	340

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Soil Standards (Table 3, R/P/I, Coarse Textured)

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	11 Soil Samples

Parameter	***19-1956-6*** BH210 1.50-2.10m	***19-1956-7*** BH210 (Dupe) 1.50-2.10m	***19-1956-8*** BH212 0.00-0.60m	***19-1956-9*** BH212 1.50-2.10m	***19-1956-10*** BH214 0.00-0.60m	**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	<1	7.5
Arsenic	4.0	4.2	5.2	5.4	13	18
Barium	96	93	120	78	234	390
Beryllium	<2	<2	<2	<2	<2	(5) 4
Boron	9.2	8.9	6.0	8.8	16	120
Cadmium	<1	<1	<1	<1	<1	1.2
Chromium	12	13	14	13	14	160
Cobalt	8.7	9.2	5.8	9.2	4.6	22
Copper	47	47	29	52	42	(180) 140
Lead	<10	<10	**211**	<10	**331**	120
Molybdenum	<2	<2	<2	<2	<2	6.9
Nickel	19	19	13	19	10	(130) 100
Selenium	1.2	<1	1.3	1.3	<1	2.4
Silver	<0.5	<0.5	<0.5	<0.5	<0.5	(25) 20
Thallium	<1	<1	<1	<1	<1	1
Uranium	<1	<1	<1	<1	<1	23
Vanadium	19	19	23	20	20	86
Zinc	54	52	264	54	**367**	340

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Soil Standards (Table 3, R/P/I, Coarse Textured)

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	11 Soil Samples

Parameter	***19-1956-11*** BH214 1.50-2.10m					**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1					7.5
Arsenic	5.4					18
Barium	208					390
Beryllium	<2					(5) 4
Boron	12					120
Cadmium	<1					1.2
Chromium	18					160
Cobalt	11					22
Copper	47					(180) 140
Lead	12					120
Molybdenum	<2					6.9
Nickel	26					(130) 100
Selenium	<1					2.4
Silver	<0.5					(25) 20
Thallium	<1					1
Uranium	<1					23
Vanadium	27					86
Zinc	71					340

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Soil Standards (Table 3, R/P/I, Coarse Textured)

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
Metals in Soil						
Antimony	<1	1	102	80-120	86	70-130
Arsenic	<1	1	106	80-120	89	70-130
Barium	<5	5	106	80-120	102	70-130
Beryllium	<2	2	116	80-120	113	70-130
Boron	<5	5	108	80-120	130	70-130
Cadmium	<1	1	106	80-120	94	70-130
Chromium	<5	5	101	80-120	77	70-130
Cobalt	<2	2	100	80-120	74	70-130
Copper	<5	5	110	80-120	98	70-130
Lead	<10	10	103	80-120	94	70-130
Molybdenum	<2	2	104	80-120	76	70-130
Nickel	<5	5	101	80-120	71	70-130
Selenium	<1	1	102	80-120	87	70-130
Silver	<0.5	0.5	107	80-120	82	70-130
Thallium	<1	1	104	80-120	98	70-130
Uranium	<1	1	101	80-120	102	70-130
Vanadium	<10	10	105	80-120	87	70-130
Zinc	<30	30	114	80-120	96	70-130

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Soil						
Antimony	2.9	0-30				
Arsenic	0.9	0-30				
Barium	0.9	0-30				
Beryllium	0.0	0-30				
Boron	8.0	0-30				
Cadmium	2.0	0-30				
Chromium	1.9	0-30				
Cobalt	5.7	0-30				
Copper	3.1	0-30				
Lead	0.7	0-30				
Molybdenum	0.0	0-30				
Nickel	4.0	0-30				
Selenium	18	0-30				
Silver	0.0	0-30				
Thallium	0.0	0-30				
Uranium	0.0	0-30				
Vanadium	1.1	0-30				
Zinc	3.0	0-30				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	11 Soil Samples

Parameter	***19-1956-5*** BH210 0.00-0.60m	***19-1956-6*** BH210 1.50-2.10m	***19-1956-7*** BH210 (Dupe) 1.50-2.10m			**Soil Standards [1]**
	Concentration (µg/g)					
Mercury in Soil	<0.1	<0.1	<0.1			(1.8) 0.27

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**MS**	**AR**
	(µg/g)		**Recovery (%)**		**Recovery (%)**	
Mercury in Soil	<0.1	0.1	106	80-120	106	70-130

Parameter	**Duplicate**	**AR**				
	RPD (%)					
Mercury in Soil	1.2	0-30				

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	11 Soil Samples

Parameter	***19-1956-1*** BH202 0.00-0.60m	***19-1956-2*** BH202 1.50-2.10m	***19-1956-3*** BH204 0.00-0.60m	***19-1956-4*** BH204 1.50-2.10m	***19-1956-5*** BH210 0.00-0.60m	**Soil Standards [1]**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	<0.02	(0.17) 0.21
Toluene	<0.2	<0.2	<0.2	<0.2	<0.2	(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	<0.05	(15) 2
Xylenes	<0.05	<0.05	<0.05	<0.05	<0.05	(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10	<10	<10	<10	(65) 55
F2 (C_{10} - C_{16})	<10	<10	<10	<10	<10	(150) 98
F3 (C_{16} - C_{34})	190	<50	<50	<50	59	(1300) 300
F4 (C_{34}-C_{50})	90	<50	<50	<50	<50	(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes	Yes	
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	137	105	86	118	129	60-140
Toluene-d8	131	100	66	96	108	60-140
4-Bromofluorobenzene	135	78	69	134	132	60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	11 Soil Samples

Parameter	***19-1956-6*** BH210 1.50-2.10m	***19-1956-7*** BH210 (Dupe) 1.50-2.10m	***19-1956-8*** BH212 0.00-0.60m	***19-1956-9*** BH212 1.50-2.10m	***19-1956-10*** BH214 0.00-0.60m	**Soil Standards [1]**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	<0.02	(0.17) 0.21
Toluene	<0.2	<0.2	<0.2	<0.2	<0.2	(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	<0.05	(15) 2
Xylenes	<0.05	<0.05	<0.05	<0.05	<0.05	(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10	<10	<10	<10	(65) 55
F2 (C_{10} - C_{16})	<10	<10	<10	<10	<10	(150) 98
F3 (C_{16} - C_{34})	<50	<50	<50	<50	82	(1300) 300
F4 (C_{34}-C_{50})	<50	<50	<50	<50	<50	(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes	Yes	
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	137	115	119	99	87	60-140
Toluene-d8	129	98	100	83	72	60-140
4-Bromofluorobenzene	135	132	136	110	99	60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	11 Soil Samples

Parameter	***19-1956-11*** BH214 1.50-2.10m					**Soil Standards [1]**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02					(0.17) 0.21
Toluene	<0.2					(6) 2.3
Ethylbenzene	<0.05					(15) 2
Xylenes	<0.05					(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10					(65) 55
F2 (C_{10} - C_{16})	<10					(150) 98
F3 (C_{16} - C_{34})	<50					(1300) 300
F4 (C_{34}-C_{50})	<50					(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes					
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	121					60-140
Toluene-d8	110					60-140
4-Bromofluorobenzene	117					60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
BTEX in Soil						
Benzene	<0.02	0.02	84	60-130	117	50-140
Toluene	<0.2	0.2	91	60-130	105	50-140
Ethylbenzene	<0.05	0.05	84	60-130	125	50-140
Xylenes	<0.05	0.05	126	60-130	135	50-140
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	10	91	80-120	105	60-140
F2 (C_{10} - C_{16})	<10	10	97	80-120	111	60-140
F3 (C_{16} - C_{34})	<50	50	103	80-120	97	60-140
F4 (C_{34}-C_{50})	<50	50	107	80-120	69	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
1,2-Dichloroethane-d4	96	60-140	80	60-140	136	60-140
Toluene-d8	77	60-140	79	60-140	134	60-140
4-Bromofluorobenzene	65	60-140	78	60-140	138	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

BTEX should be subtracted from F_1, Naphthalene from F_2 and selected PAHs from F_3 if BTEX/PAHs are analyzed, then report $F_{1\text{-BTEX}}$, $F_{2\text{-Naph.}}$ and $F_{3\text{-PAH}}$. nC_{50} response factor was within 70% of nC_{10}+nC_{16}+nC_{34} average.

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Soil						
Benzene	0.0	0-50				
Toluene	5.9	0-50				
Ethylbenzene	0.0	0-50				
Xylenes	0.0	0-50				
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	18	0-30				
F2 (C_{10} - C_{16})	0.0	0-30				
F3 (C_{16} - C_{34})	15	0-30				
F4 (C_{34}-C_{50})	22	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
1,2-Dichloroethane-d4	121	60-140				
Toluene-d8	100	60-140				
4-Bromofluorobenzene	123	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	11 Soil Samples

Parameter	***19-1956-1*** BH202 0.00-0.60m	***19-1956-2*** BH202 1.50-2.10m	***19-1956-3*** BH204 0.00-0.60m	***19-1956-4*** BH204 1.50-2.10m	***19-1956-5*** BH210 0.00-0.60m	**Soil Standards** [1]
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	
Acenaphthylene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05	<0.05	<0.05	(58) 7.9
Fluorene	<0.05	<0.05	<0.05	<0.05	<0.05	(69) 62
Phenanthrene	0.50	<0.05	<0.05	<0.05	0.52	(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05	<0.05	0.10	(0.74) 0.67
Fluoranthene	0.58	<0.05	0.09	<0.05	**1.4**	0.69
Pyrene	0.39	<0.05	0.08	<0.05	1.2	78
Benzo [a] anthracene	0.07	<0.05	<0.05	<0.05	0.26	(0.63) 0.5
Chrysene	0.14	<0.05	<0.05	<0.05	0.40	(7.8) 7
Benzo [b] fluoranthene	0.22	<0.05	<0.05	<0.05	0.62	0.78
Benzo [k] fluoranthene	0.18	<0.05	<0.05	<0.05	0.46	0.78
Benzo [a] pyrene	0.12	<0.05	<0.05	<0.05	**0.54**	0.3
Indeno [1,2,3-cd] pyrene	0.16	<0.1	<0.1	<0.1	0.28	(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Benzo [g,h,i] perylene	0.13	<0.1	<0.1	<0.1	0.27	(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	70	78	76	81	92	50-140
Phenanthrene-d10	85	109	86	95	128	50-140
Chrysene-d12	74	89	79	96	112	50-140

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Soil Standards (Table 3, R/P/I, Coarse Textured)

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	11 Soil Samples

Parameter	***19-1956-6*** BH210 1.50-2.10m	***19-1956-7*** BH210 (Dupe) 1.50-2.10m	***19-1956-8*** BH212 0.00-0.60m	***19-1956-9*** BH212 1.50-2.10m	***19-1956-10*** BH214 0.00-0.60m	**Soil Standards [1]**
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	<0.05	
Acenaphthylene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05	<0.05	<0.05	(58) 7.9
Fluorene	<0.05	<0.05	<0.05	<0.05	<0.05	(69) 62
Phenanthrene	<0.05	<0.05	<0.05	<0.05	<0.05	(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.74) 0.67
Fluoranthene	<0.05	<0.05	0.10	<0.05	0.12	0.69
Pyrene	<0.05	<0.05	0.07	<0.05	0.10	78
Benzo [a] anthracene	<0.05	<0.05	<0.05	<0.05	<0.05	(0.63) 0.5
Chrysene	<0.05	<0.05	<0.05	<0.05	<0.05	(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.06	0.78
Benzo [k] fluoranthene	<0.05	<0.05	<0.05	<0.05	<0.05	0.78
Benzo [a] pyrene	<0.05	<0.05	<0.05	<0.05	0.05	0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1	<0.1	<0.1	<0.1	(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Benzo [g,h,i] perylene	<0.1	<0.1	<0.1	<0.1	<0.1	(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	120	97	126	104	111	50-140
Phenanthrene-d10	109	124	133	134	121	50-140
Chrysene-d12	109	101	124	126	128	50-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	11 Soil Samples

Parameter	***19-1956-11*** BH214 1.50-2.10m					**Soil Standards** [1]
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05					(0.75) 0.6
2-Methylnaphthalene	<0.05					(3.4) 0.99
1-Methylnaphthalene	<0.05					
Acenaphthylene	<0.05					(0.17) 0.15
Acenaphthene	<0.05					(58) 7.9
Fluorene	<0.05					(69) 62
Phenanthrene	<0.05					(7.8) 6.2
Anthracene	<0.05					(0.74) 0.67
Fluoranthene	<0.05					0.69
Pyrene	<0.05					78
Benzo [a] anthracene	<0.05					(0.63) 0.5
Chrysene	<0.05					(7.8) 7
Benzo [b] fluoranthene	<0.05					0.78
Benzo [k] fluoranthene	<0.05					0.78
Benzo [a] pyrene	<0.05					0.3
Indeno [1,2,3-cd] pyrene	<0.1					(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1					0.1
Benzo [g,h,i] perylene	<0.1					(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	112					50-140
Phenanthrene-d10	107					50-140
Chrysene-d12	123					50-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
PAHs in Soil						
Naphthalene	<0.05	0.05	74	50-140	77	50-140
2-Methylnaphthalene	<0.05	0.05	99	50-140	86	50-140
1-Methylnaphthalene	<0.05	0.05	82	50-140	83	50-140
Acenaphthylene	<0.05	0.05	106	50-140	102	50-140
Acenaphthene	<0.05	0.05	100	50-140	102	50-140
Fluorene	<0.05	0.05	120	50-140	138	50-140
Phenanthrene	<0.05	0.05	104	50-140	136	50-140
Anthracene	<0.05	0.05	95	50-140	129	50-140
Fluoranthene	<0.05	0.05	120	50-140	132	50-140
Pyrene	<0.05	0.05	109	50-140	138	50-140
Benzo [a] anthracene	<0.05	0.05	86	50-140	110	50-140
Chrysene	<0.05	0.05	99	50-140	114	50-140
Benzo [b] fluoranthene	<0.05	0.05	121	50-140	114	50-140
Benzo [k] fluoranthene	<0.05	0.05	93	50-140	88	50-140
Benzo [a] pyrene	<0.05	0.05	97	50-140	92	50-140
Indeno [1,2,3-cd] pyrene	<0.1	0.1	108	50-140	95	50-140
Dibenzo [a,h] anthracene	<0.1	0.1	113	50-140	90	50-140
Benzo [g,h,i] perylene	<0.1	0.1	107	50-140	103	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	117	50-140	130	50-140	128	50-140
Phenanthrene-d10	98	50-140	106	50-140	138	50-140
Chrysene-d12	123	50-140	109	50-140	111	50-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Soil						
Naphthalene	0.0	0-40				
2-Methylnaphthalene	0.0	0-40				
1-Methylnaphthalene	0.0	0-40				
Acenaphthylene	0.0	0-40				
Acenaphthene	0.0	0-40				
Fluorene	0.0	0-40				
Phenanthrene	0.0	0-40				
Anthracene	0.0	0-40				
Fluoranthene	0.0	0-40				
Pyrene	0.0	0-40				
Benzo [a] anthracene	0.0	0-40				
Chrysene	0.0	0-40				
Benzo [b] fluoranthene	0.0	0-40				
Benzo [k] fluoranthene	0.0	0-40				
Benzo [a] pyrene	0.0	0-40				
Indeno [1,2,3-cd] pyrene	0.0	0-40				
Dibenzo [a,h] anthracene	0.0	0-40				
Benzo [g,h,i] perylene	0.0	0-40				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	140	50-140				
Phenanthrene-d10	99	50-140				
Chrysene-d12	108	50-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	11 Soil Samples

Parameter	***19-1956-5*** BH210 0.00-0.60m	***19-1956-6*** BH210 1.50-2.10m	***19-1956-7*** BH210 (Dupe) 1.50-2.10m			**Soil Standards [1]**
	Concentration (µg/g)					
PCBs in Soil	<0.02	<0.02	<0.02			0.35
Surrogate Recovery (%)						
Decachlorobiphenyl	122	104	95			60-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**MS**	**AR**
	(µg/g)		**Recovery (%)**		**Recovery (%)**	
PCBs in Soil	<0.02	0.02	116	60-140	96	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Decachlorobiphenyl	98	60-140	94	60-140	86	60-140

Parameter	**Duplicate**	**AR**				
	RPD (%)					
PCBs in Soil	0.0	0-40				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Decachlorobiphenyl	99	60-140				

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	11 Soil Samples

Parameter	***19-1956-1*** BH202 0.00-0.60m	***19-1956-2*** BH202 1.50-2.10m	***19-1956-3*** BH204 0.00-0.60m	***19-1956-4*** BH204 1.50-2.10m	***19-1956-5*** BH210 0.00-0.60m	**Soil Standards [1]**
***EC** (mS/cm)*	**1.83**	0.22	0.20	0.23	0.58	0.7

Parameter	***19-1956-6*** BH210 1.50-2.10m	***19-1956-7*** BH210 (Dupe) 1.50-2.10m	***19-1956-8*** BH212 0.00-0.60m	***19-1956-9*** BH212 1.50-2.10m	***19-1956-10*** BH214 0.00-0.60m	**Soil Standards [1]**
***EC** (mS/cm)*	0.22	0.23	0.24	0.26	0.30	0.7

Parameter	***19-1956-11*** BH214 1.50-2.10m					**Soil Standards [1]**
***EC** (mS/cm)*	0.20					0.7

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
***EC** (mS/cm)*	<0.01	0.01	101	90-110	9.5	0-10

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	11 Soil Samples

Parameter	***19-1956-1*** BH202 0.00-0.60m	***19-1956-2*** BH202 1.50-2.10m	***19-1956-3*** BH204 0.00-0.60m	***19-1956-4*** BH204 1.50-2.10m	***19-1956-5*** BH210 0.00-0.60m	**Soil Standards [1]**
SAR *(no unit)*	1.9	0.23	0.94	0.71	3.4	5

Parameter	***19-1956-6*** BH210 1.50-2.10m	***19-1956-7*** BH210 (Dupe) 1.50-2.10m	***19-1956-8*** BH212 0.00-0.60m	***19-1956-9*** BH212 1.50-2.10m	***19-1956-10*** BH214 0.00-0.60m	**Soil Standards [1]**
SAR *(no unit)*	0.97	0.89	0.74	0.80	0.42	5

Parameter	***19-1956-11*** BH214 1.50-2.10m					**Soil Standards [1]**
SAR *(no unit)*	0.41					5

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**LCS**	**AR**	**Duplicate**	**AR**		
			RPD (%)			
SAR *(no unit)*	0.41	0.30-0.50	2.1	0-30		

LEGEND:
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, PHCs, PAHs, PCBs, EC, SAR
Sample Description:	11 Soil Samples

Parameter	***19-1956-1*** BH202 0.00-0.60m	***19-1956-2*** BH202 1.50-2.10m	***19-1956-3*** BH204 0.00-0.60m	***19-1956-4*** BH204 1.50-2.10m	***19-1956-5*** BH210 0.00-0.60m	***19-1956-6*** BH210 1.50-2.10m
Moisture Content (%)	21	14	20	10	20	11

Parameter	***19-1956-7*** BH210 (Dupe) 1.50-2.10m	***19-1956-8*** BH212 0.00-0.60m	***19-1956-9*** BH212 1.50-2.10m	***19-1956-10*** BH214 0.00-0.60m	***19-1956-11*** BH214 1.50-2.10m	
Moisture Content (%)	11	16	15	21	13	

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
Moisture Content (%)	<0.1	0.1	99	70-130	3.7	0-20

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

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F.E. Job #: 19-1993
Project Name: Phase II ESA
Project ID: FE-P-19-9254
Date Sampled: 21-Feb-19
Date Received: 22-Feb-19
Date Reported: 4-Mar-19
Location: 2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Soil	2	25-Feb-19	25-Feb-19	Metals F-18	SM 3125-B
VOCs	Soil	1	22-Feb-19	27-Feb-19	VOCs F-14	SW-846, 8260C
PHCs (F1 & BTEX)	Soil	2	22-Feb-19	27-Feb-19	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Soil	2	25-Feb-19	1-Mar-19	PHCs F-7	CCME CWS
PAHs	Soil	2	27-Feb-19	27-Feb-19	PAHs F-4	SM 6410-B
EC	Soil	2	26-Feb-19	26-Feb-19	pH-EC-SAR F-16	SW-846, 9050A
SAR	Soil	2	26-Feb-19	25-Feb-19	pH-EC-SAR F-16	SW-846, 6010C
Moisture Content	Soil	2	N/A	25-Feb-19	Support Procedures F-99	Carter (1993)

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:



Roger Lin, Ph. D., C. Chem.
Laboratory Manager

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-1993-1*** MW213 0.00-0.90m	***19-1993-2*** MW213 0.90-1.50m				**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1				7.5
Arsenic	3.1	2.4				18
Barium	73	118				390
Beryllium	<2	<2				(5) 4
Boron	<5	5.2				120
Cadmium	<1	<1				1.2
Chromium	17	18				160
Cobalt	7.2	8.2				22
Copper	16	20				(180) 140
Lead	18	<10				120
Molybdenum	<2	<2				6.9
Nickel	16	20				(130) 100
Selenium	1.6	1.6				2.4
Silver	<0.5	<0.5				(25) 20
Thallium	<1	<1				1
Uranium	<1	<1				23
Vanadium	25	22				86
Zinc	60	47				340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
Metals in Soil						
Antimony	<1	1	103	80-120	100	70-130
Arsenic	<1	1	101	80-120	98	70-130
Barium	<5	5	103	80-120	83	70-130
Beryllium	<2	2	103	80-120	94	70-130
Boron	<5	5	109	80-120	110	70-130
Cadmium	<1	1	100	80-120	100	70-130
Chromium	<5	5	101	80-120	88	70-130
Cobalt	<2	2	99	80-120	96	70-130
Copper	<5	5	97	80-120	98	70-130
Lead	<10	10	104	80-120	100	70-130
Molybdenum	<2	2	99	80-120	86	70-130
Nickel	<5	5	96	80-120	96	70-130
Selenium	<1	1	109	80-120	78	70-130
Silver	<0.5	0.5	102	80-120	87	70-130
Thallium	<1	1	102	80-120	106	70-130
Uranium	<1	1	101	80-120	109	70-130
Vanadium	<10	10	101	80-120	94	70-130
Zinc	<30	30	101	80-120	87	70-130

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Soil						
Antimony	0.0	0-30				
Arsenic	3.3	0-30				
Barium	5.1	0-30				
Beryllium	0.0	0-30				
Boron	0.0	0-30				
Cadmium	0.0	0-30				
Chromium	5.5	0-30				
Cobalt	2.8	0-30				
Copper	3.2	0-30				
Lead	0.5	0-30				
Molybdenum	0.0	0-30				
Nickel	1.8	0-30				
Selenium	8.9	0-30				
Silver	0.0	0-30				
Thallium	0.0	0-30				
Uranium	0.0	0-30				
Vanadium	2.0	0-30				
Zinc	2.3	0-30				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-1993-2*** MW213 0.90-1.50m					**Soil Standards** [1]
	Concentration (µg/g)					
VOCs in Soil						
Acetone	<0.5					(28) 16
Benzene	<0.02					(0.17) 0.21
Bromodichloromethane	<0.05					13
Bromoform	<0.05					(0.26) 0.27
Bromomethane	<0.05					0.05
Carbon Tetrachloride	<0.05					(0.12) 0.05
Chlorobenzene	<0.05					(2.7) 2.4
Chloroform	<0.05					(0.18) 0.05
Dibromochloromethane	<0.05					9.4
1,2-Dichlorobenzene	<0.05					(4.3) 3.4
1,3-Dichlorobenzene	<0.05					(6) 4.8
1,4-Dichlorobenzene	<0.05					(0.097) 0.083
Dichlordifluoromethane	<0.05					(25) 16
1,1-Dichloroethane	<0.05					(11) 3.5
1,2-Dichloroethane	<0.05					0.05
1,1-Dichloroethylene	<0.05					0.05
c-1,2-Dichloroethylene	<0.05					(30) 3.4
t-1,2-Dichloroethylene	<0.05					(0.75) 0.084
1,2-Dichloropropane	<0.05					(0.085) 0.05
1,3-Dichloropropene (cis-+trans-)	<0.05					(0.083) 0.05
Ethylbenzene	<0.05					(15) 2
Ethylene Dibromide	<0.05					0.05
Hexane (n)	<0.05					(34) 2.8
Methyl Ethyl Ketone	<0.5					(44) 16
Methyl Isobutyl Ketone	<0.5					(4.3) 1.7
Methyl tert-butyl Ether	<0.05					(1.4) 0.75
Methylene Chloride	<0.05					(0.96) 0.1
Styrene	<0.05					(2.2) 0.7
1,1,1,2-Tetrachloroethane	<0.05					(0.05) 0.058
1,1,2,2-Tetrachloroethane	<0.05					0.05
Tetrachloroethylene	<0.05					(2.3) 0.28
Toluene	<0.2					(6) 2.3
1,1,1-Trichloroethane	<0.05					(3.4) 0.38
1,1,2-Trichloroethane	<0.05					0.05
Trichloroethylene	<0.05					(0.52) 0.061
Trichlorofluoromethane	<0.05					(5.8) 4
Vinyl Chloride	<0.02					(0.022) 0.02
Xylenes	<0.05					(25) 3.1
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	118					50-140
Toluene-d8	97					50-140
4-Bromofluorobenzene	90					50-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
VOCs in Soil						
Acetone	<0.5	0.5	100	50-140	100	50-140
Benzene	<0.02	0.02	103	60-130	104	50-140
Bromodichloromethane	<0.05	0.05	104	50-140	106	50-140
Bromoform	<0.05	0.05	93	60-130	114	50-140
Bromomethane	<0.05	0.05	100	50-140	100	50-140
Carbon Tetrachloride	<0.05	0.05	100	60-130	100	50-140
Chlorobenzene	<0.05	0.05	100	60-130	100	50-140
Chloroform	<0.05	0.05	97	60-130	127	50-140
Dibromochloromethane	<0.05	0.05	95	60-130	117	50-140
1,2-Dichlorobenzene	<0.05	0.05	100	60-130	100	50-140
1,3-Dichlorobenzene	<0.05	0.05	100	60-130	100	50-140
1,4-Dichlorobenzene	<0.05	0.05	100	60-130	100	50-140
Dichlorodifluoromethane	<0.05	0.05	100	50-140	100	50-140
1,1-Dichloroethane	<0.05	0.05	100	60-130	100	50-140
1,2-Dichloroethane	<0.05	0.05	100	60-130	100	50-140
1,1-Dichloroethylene	<0.05	0.05	100	60-130	100	50-140
c-1,2-Dichloroethylene	<0.05	0.05	100	60-130	100	50-140
t-1,2-Dichloroethylene	<0.05	0.05	100	60-130	100	50-140
1,2-Dichloropropane	<0.05	0.05	100	60-130	100	50-140
1,3-Dichloropropene (cis-+trans-)	<0.05	0.05	100	60-130	100	50-140
Ethylbenzene	<0.05	0.05	93	60-130	109	50-140
Ethylene Dibromide	<0.05	0.05	100	60-130	100	50-140
Hexane (n)	<0.05	0.05	100	60-130	100	50-140
Methyl Ethyl Ketone	<0.5	0.5	100	50-140	100	50-140
Methyl Isobutyl Ketone	<0.5	0.5	100	50-140	100	50-140
Methyl tert-butyl Ether	<0.05	0.05	100	60-130	100	50-140
Methylene Chloride	<0.05	0.05	95	60-130	131	50-140
Styrene	<0.05	0.05	100	60-130	100	50-140
1,1,1,2-Tetrachloroethane	<0.05	0.05	100	60-130	100	50-140
1,1,2,2-Tetrachloroethane	<0.05	0.05	100	60-130	100	50-140
Tetrachloroethylene	<0.05	0.05	85	60-130	103	50-140
Toluene	<0.2	0.2	94	60-130	104	50-140
1,1,1-Trichloroethane	<0.05	0.05	97	60-130	118	50-140
1,1,2-Trichloroethane	<0.05	0.05	100	60-130	100	50-140
Trichloroethylene	<0.05	0.05	94	60-130	116	50-140
Trichlorofluoromethane	<0.05	0.05	100	50-140	100	50-140
Vinyl Chloride	<0.02	0.02	100	50-140	100	50-140
Xylenes	<0.05	0.05	84	60-130	112	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
1,2-Dichloroethane-d4	72	60-140	97	60-140	91	60-140
Toluene-d8	62	60-140	82	60-140	61	60-140
4-Bromofluorobenzene	61	60-140	90	60-140	77	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
VOCs in Soil						
Acetone	0.0	0-50				
Benzene	0.0	0-50				
Bromodichloromethane	0.0	0-50				
Bromoform	0.0	0-50				
Bromomethane	0.0	0-50				
Carbon Tetrachloride	0.0	0-50				
Chlorobenzene	0.0	0-50				
Chloroform	0.0	0-50				
Dibromochloromethane	0.0	0-50				
1,2-Dichlorobenzene	0.0	0-50				
1,3-Dichlorobenzene	0.0	0-50				
1,4-Dichlorobenzene	0.0	0-50				
Dichlorodifluoromethane	0.0	0-50				
1,1-Dichloroethane	0.0	0-50				
1,2-Dichloroethane	0.0	0-50				
1,1-Dichloroethylene	0.0	0-50				
c-1,2-Dichloroethylene	0.0	0-50				
t-1,2-Dichloroethylene	0.0	0-50				
1,2-Dichloropropane	0.0	0-50				
1,3-Dichloropropene (cis-+trans-)	0.0	0-50				
Ethylbenzene	0.0	0-50				
Ethylene Dibromide	0.0	0-50				
Hexane (n)	0.0	0-50				
Methyl Ethyl Ketone	0.0	0-50				
Methyl Isobutyl Ketone	0.0	0-50				
Methyl tert-butyl Ether	0.0	0-50				
Methylene Chloride	0.0	0-50				
Styrene	0.0	0-50				
1,1,1,2-Tetrachloroethane	0.0	0-50				
1,1,2,2-Tetrachloroethane	0.0	0-50				
Tetrachloroethylene	0.0	0-50				
Toluene	15	0-50				
1,1,1-Trichloroethane	0.0	0-50				
1,1,2-Trichloroethane	0.0	0-50				
Trichloroethylene	0.0	0-50				
Trichlorofluoromethane	0.0	0-50				
Vinyl Chloride	0.0	0-50				
Xylenes	0.0	0-50				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
1,2-Dichloroethane-d4	85	60-140				
Toluene-d8	67	60-140				
4-Bromofluorobenzene	87	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-1993-1*** MW213 0.00-0.90m	***19-1993-2*** MW213 0.90-1.50m				**Soil Standards [1]**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02				(0.17) 0.21
Toluene	<0.2	<0.2				(6) 2.3
Ethylbenzene	<0.05	<0.05				(15) 2
Xylenes	<0.05	<0.05				(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10				(65) 55
F2 (C_{10} - C_{16})	<10	<10				(150) 98
F3 (C_{16} - C_{34})	<50	<50				(1300) 300
F4 (C_{34}-C_{50})	<50	<50				(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes				
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	106	118				60-140
Toluene-d8	80	97				60-140
4-Bromofluorobenzene	83	90				60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
BTEX in Soil						
Benzene	<0.02	0.02	103	60-130	104	50-140
Toluene	<0.2	0.2	94	60-130	104	50-140
Ethylbenzene	<0.05	0.05	93	60-130	109	50-140
Xylenes	<0.05	0.05	84	60-130	112	50-140
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	10	94	80-120	104	60-140
F2 (C_{10} - C_{16})	<10	10	115	80-120	70	60-140
F3 (C_{16} - C_{34})	<50	50	109	80-120	97	60-140
F4 (C_{34}-C_{50})	<50	50	107	80-120	79	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
1,2-Dichloroethane-d4	72	60-140	97	60-140	91	60-140
Toluene-d8	62	60-140	82	60-140	61	60-140
4-Bromofluorobenzene	61	60-140	90	60-140	77	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

BTEX should be subtracted from F_1, Naphthalene from F_2 and selected PAHs from F_3 if BTEX/PAHs are analyzed, then report $F_{1\text{-BTEX}}$, $F_{2\text{-Naph.}}$ and $F_{3\text{-PAH}}$. nC_{50} response factor was within 70% of nC_{10}+nC_{16}+nC_{34} average.

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Soil						
Benzene	0.0	0-50				
Toluene	15	0-50				
Ethylbenzene	0.0	0-50				
Xylenes	0.0	0-50				
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	10	0-30				
F2 (C_{10} - C_{16})	0.0	0-30				
F3 (C_{16} - C_{34})	16	0-30				
F4 (C_{34}-C_{50})	24	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
1,2-Dichloroethane-d4	85	60-140				
Toluene-d8	67	60-140				
4-Bromofluorobenzene	87	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-1993-1*** MW213 0.00-0.90m	***19-1993-2*** MW213 0.90-1.50m				**Soil Standards** [1]
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05				(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05				(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05				
Acenaphthylene	<0.05	<0.05				(0.17) 0.15
Acenaphthene	0.17	<0.05				(58) 7.9
Fluorene	0.16	<0.05				(69) 62
Phenanthrene	1.6	<0.05				(7.8) 6.2
Anthracene	0.12	<0.05				(0.74) 0.67
Fluoranthene	**2.1**	<0.05				0.69
Pyrene	1.3	<0.05				78
Benzo [a] anthracene	0.53	<0.05				(0.63) 0.5
Chrysene	0.75	<0.05				(7.8) 7
Benzo [b] fluoranthene	0.70	<0.05				0.78
Benzo [k] fluoranthene	0.34	<0.05				0.78
Benzo [a] pyrene	**0.48**	<0.05				0.3
Indeno [1,2,3-cd] pyrene	0.39	<0.1				(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1				0.1
Benzo [g,h,i] perylene	0.24	<0.1				(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	93	100				50-140
Phenanthrene-d10	98	94				50-140
Chrysene-d12	75	84				50-140

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Soil Standards.

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
PAHs in Soil						
Naphthalene	<0.05	0.05	104	50-140	114	50-140
2-Methylnaphthalene	<0.05	0.05	118	50-140	110	50-140
1-Methylnaphthalene	<0.05	0.05	113	50-140	105	50-140
Acenaphthylene	<0.05	0.05	112	50-140	103	50-140
Acenaphthene	<0.05	0.05	113	50-140	123	50-140
Fluorene	<0.05	0.05	136	50-140	96	50-140
Phenanthrene	<0.05	0.05	84	50-140	96	50-140
Anthracene	<0.05	0.05	79	50-140	88	50-140
Fluoranthene	<0.05	0.05	94	50-140	92	50-140
Pyrene	<0.05	0.05	97	50-140	98	50-140
Benzo [a] anthracene	<0.05	0.05	89	50-140	79	50-140
Chrysene	<0.05	0.05	95	50-140	94	50-140
Benzo [b] fluoranthene	<0.05	0.05	94	50-140	101	50-140
Benzo [k] fluoranthene	<0.05	0.05	96	50-140	105	50-140
Benzo [a] pyrene	<0.05	0.05	92	50-140	99	50-140
Indeno [1,2,3-cd] pyrene	<0.1	0.1	73	50-140	95	50-140
Dibenzo [a,h] anthracene	<0.1	0.1	77	50-140	102	50-140
Benzo [g,h,i] perylene	<0.1	0.1	81	50-140	97	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	97	50-140	93	50-140	95	50-140
Phenanthrene-d10	64	50-140	82	50-140	86	50-140
Chrysene-d12	83	50-140	99	50-140	94	50-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Soil						
Naphthalene	0.0	0-40				
2-Methylnaphthalene	0.0	0-40				
1-Methylnaphthalene	0.0	0-40				
Acenaphthylene	0.0	0-40				
Acenaphthene	0.0	0-40				
Fluorene	0.0	0-40				
Phenanthrene	0.0	0-40				
Anthracene	0.0	0-40				
Fluoranthene	0.0	0-40				
Pyrene	0.0	0-40				
Benzo [a] anthracene	0.0	0-40				
Chrysene	0.0	0-40				
Benzo [b] fluoranthene	0.0	0-40				
Benzo [k] fluoranthene	0.0	0-40				
Benzo [a] pyrene	0.0	0-40				
Indeno [1,2,3-cd] pyrene	0.0	0-40				
Dibenzo [a,h] anthracene	0.0	0-40				
Benzo [g,h,i] perylene	0.0	0-40				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	110	50-140				
Phenanthrene-d10	75	50-140				
Chrysene-d12	83	50-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-1993-1*** MW213 0.00-0.90m	***19-1993-2*** MW213 0.90-1.50m				**Soil Standards [1]**
***EC** (mS/cm)*	0.20	0.15				0.7

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
***EC** (mS/cm)*	<0.01	0.01	101	90-110	9.5	0-10

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-1993-1*** MW213 0.00-0.90m	***19-1993-2*** MW213 0.90-1.50m				**Soil Standards [1]**
SAR *(no unit)*	1.1	0.45				5

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**LCS**	**AR**	**Duplicate**	**AR**		
			RPD (%)			
SAR *(no unit)*	0.41	0.30-0.50	2.1	0-30		

LEGEND:
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Hg, VOCs, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-1993-1*** MW213 0.00-0.90m	***19-1993-2*** MW213 0.90-1.50m				
Moisture Content (%)	17	13				

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
Moisture Content (%)	<0.1	0.1	99	70-130	3.7	0-20

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

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F.E. Job #: 19-2014
Project Name: Phase II ESA
Project ID: FE-P-19-9254
Date Sampled: 26-Feb-19
Date Received: 26-Feb-19
Date Reported: 4-Mar-19
Location: 2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Water	4	N/A	27-Feb-19	Metals F-1	SM 3120-B
VOCs	Water	5	N/A	1-Mar-19	VOCs F-6	SM 6200-B
PHCs (F1 & BTEX)	Water	4	N/A	1-Mar-19	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Water	4	28-Feb-19	1-Mar-19	PHCs F-7	CCME CWS
PAHs	Water	4	28-Feb-19	28-Feb-19	PAHs F-4	SM 6410B

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:



Roger Lin, Ph. D., C. Chem.
Laboratory Manager

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PHCs, VOCs, PAHs
Sample Description:	5 Water Samples

Parameter	***19-2014-1*** MW211	***19-2014-2*** MW211 Duplicate	***19-2014-3*** MW212	***19-2014-4*** MW214		**Ground Water Standards** [1]
	Concentration (µ g/L)					
Metals in Water						
Antimony	<0.5	<0.5	<0.5	<0.5		20,000
Arsenic	12	7.7	11	12		1,900
Barium	141	150	237	109		29,000
Beryllium	<0.5	<0.5	<0.5	<0.5		67
Boron	160	359	594	444		45,000
Cadmium	<0.5	<0.5	<0.5	<0.5		2.7
Chromium	14	41	30	43		810
Cobalt	7.3	7.3	1.8	1.3		66
Copper	<5	<5	<5	<5		87
Lead	<1	<1	<1	<1		25
Molybdenum	5.9	6.4	17	7.5		9,200
Nickel	6.6	6.8	11	7.1		490
Selenium	<5	<5	8.1	14		63
Silver	<0.3	<0.3	<0.3	<0.3		1.5
Thallium	<0.5	<0.5	<0.5	<0.5		510
Uranium	14	14	9.1	6.3		420
Vanadium	1.9	2.3	7.4	9.4		250
Zinc	<5	<5	6.6	<5		1,100

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/L)		Recovery (%)		Recovery (%)	
Metals in Water						
Antimony	<0.5	0.5	80	80-120	96	70-130
Arsenic	<1	1	91	80-120	119	70-130
Barium	<2	2	95	80-120	107	70-130
Beryllium	<0.5	0.5	103	80-120	88	70-130
Boron	<10	10	100	80-120	95	70-130
Cadmium	<0.5	0.5	91	80-120	101	70-130
Chromium	<10	10	110	80-120	94	70-130
Cobalt	<1	1	101	80-120	101	70-130
Copper	<5	5	101	80-120	95	70-130
Lead	<1	1	91	80-120	100	70-130
Molybdenum	<0.5	0.5	86	80-120	100	70-130
Nickel	<1	1	99	80-120	98	70-130
Selenium	<5	5	90	80-120	125	70-130
Silver	<0.3	0.3	94	80-120	84	70-130
Thallium	<0.5	0.5	91	80-120	104	70-130
Uranium	<2	2	89	80-120	119	70-130
Vanadium	<0.5	0.5	107	80-120	98	70-130
Zinc	<5	5	105	80-120	103	70-130

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Water						
Antimony	0.0	0-20				
Arsenic	8.0	0-20				
Barium	1.4	0-20				
Beryllium	0.0	0-20				
Boron	11	0-20				
Cadmium	0.0	0-20				
Chromium	2.1	0-20				
Cobalt	1.4	0-20				
Copper	0.0	0-20				
Lead	0.0	0-20				
Molybdenum	1.7	0-20				
Nickel	1.5	0-20				
Selenium	0.0	0-20				
Silver	0.0	0-20				
Thallium	0.0	0-20				
Uranium	2.1	0-20				
Vanadium	3.1	0-20				
Zinc	0.0	0-20				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PHCs, VOCs, PAHs
Sample Description:	5 Water Samples

Parameter	***19-2014-1*** MW211	***19-2014-2*** MW211 Duplicate	***19-2014-3*** MW212	***19-2014-4*** MW214	***19-2014-5*** Trip Blank	**Ground Water Standards [1]**
	Concentration (µ g/L)					
VOCs in Water						
Acetone	<30	<30	<30	<30	<30	130000
Benzene	<0.5	<0.5	<0.5	0.8	<0.5	(430) 44
Bromodichloromethane	<2	<2	<2	<2	<2	85000
Bromoform	<5	<5	<5	<5	<5	(770) 380
Bromomethane	<0.5	<0.5	<0.5	<0.5	<0.5	(56) 5.6
Carbon Tetrachloride	<0.2	<0.2	<0.2	<0.2	<0.2	(8.4) 0.79
Chlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	630
Chloroform	<1	<1	<1	<1	<1	(22) 2.4
Dibromochloromethane	<2	<2	<2	<2	<2	82000
1,2-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	(9600) 4600
1,3-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	9600
1,4-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	(67) 8
Dichlordifluoromethane	<2	<2	<2	<2	<2	4400
1,1-Dichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	(3100) 320
1,2-Dichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	(12) 1.6
1,1-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	(17) 1.6
c-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	(17) 1.6
t-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	(17) 1.6
1,2-Dichloropropane	<0.5	<0.5	<0.5	<0.5	<0.5	(140) 16
1,3-Dichloropropene (cis-+trans-)	<0.5	<0.5	<0.5	<0.5	<0.5	(45) 5.2
Ethylbenzene	<0.5	<0.5	<0.5	<0.5	<0.5	2300
Ethylene Dibromide	<0.2	<0.2	<0.2	<0.2	<0.2	(0.83) 0.25
Hexane (n)	<5	<5	<5	<5	<5	(520) 51
Methyl Ethyl Ketone	<20	<20	<20	<20	<20	(1500000)470000
Methyl Isobutyl Ketone	<20	<20	<20	<20	<20	(580000)140000
Methyl tert-butyl Ether	<2	<2	<2	<2	<2	(1400) 190
Methylene Chloride	<5	<5	<5	<5	<5	(5500) 610
Styrene	<0.5	<0.5	<0.5	<0.5	<0.5	(9100) 1300
1,1,1,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	(28) 3.3
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	(15) 3.2
Tetrachloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	(17) 1.6
Toluene	<0.5	<0.5	<0.5	3.3	<0.5	18000
1,1,1-Trichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	(6700) 640
1,1,2-Trichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	(30) 4.7
Trichloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	(17) 1.6
Trichlorofluoromethane	<5	<5	<5	<5	<5	2500
Vinyl Chloride	<0.5	<0.5	<0.5	<0.5	<0.5	(1.7) 0.5
Xylenes	<0.5	<0.5	<0.5	<0.5	<0.5	4200
Surrogate Recovery (%)						
Bromochloromethane	82	94	81	90	105	60-140
1,4-Difluorobenzene	81	89	81	88	106	60-140
1,4-Dichlorobutane	83	94	83	96	110	60-140

< result obtained was below RL (Reporting Limit).

Bold: Result ecxeeds limit noted in Ground Water Standards.

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(ug/L)		Recovery (%)		Recovery (%)	
VOCs in Water						
Acetone	<30	<30	78	50-140	116	50-140
Benzene	<0.5	<0.5	109	60-130	104	50-140
Bromodichloromethane	<2	<2	107	50-140	112	50-140
Bromoform	<5	<5	93	60-130	100	50-140
Bromomethane	<0.5	<0.5	92	50-140	104	50-140
Carbon Tetrachloride	<0.2	<0.2	92	60-130	83	50-140
Chlorobenzene	<0.5	<0.5	112	60-130	73	50-140
Chloroform	<1	<1	105	60-130	97	50-140
Dibromochloromethane	<2	<2	107	60-130	96	50-140
1,2-Dichlorobenzene	<0.5	<0.5	104	60-130	67	50-140
1,3-Dichlorobenzene	<0.5	<0.5	79	60-130	84	50-140
1,4-Dichlorobenzene	<0.5	<0.5	98	60-130	88	50-140
Dichlordifluoromethane	<2	<2	94	50-140	87	50-140
1,1-Dichloroethane	<0.5	<0.5	103	60-130	68	50-140
1,2-Dichloroethane	<0.5	<0.5	97	60-130	103	50-140
1,1-Dichloroethylene	<0.5	<0.5	94	60-130	124	50-140
c-1,2-Dichloroethylene	<0.5	<0.5	91	60-130	119	50-140
t-1,2-Dichloroethylene	<0.5	<0.5	77	60-130	81	50-140
1,2-Dichloropropane	<0.5	<0.5	108	60-130	82	50-140
1,3-Dichloropropene (cis-+trans-)	<0.5	<0.5	109	60-130	68	50-140
Ethylbenzene	<0.5	<0.5	99	60-130	86	50-140
Ethylene Dibromide	<0.2	<0.2	76	60-130	113	50-140
Hexane (n)	<5	<5	107	60-130	73	50-140
Methyl Ethyl Ketone	<20	<20	78	50-140	122	50-140
Methyl Isobutyl Ketone	<20	<20	104	50-140	123	50-140
Methyl tert-butyl Ether	<2	<2	85	60-130	127	50-140
Methylene Chloride	<5	<5	89	60-130	85	50-140
Styrene	<0.5	<0.5	114	60-130	114	50-140
1,1,1,2-Tetrachloroethane	<0.5	<0.5	88	60-130	118	50-140
1,1,2,2-Tetrachloroethane	<0.5	<0.5	84	60-130	92	50-140
Tetrachloroethylene	<0.5	<0.5	102	60-130	98	50-140
Toluene	<0.5	<0.5	110	60-130	114	50-140
1,1,1-Trichloroethane	<0.5	<0.5	77	60-130	93	50-140
1,1,2-Trichloroethane	<0.5	<0.5	81	60-130	82	50-140
Trichloroethylene	<0.5	<0.5	109	60-130	95	50-140
Trichlorofluoromethane	<5	<5	111	50-140	119	50-140
Vinyl Chloride	<0.5	<0.5	81	50-140	72	50-140
Xylenes	<0.5	<0.5	109	60-130	77	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Bromocholoromethane	110	60-140	110	60-140	118	60-140
1,4-Difluorobenzene	110	60-140	109	60-140	125	60-140
1,4-Dichlorobutane	114	60-140	108	60-140	117	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
VOCs in Water						
Acetone	0.0	0-30				
Benzene	1.0	0-30				
Bromodichloromethane	0.0	0-30				
Bromoform	0.0	0-30				
Bromomethane	0.0	0-30				
Carbon Tetrachloride	0.0	0-30				
Chlorobenzene	0.0	0-30				
Chloroform	0.0	0-30				
Dibromochloromethane	0.0	0-30				
1,2-Dichlorobenzene	0.0	0-30				
1,3-Dichlorobenzene	0.0	0-30				
1,4-Dichlorobenzene	0.0	0-30				
Dichlordifluoromethane	0.0	0-30				
1,1-Dichloroethane	0.0	0-30				
1,2-Dichloroethane	0.0	0-30				
1,1-Dichloroethylene	0.0	0-30				
c-1,2-Dichloroethylene	0.0	0-30				
t-1,2-Dichloroethylene	0.0	0-30				
1,2-Dichloropropane	0.0	0-30				
1,3-Dichloropropene (cis-+trans-)	0.0	0-30				
Ethylbenzene	2.0	0-30				
Ethylene Dibromide	0.0	0-30				
Hexane (n)	0.0	0-30				
Methyl Ethyl Ketone	0.0	0-30				
Methyl Isobutyl Ketone	0.0	0-30				
Methyl tert-butyl Ether	0.0	0-30				
Methylene Chloride	0.0	0-30				
Styrene	0.0	0-30				
1,1,1,2-Tetrachloroethane	0.0	0-30				
1,1,2,2-Tetrachloroethane	0.0	0-30				
Tetrachloroethylene	0.0	0-30				
Toluene	22	0-30				
1,1,1-Trichloroethane	0.0	0-30				
1,1,2-Trichloroethane	0.0	0-30				
Trichloroethylene	0.0	0-30				
Trichlorofluoromethane	0.0	0-30				
Vinyl Chloride	0.0	0-30				
Xylenes	1.0	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Bromocholoromethane	136	60-140				
1,4-Difluorobenzene	123	60-140				
1,4-Dichlorobutane	133	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PHCs, VOCs, PAHs
Sample Description:	5 Water Samples

Parameter	***19-2014-1*** MW211	***19-2014-2*** MW211 Duplicate	***19-2014-3*** MW212	***19-2014-4*** MW214		**Ground Water Standards** [1]
	Concentration (µ g/L)					
BTEX in Water						
Benzene	<0.5	<0.5	<0.5	0.8		(430) 44
Toluene	<0.5	<0.5	<0.5	3.3		18000
Ethylbenzene	<0.5	<0.5	<0.5	<0.5		2300
Xylenes	<0.5	<0.5	<0.5	<0.5		4200
PHCs (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25	<25	<25	<25		750
F2 (C_{10} - C_{16})	<100	<100	<100	<100		150
F3 (C_{16} - C_{34})	<100	<100	<100	<100		500
F4 (>C_{34})	<100	<100	<100	<100		500
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
Bromochloromethane	82	94	81	90		60-140
1,4-Difluorobenzene	81	89	81	88		60-140
1,4-Dichlorobutane	83	94	83	96		60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(ug/L)		Recovery (%)		Recovery (%)	
BTEX in Water						
Benzene	<0.5	0.5	97	60-130	91	50-140
Toluene	<0.5	0.5	98	60-130	89	50-140
Ethylbenzene	<0.5	0.5	88	60-130	74	50-140
Xylenes	<0.5	0.5	102	60-130	86	50-140
PHC (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25	25	98	60-140	115	60-140
F2 (C_{10} - C_{16})	<100	100	115	60-140	70	60-140
F3 (C_{16} - C_{34})	<100	100	109	60-140	97	60-140
F4 (>C_{34})	<100	100	107	60-140	79	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Bromochloromethane	103	60-140	87	60-140	122	60-140
1,4-Difluorobenzene	109	60-140	72	60-140	109	60-140
1,4-Dichlorobutane	112	60-140	76	60-140	117	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Water						
Benzene	1.0	0-30				
Toluene	22.0	0-30				
Ethylbenzene	2.0	0-30				
Xylenes	1.0	0-30				
PHC (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	0.0	0-30				
F2 (C_{10} - C_{16})	0.0	0-30				
F3 (C_{16} - C_{34})	16	0-30				
F4 (>C_{34})	24	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Bromochloromethane	136	60-140				
1,4-Difluorobenzene	123	60-140				
1,4-Dichlorobutane	133	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PHCs, VOCs, PAHs
Sample Description:	5 Water Samples

Parameter	***19-2014-1*** MW211	***19-2014-2*** MW211 Duplicate	***19-2014-3*** MW212	***19-2014-4*** MW214		**Ground Water Standards** [1]
	Concentration (µ g/L)					
PAHs in Water						
Naphthalene	<2	<2	<2	<2		(6400) 1400
2-Methylnaphthalene	<1	<1	<1	<1		1800
1-Methylnaphthalene	<1	<1	<1	<1		
Acenaphthylene	<1	<1	<1	<1		1.8
Acenaphthene	<1	<1	<1	<1		(1700) 600
Fluorene	<0.5	<0.5	<0.5	<0.5		400
Phenanthrene	<0.1	<0.1	<0.1	<0.1		580
Anthracene	<0.1	<0.1	<0.1	<0.1		2.4
Fluoranthene	<0.4	<0.4	<0.4	<0.4		130
Pyrene	<0.2	<0.2	<0.2	<0.2		68
Benzo [a] anthracene	<0.2	<0.2	<0.2	<0.2		4.7
Chrysene	<0.1	<0.1	<0.1	<0.1		1
Benzo [b] fluoranthene	<0.1	<0.1	<0.1	<0.1		0.75
Benzo [k] fluoranthene	<0.1	<0.1	<0.1	<0.1		0.4
Benzo [a] pyrene	<0.01	<0.01	<0.01	<0.01		0.81
Indeno [1,2,3-cd] pyrene	<0.2	<0.2	<0.2	<0.2		0.2
Dibenzo [a,h] anthracene	<0.2	<0.2	<0.2	<0.2		0.52
Benzo [g,h,i] perylene	<0.2	<0.2	<0.2	<0.2		0.2
Surrogate Recovery (%)						
Naphthalene-d8	57	53	51	62		50-140
Phenanthrene-d10	82	72	63	79		50-140
Chrysene-d12	67	63	65	60		50-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/L)		Recovery (%)		Recovery (%)	
PAHs in Water						
Naphthalene	<2	2	84	50-140	79	50-140
2-Methylnaphthalene	<1	1	91	50-140	89	50-140
1-Methylnaphthalene	<1	1	76	50-140	83	50-140
Acenaphthylene	<1	1	80	50-140	95	50-140
Acenaphthene	<1	1	85	50-140	96	50-140
Fluorene	<0.5	0.5	68	50-140	101	50-140
Phenanthrene	<0.1	0.1	100	50-140	91	50-140
Anthracene	<0.1	0.1	79	50-140	82	50-140
Fluoranthene	<0.4	0.4	81	50-140	79	50-140
Pyrene	<0.2	0.2	76	50-140	75	50-140
Benzo [a] anthracene	<0.2	0.2	76	50-140	66	50-140
Chrysene	<0.1	0.1	75	50-140	83	50-140
Benzo [b] fluoranthene	<0.1	0.1	50	50-140	52	50-140
Benzo [k] fluoranthene	<0.1	0.1	97	50-140	110	50-140
Benzo [a] pyrene	<0.01	0.01	86	50-140	102	50-140
Indeno [1,2,3-cd] pyrene	<0.2	0.2	80	50-140	89	50-140
Dibenzo [a,h] anthracene	<0.2	0.2	90	50-140	88	50-140
Benzo [g,h,i] perylene	<0.2	0.2	74	50-140	79	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	51	50-140	70	50-140	63	50-140
Phenanthrene-d10	64	50-140	82	50-140	84	50-140
Chrysene-d12	59	50-140	51	50-140	53	50-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Water						
Naphthalene	10.6	0-30				
2-Methylnaphthalene	9.4	0-30				
1-Methylnaphthalene	13.1	0-30				
Acenaphthylene	3.5	0-30				
Acenaphthene	6.8	0-30				
Fluorene	3.2	0-30				
Phenanthrene	6.8	0-30				
Anthracene	11.5	0-30				
Fluoranthene	12.8	0-30				
Pyrene	13.8	0-30				
Benzo [a] anthracene	3.1	0-30				
Chrysene	13.3	0-30				
Benzo [b] fluoranthene	11.7	0-30				
Benzo [k] fluoranthene	26.8	0-30				
Benzo [a] pyrene	17.6	0-30				
Indeno [1,2,3-cd] pyrene	18.6	0-30				
Dibenzo [a,h] anthracene	18.9	0-30				
Benzo [g,h,i] perylene	17.6	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	51	50-140				
Phenanthrene-d10	63	50-140				
Chrysene-d12	52	50-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

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F.E. Job #: 19-2055
Project Name: Phase II ESA
Project ID: FE-P-19-9254
Date Sampled: 1-Mar-19
Date Received: 5-Mar-19
Date Reported: 12-Mar-19
Location: 2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Soil	2	11-Mar-19	11-Mar-19	Metals F-18	SM 3125-B
PHCs (F1 & BTEX)	Soil	2	6-Mar-19	6-Mar-19	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Soil	2	6-Mar-19	7-Mar-19	PHCs F-7	CCME CWS
PAHs	Soil	2	7-Mar-19	7-Mar-19	PAHs F-4	SM 6410-B
EC	Soil	2	6-Mar-19	6-Mar-19	pH-EC-SAR F-16	SW-846, 9050A
SAR	Soil	2	12-Mar-19	12-Mar-19	pH-EC-SAR F-16	SW-846, 6010C
Moisture Content	Soil	2	N/A	6-Mar-19	Support Procedures F-99	Carter (1993)

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:

Roger Lin, Ph. D., C. Chem.
Laboratory Manager

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
Ronggen (Roger) Lin
CHEMIST

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-2055-1*** MW216 0.00-0.30m	***19-2055-2*** MW216 (Dupe) 0.00-0.30m				**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1				7.5
Arsenic	3.7	2.9				18
Barium	59	56				390
Beryllium	<2	<2				(5) 4
Boron	5.6	6.8				120
Cadmium	<1	<1				1.2
Chromium	16	15				160
Cobalt	12	10				22
Copper	36	33				(180) 140
Lead	<10	<10				120
Molybdenum	<2	<2				6.9
Nickel	21	19				(130) 100
Selenium	<1	<1				2.4
Silver	<0.5	<0.5				(25) 20
Thallium	<1	<1				1
Uranium	<1	<1				23
Vanadium	22	20				86
Zinc	42	37				340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
Metals in Soil						
Antimony	<1	1	90	80-120	89	70-130
Arsenic	<1	1	82	80-120	82	70-130
Barium	<5	5	96	80-120	92	70-130
Beryllium	<2	2	92	80-120	94	70-130
Boron	<5	5	88	80-120	97	70-130
Cadmium	<1	1	96	80-120	103	70-130
Chromium	<5	5	101	80-120	91	70-130
Cobalt	<2	2	105	80-120	97	70-130
Copper	<5	5	80	80-120	75	70-130
Lead	<10	10	96	80-120	101	70-130
Molybdenum	<2	2	101	80-120	88	70-130
Nickel	<5	5	112	80-120	103	70-130
Selenium	<1	1	91	80-120	73	70-130
Silver	<0.5	0.5	95	80-120	89	70-130
Thallium	<1	1	103	80-120	108	70-130
Uranium	<1	1	105	80-120	112	70-130
Vanadium	<10	10	105	80-120	90	70-130
Zinc	<30	30	81	80-120	70	70-130

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Soil						
Antimony	0.0	0-30				
Arsenic	2.7	0-30				
Barium	9.1	0-30				
Beryllium	0.0	0-30				
Boron	25	0-30				
Cadmium	0.0	0-30				
Chromium	1.2	0-30				
Cobalt	1.6	0-30				
Copper	1.7	0-30				
Lead	0.0	0-30				
Molybdenum	0.0	0-30				
Nickel	1.9	0-30				
Selenium	15	0-30				
Silver	0.0	0-30				
Thallium	0.0	0-30				
Uranium	0.0	0-30				
Vanadium	3.2	0-30				
Zinc	1.2	0-30				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-2055-1*** MW216 0.00-0.30m	***19-2055-2*** MW216 (Dupe) 0.00-0.30m				**Soil Standards [1]**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02				(0.17) 0.21
Toluene	<0.2	<0.2				(6) 2.3
Ethylbenzene	<0.05	<0.05				(15) 2
Xylenes	<0.05	<0.05				(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10				(65) 55
F2 (C_{10} - C_{16})	<10	<10				(150) 98
F3 (C_{16} - C_{34})	<50	<50				(1300) 300
F4 (C_{34}-C_{50})	<50	<50				(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes				
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	68	86				60-140
Toluene-d8	71	74				60-140
4-Bromofluorobenzene	74	133				60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
BTEX in Soil						
Benzene	<0.02	0.02	105	60-130	75	50-140
Toluene	<0.2	0.2	109	60-130	91	50-140
Ethylbenzene	<0.05	0.05	106	60-130	83	50-140
Xylenes	<0.05	0.05	102	60-130	94	50-140
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	10	109	80-120	91	60-140
F2 (C_{10} - C_{16})	<10	10	101	80-120	63	60-140
F3 (C_{16} - C_{34})	<50	50	95	80-120	69	60-140
F4 (C_{34}-C_{50})	<50	50	95	80-120	76	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
1,2-Dichloroethane-d4	90	60-140	63	60-140	80	60-140
Toluene-d8	94	60-140	65	60-140	80	60-140
4-Bromofluorobenzene	69	60-140	84	60-140	76	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

BTEX should be subtracted from F_1, Naphthalene from F_2 and selected PAHs from F_3 if BTEX/PAHs are analyzed, then report $F_{1\text{-BTEX}}$, $F_{2\text{-Naph.}}$ and $F_{3\text{-PAH}}$. nC_{50} response factor was within 70% of nC_{10}+nC_{16}+nC_{34} average.

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Soil						
Benzene	0.0	0-50				
Toluene	0.0	0-50				
Ethylbenzene	0.0	0-50				
Xylenes	0.0	0-50				
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	13	0-30				
F2 (C_{10} - C_{16})	0.0	0-30				
F3 (C_{16} - C_{34})	0.0	0-30				
F4 (C_{34}-C_{50})	0.0	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
1,2-Dichloroethane-d4	71	60-140				
Toluene-d8	68	60-140				
4-Bromofluorobenzene	81	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-2055-1*** MW216 0.00-0.30m	***19-2055-2*** MW216 (Dupe) 0.00-0.30m				**Soil Standards** [1]
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05				(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05				(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05				
Acenaphthylene	<0.05	<0.05				(0.17) 0.15
Acenaphthene	<0.05	<0.05				(58) 7.9
Fluorene	<0.05	<0.05				(69) 62
Phenanthrene	<0.05	<0.05				(7.8) 6.2
Anthracene	<0.05	<0.05				(0.74) 0.67
Fluoranthene	<0.05	<0.05				0.69
Pyrene	<0.05	<0.05				78
Benzo [a] anthracene	<0.05	<0.05				(0.63) 0.5
Chrysene	<0.05	<0.05				(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05				0.78
Benzo [k] fluoranthene	<0.05	<0.05				0.78
Benzo [a] pyrene	<0.05	<0.05				0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1				(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1				0.1
Benzo [g,h,i] perylene	<0.1	<0.1				(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	100	78				50-140
Phenanthrene-d10	87	84				50-140
Chrysene-d12	88	113				50-140

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Soil Standards.

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
PAHs in Soil						
Naphthalene	<0.05	0.05	111	50-140	129	50-140
2-Methylnaphthalene	<0.05	0.05	109	50-140	127	50-140
1-Methylnaphthalene	<0.05	0.05	104	50-140	107	50-140
Acenaphthylene	<0.05	0.05	107	50-140	109	50-140
Acenaphthene	<0.05	0.05	96	50-140	100	50-140
Fluorene	<0.05	0.05	81	50-140	109	50-140
Phenanthrene	<0.05	0.05	100	50-140	106	50-140
Anthracene	<0.05	0.05	119	50-140	100	50-140
Fluoranthene	<0.05	0.05	111	50-140	92	50-140
Pyrene	<0.05	0.05	103	50-140	101	50-140
Benzo [a] anthracene	<0.05	0.05	113	50-140	108	50-140
Chrysene	<0.05	0.05	114	50-140	102	50-140
Benzo [b] fluoranthene	<0.05	0.05	98	50-140	102	50-140
Benzo [k] fluoranthene	<0.05	0.05	92	50-140	114	50-140
Benzo [a] pyrene	<0.05	0.05	97	50-140	100	50-140
Indeno [1,2,3-cd] pyrene	<0.1	0.1	93	50-140	120	50-140
Dibenzo [a,h] anthracene	<0.1	0.1	91	50-140	133	50-140
Benzo [g,h,i] perylene	<0.1	0.1	90	50-140	136	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	90	50-140	83	50-140	92	50-140
Phenanthrene-d10	99	50-140	103	50-140	108	50-140
Chrysene-d12	104	50-140	102	50-140	108	50-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Soil						
Naphthalene	0.0	0-40				
2-Methylnaphthalene	0.0	0-40				
1-Methylnaphthalene	0.0	0-40				
Acenaphthylene	0.0	0-40				
Acenaphthene	0.0	0-40				
Fluorene	0.0	0-40				
Phenanthrene	0.0	0-40				
Anthracene	0.0	0-40				
Fluoranthene	0.0	0-40				
Pyrene	0.0	0-40				
Benzo [a] anthracene	0.0	0-40				
Chrysene	0.0	0-40				
Benzo [b] fluoranthene	0.0	0-40				
Benzo [k] fluoranthene	0.0	0-40				
Benzo [a] pyrene	0.0	0-40				
Indeno [1,2,3-cd] pyrene	0.0	0-40				
Dibenzo [a,h] anthracene	0.0	0-40				
Benzo [g,h,i] perylene	0.0	0-40				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	95	50-140				
Phenanthrene-d10	97	50-140				
Chrysene-d12	98	50-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-2055-1*** MW216 0.00-0.30m	***19-2055-2*** MW216 (Dupe) 0.00-0.30m				**Soil Standards [1]**
***EC** (mS/cm)*	0.21	0.20				0.7

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
***EC** (mS/cm)*	<0.01	0.01	101	90-110	9.5	0-10

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-2055-1*** MW216 0.00-0.30m	***19-2055-2*** MW216 (Dupe) 0.00-0.30m				**Soil Standards [1]**
SAR *(no unit)*	0.55	0.56				5

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**LCS**	**AR**	**Duplicate**	**AR**		
			RPD (%)			
SAR *(no unit)*	0.41	0.30-0.50	0.7	0-30		

LEGEND:
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PHCs, PAHs, EC, SAR
Sample Description:	2 Soil Samples

Parameter	***19-2055-1*** MW216 0.00-0.30m	***19-2055-2*** MW216 (Dupe) 0.00-0.30m				
Moisture Content (%)	12	14				

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
Moisture Content (%)	<0.1	0.1	99	70-130	3.7	0-20

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

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F.E. Job #: 19-2056
Project Name: Phase II ESA
Project ID: FE-P-19-9254
Date Sampled: 4-Mar-19
Date Received: 5-Mar-19
Date Reported: 11-Mar-19
Location: 2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Water	2	N/A	8-Mar-19	Metals F-1	SM 3120-B
VOCs	Water	3	N/A	6-Mar-19	VOCs F-6	SM 6200-B
PHCs (F1 & BTEX)	Water	2	N/A	6-Mar-19	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Water	2	6-Mar-19	11-Mar-19	PHCs F-7	CCME CWS
PAHs	Water	2	6-Mar-19	6-Mar-19	PAHs F-4	SM 6410B

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:

Roger Lin, Ph. D., C. Chem.
Laboratory Manager

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
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Ronggen (Roger) Lin
CHEMIST

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PHCs, VOCs, PAHs
Sample Description:	3 Water Samples

Parameter	***19-2056-1*** MW216	***19-2056-2*** MW217				**Ground Water Standards** [1]
	Concentration (µ g/L)					
Metals in Water						
Antimony	1.8	<0.5				20,000
Arsenic	11	5.0				1,900
Barium	195	300				29,000
Beryllium	<0.5	<0.5				67
Boron	113	156				45,000
Cadmium	<0.5	<0.5				2.7
Chromium	<10	<10				810
Cobalt	2.1	1.4				66
Copper	8.1	<5				87
Lead	<1	2.5				25
Molybdenum	9.4	10				9,200
Nickel	4.3	6.0				490
Selenium	<5	<5				63
Silver	<0.3	<0.3				1.5
Thallium	<0.5	<0.5				510
Uranium	3.1	3.6				420
Vanadium	2.7	4.3				250
Zinc	<5	<5				1,100

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/L)		Recovery (%)		Recovery (%)	
Metals in Water						
Antimony	<0.5	0.5	92	80-120	98	70-130
Arsenic	<1	1	93	80-120	121	70-130
Barium	<2	2	88	80-120	86	70-130
Beryllium	<0.5	0.5	99	80-120	84	70-130
Boron	<10	10	80	80-120	92	70-130
Cadmium	<0.5	0.5	88	80-120	89	70-130
Chromium	<10	10	89	80-120	90	70-130
Cobalt	<1	1	92	80-120	85	70-130
Copper	<5	5	96	80-120	89	70-130
Lead	<1	1	89	80-120	88	70-130
Molybdenum	<0.5	0.5	90	80-120	95	70-130
Nickel	<1	1	95	80-120	80	70-130
Selenium	<5	5	90	80-120	79	70-130
Silver	<0.3	0.3	88	80-120	94	70-130
Thallium	<0.5	0.5	90	80-120	87	70-130
Uranium	<2	2	93	80-120	109	70-130
Vanadium	<0.5	0.5	85	80-120	97	70-130
Zinc	<5	5	102	80-120	100	70-130

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Water						
Antimony	0.0	0-20				
Arsenic	8.7	0-20				
Barium	8.5	0-20				
Beryllium	0.0	0-20				
Boron	4.2	0-20				
Cadmium	0.0	0-20				
Chromium	1.0	0-20				
Cobalt	0.0	0-20				
Copper	0.0	0-20				
Lead	0.0	0-20				
Molybdenum	0.0	0-20				
Nickel	3.9	0-20				
Selenium	0.0	0-20				
Silver	0.0	0-20				
Thallium	0.0	0-20				
Uranium	0.0	0-20				
Vanadium	3.1	0-20				
Zinc	0.0	0-20				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PHCs, VOCs, PAHs
Sample Description:	3 Water Samples

Parameter	***19-2056-1*** MW216	***19-2056-2*** MW217	***19-2056-3*** Trip Blank			**Ground Water Standards [1]**
	Concentration (µ g/L)					
VOCs in Water						
Acetone	<30	<30	<30			130000
Benzene	<0.5	<0.5	<0.5			(430) 44
Bromodichloromethane	<2	<2	<2			85000
Bromoform	<5	<5	<5			(770) 380
Bromomethane	<0.5	<0.5	<0.5			(56) 5.6
Carbon Tetrachloride	<0.2	<0.2	<0.2			(8.4) 0.79
Chlorobenzene	<0.5	<0.5	<0.5			630
Chloroform	<1	<1	<1			(22) 2.4
Dibromochloromethane	<2	<2	<2			82000
1,2-Dichlorobenzene	<0.5	<0.5	<0.5			(9600) 4600
1,3-Dichlorobenzene	<0.5	<0.5	<0.5			9600
1,4-Dichlorobenzene	<0.5	<0.5	<0.5			(67) 8
Dichlordifluoromethane	<2	<2	<2			4400
1,1-Dichloroethane	<0.5	<0.5	<0.5			(3100) 320
1,2-Dichloroethane	<0.5	<0.5	<0.5			(12) 1.6
1,1-Dichloroethylene	<0.5	<0.5	<0.5			(17) 1.6
c-1,2-Dichloroethylene	<0.5	<0.5	<0.5			(17) 1.6
t-1,2-Dichloroethylene	<0.5	<0.5	<0.5			(17) 1.6
1,2-Dichloropropane	<0.5	<0.5	<0.5			(140) 16
1,3-Dichloropropene (cis-+trans-)	<0.5	<0.5	<0.5			(45) 5.2
Ethylbenzene	<0.5	<0.5	<0.5			2300
Ethylene Dibromide	<0.2	<0.2	<0.2			(0.83) 0.25
Hexane (n)	<5	<5	<5			(520) 51
Methyl Ethyl Ketone	<20	<20	<20			(1500000)470000
Methyl Isobutyl Ketone	<20	<20	<20			(580000)140000
Methyl tert-butyl Ether	<2	<2	<2			(1400) 190
Methylene Chloride	<5	<5	<5			(5500) 610
Styrene	<0.5	<0.5	<0.5			(9100) 1300
1,1,1,2-Tetrachloroethane	<0.5	<0.5	<0.5			(28) 3.3
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<0.5			(15) 3.2
Tetrachloroethylene	<0.5	<0.5	<0.5			(17) 1.6
Toluene	<0.5	<0.5	<0.5			18000
1,1,1-Trichloroethane	<0.5	<0.5	<0.5			(6700) 640
1,1,2-Trichloroethane	<0.5	<0.5	<0.5			(30) 4.7
Trichloroethylene	<0.5	<0.5	<0.5			(17) 1.6
Trichlorofluoromethane	<5	<5	<5			2500
Vinyl Chloride	<0.5	<0.5	<0.5			(1.7) 0.5
Xylenes	<0.5	<0.5	<0.5			4200
Surrogate Recovery (%)						
Bromochloromethane	98	122	81			60-140
1,4-Difluorobenzene	87	109	75			60-140
1,4-Dichlorobutane	88	111	86			60-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(ug/L)		Recovery (%)		Recovery (%)	
VOCs in Water						
Acetone	<30	<30	105	50-140	86	50-140
Benzene	<0.5	<0.5	97	60-130	109	50-140
Bromodichloromethane	<2	<2	99	50-140	110	50-140
Bromoform	<5	<5	106	60-130	109	50-140
Bromomethane	<0.5	<0.5	119	50-140	74	50-140
Carbon Tetrachloride	<0.2	<0.2	114	60-130	112	50-140
Chlorobenzene	<0.5	<0.5	82	60-130	74	50-140
Chloroform	<1	<1	99	60-130	95	50-140
Dibromochloromethane	<2	<2	90	60-130	117	50-140
1,2-Dichlorobenzene	<0.5	<0.5	85	60-130	119	50-140
1,3-Dichlorobenzene	<0.5	<0.5	107	60-130	115	50-140
1,4-Dichlorobenzene	<0.5	<0.5	118	60-130	72	50-140
Dichlordifluoromethane	<2	<2	114	50-140	117	50-140
1,1-Dichloroethane	<0.5	<0.5	103	60-130	68	50-140
1,2-Dichloroethane	<0.5	<0.5	108	60-130	76	50-140
1,1-Dichloroethylene	<0.5	<0.5	104	60-130	92	50-140
c-1,2-Dichloroethylene	<0.5	<0.5	111	60-130	79	50-140
t-1,2-Dichloroethylene	<0.5	<0.5	107	60-130	111	50-140
1,2-Dichloropropane	<0.5	<0.5	119	60-130	74	50-140
1,3-Dichloropropene (cis-+trans-)	<0.5	<0.5	89	60-130	108	50-140
Ethylbenzene	<0.5	<0.5	88	60-130	86	50-140
Ethylene Dibromide	<0.2	<0.2	112	60-130	83	50-140
Hexane (n)	<5	<5	121	60-130	111	50-140
Methyl Ethyl Ketone	<20	<20	110	50-140	78	50-140
Methyl Isobutyl Ketone	<20	<20	94	50-140	103	50-140
Methyl tert-butyl Ether	<2	<2	105	60-130	87	50-140
Methylene Chloride	<5	<5	69	60-130	107	50-140
Styrene	<0.5	<0.5	84	60-130	77	50-140
1,1,1,2-Tetrachloroethane	<0.5	<0.5	109	60-130	78	50-140
1,1,2,2-Tetrachloroethane	<0.5	<0.5	114	60-130	117	50-140
Tetrachloroethylene	<0.5	<0.5	88	60-130	81	50-140
Toluene	<0.5	<0.5	98	60-130	103	50-140
1,1,1-Trichloroethane	<0.5	<0.5	85	60-130	93	50-140
1,1,2-Trichloroethane	<0.5	<0.5	111	60-130	112	50-140
Trichloroethylene	<0.5	<0.5	92	60-130	100	50-140
Trichlorofluoromethane	<5	<5	81	50-140	72	50-140
Vinyl Chloride	<0.5	<0.5	116	50-140	112	50-140
Xylenes	<0.5	<0.5	102	60-130	100	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Bromocholoromethane	103	60-140	87	60-140	83	60-140
1,4-Difluorobenzene	109	60-140	73	60-140	74	60-140
1,4-Dichlorobutane	112	60-140	76	60-140	76	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
VOCs in Water						
Acetone	0.0	0-30				
Benzene	0.0	0-30				
Bromodichloromethane	0.0	0-30				
Bromoform	0.0	0-30				
Bromomethane	0.0	0-30				
Carbon Tetrachloride	0.0	0-30				
Chlorobenzene	0.0	0-30				
Chloroform	0.0	0-30				
Dibromochloromethane	0.0	0-30				
1,2-Dichlorobenzene	0.0	0-30				
1,3-Dichlorobenzene	0.0	0-30				
1,4-Dichlorobenzene	0.0	0-30				
Dichlordifluoromethane	0.0	0-30				
1,1-Dichloroethane	0.0	0-30				
1,2-Dichloroethane	0.0	0-30				
1,1-Dichloroethylene	0.0	0-30				
c-1,2-Dichloroethylene	0.0	0-30				
t-1,2-Dichloroethylene	0.0	0-30				
1,2-Dichloropropane	0.0	0-30				
1,3-Dichloropropene (cis-+trans-)	0.0	0-30				
Ethylbenzene	22	0-30				
Ethylene Dibromide	0.0	0-30				
Hexane (n)	0.0	0-30				
Methyl Ethyl Ketone	0.0	0-30				
Methyl Isobutyl Ketone	0.0	0-30				
Methyl tert-butyl Ether	0.0	0-30				
Methylene Chloride	0.0	0-30				
Styrene	0.0	0-30				
1,1,1,2-Tetrachloroethane	0.0	0-30				
1,1,2,2-Tetrachloroethane	0.0	0-30				
Tetrachloroethylene	0.0	0-30				
Toluene	6.0	0-30				
1,1,1-Trichloroethane	0.0	0-30				
1,1,2-Trichloroethane	0.0	0-30				
Trichloroethylene	0.0	0-30				
Trichlorofluoromethane	0.0	0-30				
Vinyl Chloride	0.0	0-30				
Xylenes	14	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Bromocholoromethane	99	60-140				
1,4-Difluorobenzene	87	60-140				
1,4-Dichlorobutane	87	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PHCs, VOCs, PAHs
Sample Description:	3 Water Samples

Parameter	***19-2056-1*** MW216	***19-2056-2*** MW217				**Ground Water Standards** [1]
	Concentration (µ g/L)					
BTEX in Water						
Benzene	<0.5	<0.5				(430) 44
Toluene	<0.5	<0.5				18000
Ethylbenzene	<0.5	<0.5				2300
Xylenes	<0.5	<0.5				4200
PHCs (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25	<25				750
F2 (C_{10} - C_{16})	<100	<100				150
F3 (C_{16} - C_{34})	<100	<100				500
F4 (>C_{34})	<100	<100				500
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes				
Surrogate Recovery (%)						
Bromochloromethane	98	122				60-140
1,4-Difluorobenzene	87	109				60-140
1,4-Dichlorobutane	88	111				60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(ug/L)		Recovery (%)		Recovery (%)	
BTEX in Water						
Benzene	<0.5	0.5	97	60-130	109	50-140
Toluene	<0.5	0.5	98	60-130	103	50-140
Ethylbenzene	<0.5	0.5	88	60-130	86	50-140
Xylenes	<0.5	0.5	102	60-130	100	50-140
PHC (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25	25	98	60-140	115	60-140
F2 (C_{10} - C_{16})	<100	100	101	60-140	63	60-140
F3 (C_{16} - C_{34})	<100	100	95	60-140	79	60-140
F4 (>C_{34})	<100	100	95	60-140	76	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Bromochloromethane	103	60-140	87	60-140	83	60-140
1,4-Difluorobenzene	109	60-140	73	60-140	74	60-140
1,4-Dichlorobutane	112	60-140	76	60-140	76	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Water						
Benzene	0.0	0-30				
Toluene	6.0	0-30				
Ethylbenzene	22	0-30				
Xylenes	14	0-30				
PHC (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	0.0	0-30				
F2 (C_{10} - C_{16})	10	0-30				
F3 (C_{16} - C_{34})	14	0-30				
F4 (>C_{34})	0.0	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Bromochloromethane	99	60-140				
1,4-Difluorobenzene	87	60-140				
1,4-Dichlorobutane	87	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PHCs, VOCs, PAHs
Sample Description:	3 Water Samples

Parameter	***19-2056-1*** MW216	***19-2056-2*** MW217				**Ground Water Standards** [1]
	Concentration (μ g/L)					
PAHs in Water						
Naphthalene	<2	<2				(6400) 1400
2-Methylnaphthalene	<1	<1				1800
1-Methylnaphthalene	<1	<1				
Acenaphthylene	<1	<1				1.8
Acenaphthene	<1	<1				(1700) 600
Fluorene	<0.5	<0.5				400
Phenanthrene	<0.1	<0.1				580
Anthracene	<0.1	<0.1				2.4
Fluoranthene	<0.4	<0.4				130
Pyrene	<0.2	<0.2				68
Benzo [a] anthracene	<0.2	<0.2				4.7
Chrysene	<0.1	<0.1				1
Benzo [b] fluoranthene	<0.1	<0.1				0.75
Benzo [k] fluoranthene	<0.1	<0.1				0.4
Benzo [a] pyrene	<0.01	<0.01				0.81
Indeno [1,2,3-cd] pyrene	<0.2	<0.2				0.2
Dibenzo [a,h] anthracene	<0.2	<0.2				0.52
Benzo [g,h,i] perylene	<0.2	<0.2				0.2
Surrogate Recovery (%)						
Naphthalene-d8	53	57				50-140
Phenanthrene-d10	74	63				50-140
Chrysene-d12	57	54				50-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/L)		Recovery (%)		Recovery (%)	
PAHs in Water						
Naphthalene	<2	2	84	50-140	79	50-140
2-Methylnaphthalene	<1	1	91	50-140	89	50-140
1-Methylnaphthalene	<1	1	76	50-140	83	50-140
Acenaphthylene	<1	1	80	50-140	95	50-140
Acenaphthene	<1	1	85	50-140	96	50-140
Fluorene	<0.5	0.5	68	50-140	101	50-140
Phenanthrene	<0.1	0.1	100	50-140	91	50-140
Anthracene	<0.1	0.1	79	50-140	82	50-140
Fluoranthene	<0.4	0.4	81	50-140	79	50-140
Pyrene	<0.2	0.2	76	50-140	75	50-140
Benzo [a] anthracene	<0.2	0.2	76	50-140	66	50-140
Chrysene	<0.1	0.1	75	50-140	83	50-140
Benzo [b] fluoranthene	<0.1	0.1	50	50-140	52	50-140
Benzo [k] fluoranthene	<0.1	0.1	97	50-140	110	50-140
Benzo [a] pyrene	<0.01	0.01	86	50-140	102	50-140
Indeno [1,2,3-cd] pyrene	<0.2	0.2	80	50-140	89	50-140
Dibenzo [a,h] anthracene	<0.2	0.2	90	50-140	88	50-140
Benzo [g,h,i] perylene	<0.2	0.2	74	50-140	79	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	51	50-140	70	50-140	63	50-140
Phenanthrene-d10	64	50-140	82	50-140	84	50-140
Chrysene-d12	59	50-140	51	50-140	53	50-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Water						
Naphthalene	11	0-30				
2-Methylnaphthalene	9.4	0-30				
1-Methylnaphthalene	13	0-30				
Acenaphthylene	3.5	0-30				
Acenaphthene	6.8	0-30				
Fluorene	3.2	0-30				
Phenanthrene	6.8	0-30				
Anthracene	12	0-30				
Fluoranthene	13	0-30				
Pyrene	14	0-30				
Benzo [a] anthracene	3.1	0-30				
Chrysene	13	0-30				
Benzo [b] fluoranthene	12	0-30				
Benzo [k] fluoranthene	27	0-30				
Benzo [a] pyrene	18	0-30				
Indeno [1,2,3-cd] pyrene	19	0-30				
Dibenzo [a,h] anthracene	19	0-30				
Benzo [g,h,i] perylene	18	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	51	50-140				
Phenanthrene-d10	63	50-140				
Chrysene-d12	52	50-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

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F.E. Job #: 19-2266
Project Name: Phase II ESA
Project ID: FE-19-9254
Date Sampled: 28-Mar-19
Date Received: 28-Mar-19
Date Reported: 4-Apr-19
Location: Old Lakeshore &, Lakeshore Rd.
Burlington, ON

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Water	3	N/A	2-Apr-19	Metals F-1	SM 3120-B
VOCs	Water	4	N/A	2-Apr-19	VOCs F-6	SM 6200-B
PHCs (F1 & BTEX)	Water	2	N/A	2-Apr-19	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Water	2	29-Mar-19	4-Apr-19	PHCs F-7	CCME CWS

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:



Roger Lin, Ph. D., C. Chem.
Laboratory Manager

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	4 Water Samples

Parameter	***19-2266-1*** MW213	***19-2266-2*** MW213 Duplicate	***19-2266-3*** MW215			**Ground Water Standards [1]**
	Concentration (µ g/L)					
Metals in Water						
Antimony	0.9	0.9	<0.5			20,000
Arsenic	<1	<1	<1			1,900
Barium	16	16	52			29,000
Beryllium	<0.5	<0.5	<0.5			67
Boron	48	49	254			45,000
Cadmium	<0.5	<0.5	<0.5			2.7
Chromium	51	51	24			810
Cobalt	<1	<1	<1			66
Copper	51	53	10			87
Lead	<1	<1	<1			25
Molybdenum	96	93	49			9,200
Nickel	14	15	11			490
Selenium	<5	<5	<5			63
Silver	<0.3	<0.3	<0.3			1.5
Thallium	<0.5	<0.5	<0.5			510
Uranium	<2	<2	6.3			420
Vanadium	13	13	3.3			250
Zinc	<5	<5	<5			1,100

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
All Types of Property Use.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/L)		Recovery (%)		Recovery (%)	
Metals in Water						
Antimony	<0.5	0.5	110	80-120	101	70-130
Arsenic	<1	1	86	80-120	100	70-130
Barium	<2	2	91	80-120	117	70-130
Beryllium	<0.5	0.5	83	80-120	105	70-130
Boron	<10	10	83	80-120	89	70-130
Cadmium	<0.5	0.5	107	80-120	106	70-130
Chromium	<10	10	92	80-120	118	70-130
Cobalt	<1	1	100	80-120	114	70-130
Copper	<5	5	105	80-120	104	70-130
Lead	<1	1	105	80-120	107	70-130
Molybdenum	<0.5	0.5	112	80-120	107	70-130
Nickel	<1	1	101	80-120	111	70-130
Selenium	<5	5	98	80-120	99	70-130
Silver	<0.3	0.3	107	80-120	75	70-130
Thallium	<0.5	0.5	106	80-120	109	70-130
Uranium	<2	2	111	80-120	87	70-130
Vanadium	<0.5	0.5	92	80-120	121	70-130
Zinc	<5	5	98	80-120	109	70-130

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Water						
Antimony	0.0	0-20				
Arsenic	0.0	0-20				
Barium	7.4	0-20				
Beryllium	0.0	0-20				
Boron	3.4	0-20				
Cadmium	0.0	0-20				
Chromium	0.0	0-20				
Cobalt	0.0	0-20				
Copper	0.0	0-20				
Lead	0.0	0-20				
Molybdenum	0.0	0-20				
Nickel	9.0	0-20				
Selenium	0.0	0-20				
Silver	0.0	0-20				
Thallium	0.0	0-20				
Uranium	0.0	0-20				
Vanadium	0.0	0-20				
Zinc	0.0	0-20				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	4 Water Samples

Parameter	***19-2266-1*** MW213	***19-2266-2*** MW213 Duplicate	***19-2266-3*** MW215	***19-2266-4*** Trip Blank		**Ground Water Standards [1]**
	Concentration (µ g/L)					
VOCs in Water						
Acetone	<30	<30	<30	<30		130000
Benzene	<0.5	<0.5	<0.5	<0.5		(430) 44
Bromodichloromethane	<2	<2	<2	<2		85000
Bromoform	<5	<5	<5	<5		(770) 380
Bromomethane	<0.5	<0.5	<0.5	<0.5		(56) 5.6
Carbon Tetrachloride	<0.2	<0.2	<0.2	<0.2		(8.4) 0.79
Chlorobenzene	<0.5	<0.5	<0.5	<0.5		630
Chloroform	<1	<1	<1	<1		(22) 2.4
Dibromochloromethane	<2	<2	<2	<2		82000
1,2-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5		(9600) 4600
1,3-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5		9600
1,4-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5		(67) 8
Dichlordifluoromethane	<2	<2	<2	<2		4400
1,1-Dichloroethane	<0.5	<0.5	<0.5	<0.5		(3100) 320
1,2-Dichloroethane	<0.5	<0.5	<0.5	<0.5		(12) 1.6
1,1-Dichloroethylene	<0.5	<0.5	<0.5	<0.5		(17) 1.6
c-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5		(17) 1.6
t-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5		(17) 1.6
1,2-Dichloropropane	<0.5	<0.5	<0.5	<0.5		(140) 16
1,3-Dichloropropene (cis-+trans-)	<0.5	<0.5	<0.5	<0.5		(45) 5.2
Ethylbenzene	<0.5	<0.5	<0.5	<0.5		2300
Ethylene Dibromide	<0.2	<0.2	<0.2	<0.2		(0.83) 0.25
Hexane (n)	<5	<5	<5	<5		(520) 51
Methyl Ethyl Ketone	<20	<20	<20	<20		(1500000)470000
Methyl Isobutyl Ketone	<20	<20	<20	<20		(580000)140000
Methyl tert-butyl Ether	<2	<2	<2	<2		(1400) 190
Methylene Chloride	<5	<5	<5	<5		(5500) 610
Styrene	<0.5	<0.5	<0.5	<0.5		(9100) 1300
1,1,1,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5		(28) 3.3
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5		(15) 3.2
Tetrachloroethylene	<0.5	<0.5	<0.5	<0.5		(17) 1.6
Toluene	6.1	6.8	<0.5	<0.5		18000
1,1,1-Trichloroethane	<0.5	<0.5	<0.5	<0.5		(6700) 640
1,1,2-Trichloroethane	<0.5	<0.5	<0.5	<0.5		(30) 4.7
Trichloroethylene	<0.5	<0.5	<0.5	<0.5		(17) 1.6
Trichlorofluoromethane	<5	<5	<5	<5		2500
Vinyl Chloride	<0.5	<0.5	<0.5	<0.5		(1.7) 0.5
Xylenes	<0.5	<0.5	<0.5	<0.5		4200
Surrogate Recovery (%)						
Bromochloromethane	93	112	84	101		60-140
1,4-Difluorobenzene	91	109	82	101		60-140
1,4-Dichlorobutane	97	109	79	107		60-140

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(ug/L)		Recovery (%)		Recovery (%)	
VOCs in Water						
Acetone	<30	<30	107	50-140	116	50-140
Benzene	<0.5	<0.5	98	60-130	107	50-140
Bromodichloromethane	<2	<2	99	50-140	127	50-140
Bromoform	<5	<5	98	60-130	88	50-140
Bromomethane	<0.5	<0.5	102	50-140	104	50-140
Carbon Tetrachloride	<0.2	<0.2	103	60-130	87	50-140
Chlorobenzene	<0.5	<0.5	110	60-130	86	50-140
Chloroform	<1	<1	108	60-130	124	50-140
Dibromochloromethane	<2	<2	104	60-130	122	50-140
1,2-Dichlorobenzene	<0.5	<0.5	83	60-130	82	50-140
1,3-Dichlorobenzene	<0.5	<0.5	87	60-130	87	50-140
1,4-Dichlorobenzene	<0.5	<0.5	107	60-130	104	50-140
Dichlordifluoromethane	<2	<2	116	50-140	117	50-140
1,1-Dichloroethane	<0.5	<0.5	103	60-130	79	50-140
1,2-Dichloroethane	<0.5	<0.5	95	60-130	83	50-140
1,1-Dichloroethylene	<0.5	<0.5	98	60-130	113	50-140
c-1,2-Dichloroethylene	<0.5	<0.5	88	60-130	108	50-140
t-1,2-Dichloroethylene	<0.5	<0.5	119	60-130	81	50-140
1,2-Dichloropropane	<0.5	<0.5	122	60-130	82	50-140
1,3-Dichloropropene (cis-+trans-)	<0.5	<0.5	126	60-130	68	50-140
Ethylbenzene	<0.5	<0.5	96	60-130	125	50-140
Ethylene Dibromide	<0.2	<0.2	104	60-130	111	50-140
Hexane (n)	<5	<5	111	60-130	84	50-140
Methyl Ethyl Ketone	<20	<20	125	50-140	122	50-140
Methyl Isobutyl Ketone	<20	<20	126	50-140	103	50-140
Methyl tert-butyl Ether	<2	<2	103	60-130	127	50-140
Methylene Chloride	<5	<5	92	60-130	108	50-140
Styrene	<0.5	<0.5	81	60-130	114	50-140
1,1,1,2-Tetrachloroethane	<0.5	<0.5	89	60-130	106	50-140
1,1,2,2-Tetrachloroethane	<0.5	<0.5	91	60-130	92	50-140
Tetrachloroethylene	<0.5	<0.5	94	60-130	98	50-140
Toluene	<0.5	<0.5	99	60-130	101	50-140
1,1,1-Trichloroethane	<0.5	<0.5	94	60-130	93	50-140
1,1,2-Trichloroethane	<0.5	<0.5	87	60-130	82	50-140
Trichloroethylene	<0.5	<0.5	100	60-130	122	50-140
Trichlorofluoromethane	<5	<5	82	50-140	108	50-140
Vinyl Chloride	<0.5	<0.5	106	50-140	76	50-140
Xylenes	<0.5	<0.5	105	60-130	86	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Bromocholoromethane	126	60-140	98	60-140	106	60-140
1,4-Difluorobenzene	122	60-140	86	60-140	104	60-140
1,4-Dichlorobutane	133	60-140	83	60-140	109	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
VOCs in Water						
Acetone	26	0-30				
Benzene	6.0	0-30				
Bromodichloromethane	0.0	0-30				
Bromoform	0.0	0-30				
Bromomethane	0.0	0-30				
Carbon Tetrachloride	0.0	0-30				
Chlorobenzene	0.0	0-30				
Chloroform	0.0	0-30				
Dibromochloromethane	0.0	0-30				
1,2-Dichlorobenzene	0.0	0-30				
1,3-Dichlorobenzene	0.0	0-30				
1,4-Dichlorobenzene	0.0	0-30				
Dichlordifluoromethane	0.0	0-30				
1,1-Dichloroethane	0.0	0-30				
1,2-Dichloroethane	0.0	0-30				
1,1-Dichloroethylene	0.0	0-30				
c-1,2-Dichloroethylene	0.0	0-30				
t-1,2-Dichloroethylene	0.0	0-30				
1,2-Dichloropropane	0.0	0-30				
1,3-Dichloropropene (cis-+trans-)	0.0	0-30				
Ethylbenzene	5.0	0-30				
Ethylene Dibromide	0.0	0-30				
Hexane (n)	0.0	0-30				
Methyl Ethyl Ketone	0.0	0-30				
Methyl Isobutyl Ketone	0.0	0-30				
Methyl tert-butyl Ether	0.0	0-30				
Methylene Chloride	0.0	0-30				
Styrene	0.0	0-30				
1,1,1,2-Tetrachloroethane	0.0	0-30				
1,1,2,2-Tetrachloroethane	0.0	0-30				
Tetrachloroethylene	19.0	0-30				
Toluene	18	0-30				
1,1,1-Trichloroethane	0.0	0-30				
1,1,2-Trichloroethane	0.0	0-30				
Trichloroethylene	12	0-30				
Trichlorofluoromethane	0.0	0-30				
Vinyl Chloride	0.0	0-30				
Xylenes	3.0	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Bromocholoromethane	116	60-140				
1,4-Difluorobenzene	120	60-140				
1,4-Dichlorobutane	119	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	4 Water Samples

Parameter	***19-2266-1*** MW213	***19-2266-2*** MW213 Duplicate				**Ground Water Standards [1]**
	Concentration (µ g/L)					
BTEX in Water						
Benzene	<0.5	<0.5				(430) 44
Toluene	6.1	6.8				18000
Ethylbenzene	<0.5	<0.5				2300
Xylenes	<0.5	<0.5				4200
PHCs (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25	<25				750
F2 (C_{10} - C_{16})	<100	<100				150
F3 (C_{16} - C_{34})	<100	<100				500
F4 (>C_{34})	<100	<100				500
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes				
Surrogate Recovery (%)						
Bromochloromethane	93	112				60-140
1,4-Difluorobenzene	91	109				60-140
1,4-Dichlorobutane	97	109				60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(ug/L)		Recovery (%)		Recovery (%)	
BTEX in Water						
Benzene	<0.5	0.5	98	60-130	107	50-140
Toluene	<0.5	0.5	99	60-130	101	50-140
Ethylbenzene	<0.5	0.5	96	60-130	125	50-140
Xylenes	<0.5	0.5	89	60-130	103	50-140
PHC (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25	25	99	60-140	128	60-140
F2 (C_{10} - C_{16})	<100	100	100	60-140	100	60-140
F3 (C_{16} - C_{34})	<100	100	100	60-140	100	60-140
F4 (>C_{34})	<100	100	100	60-140	100	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Bromochloromethane	128	60-140	98	60-140	106	60-140
1,4-Difluorobenzene	122	60-140	86	60-140	104	60-140
1,4-Dichlorobutane	133	60-140	83	60-140	109	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Water						
Benzene	6	0-30				
Toluene	18	0-30				
Ethylbenzene	5	0-30				
Xylenes	3	0-30				
PHC (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	14	0-30				
F2 (C_{10} - C_{16})	24	0-30				
F3 (C_{16} - C_{34})	18	0-30				
F4 (>C_{34})	11	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Bromochloromethane	87	60-140				
1,4-Difluorobenzene	81	60-140				
1,4-Dichlorobutane	84	60-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

FISHER ENVIRONMENTAL
ATTN: KERRY TAM
15-400 ESNA PARK DRIVE
MARKHAM ON L3R 3K2

Date Received: 27-FEB-19
Report Date: 05-MAR-19 07:23 (MT)
Version: FINAL

Client Phone: 905-475-7755

Certificate of Analysis

Lab Work Order #: L2237907

Project P.O. #: NOT SUBMITTED
Job Reference: FE-P 19-9254
C of C Numbers: 17-732669
Legal Site Desc:

Emily Hansen
Account Manager

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ANALYTICAL REPORT

Summary of Guideline Exceedances

Guideline ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)						
(No parameter exceedances)						
Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine)						
(No parameter exceedances)						

ANALYTICAL REPORT

Speciated Metals - WATER

		Guide Limits			
Lab ID				L2237907-1	L2237907-2
Sample Date				26-FEB-19	26-FEB-19
Sample ID				MW211	MW211 DUPLICATE
Analyte	**Unit**	**#1**	**#2**		
Chromium, Hexavalent	ug/L	140	140	2.54	2.49

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)
Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
CR-CR6-IC-R511-WT	Water	Hex Chrom-O.Reg 153/04 (July 2011)	EPA 7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

**ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody Numbers:

17-732669

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Quality Control Report

Workorder: L2237907 Report Date: 05-MAR-19

Client: FISHER ENVIRONMENTAL
15-400 ESNA PARK DRIVE
MARKHAM ON L3R 3K2
Contact: KERRY TAM

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CR-CR6-IC-R511-WT	**Water**							
Batch R4539507								
WG2997728-4 DUP		**WG2997728-3**						
Chromium, Hexavalent		<0.50	<0.50	RPD-NA	ug/L	N/A	20	01-MAR-19
WG2997728-2 LCS								
Chromium, Hexavalent			96.8		%		80-120	01-MAR-19
WG2997728-1 MB								
Chromium, Hexavalent			<0.50		ug/L		0.5	01-MAR-19
WG2997728-5 MS		**WG2997728-3**						
Chromium, Hexavalent			92.6		%		70-130	01-MAR-19

Quality Control Report

Workorder: L2237907 Report Date: 05-MAR-19

Client: FISHER ENVIRONMENTAL
15-400 ESNA PARK DRIVE
MARKHAM ON L3R 3K2
Contact: KERRY TAM

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental
www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2237907-COFC

COC Number: 17 - 732669

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	FISHER ENVIRONMENTAL LTD
Contact:	KERRY TAM
Phone:	416-578-6058 / OFFICE 905-475-7755
	Company address below will appear on the final report
Street:	400 ESNA PARK DRIVE, UNIT 15
City/Province:	MARKHAM, ONTARIO
Postal Code:	L3R 3K2
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	
Contact:	

Report Format / Distribution	
Select Report Format:	☑ PDF ☑ EXCEL | | EDD (DIGITAL)
Quality Control (QC) Report with Report	☑ YES ☐ NO
☑ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL | | MAIL ☐ FAX
Email 1 or Fax	KERRY@FISHERENVIRONMENTAL.COM
Email 2	
Email 3	

Invoice Distribution	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	KERRY@FISHERENVIRONMENTAL.COM
Email 2	ELENA@FISHERENVIRONMENTAL.COM

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)	
Regular [R]	☑ Standard TAT if received by 3 pm - business days - no surcharges apply
PRIORITY (Business Days) 4 day [P4-20%]	☐
3 day [P3-25%]	☐
2 day [P2-50%]	☐
EMERGENCY 1 Business day [E-100%]	☐
Same Day, Weekend or Statutory holiday [E2-200% (Laboratory opening fees may apply)]	☐
Date and Time Required for all E&P TATs:	dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Project Information	
ALS Account # / Quote #:	
Job #:	FE-P 19-9254
PO / AFE:	
LSD:	

Oil and Gas Required Fields (client use)	
AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only): L2237907

ALS Contact: | Sampler:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	F/P HEXAVALENT CHROMIUM	SAMPLES ON HOLD	Sample is hazardous (please provide further details)	NUMBER OF CONTAINERS
	MW211	26-02-19		GROUNDWATER	✓			1
	MW211 Duplicate	26-02-19		GROUNDWATER	✓			1

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)
Are samples taken from a Regulated DW System? ☐ YES ☑ NO	TABLE 3 RESIDENTIAL O.REG. 153/04
Are samples for human consumption/ use? ☐ YES ☑ NO	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C	FINAL COOLER TEMPERATURES °C
	0.1

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
	FEB 26/2019	3:30PM					Feb 27/19	8:20

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JULY 2017 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

FISHER ENVIRONMENTAL
ATTN: Kerry Tam
15-400 ESNA PARK DRIVE
MARKHAM ON L3R 3K2

Date Received: 06-MAR-19
Report Date: 11-MAR-19 13:36 (MT)
Version: FINAL

Client Phone: 905-475-7755

Certificate of Analysis

Lab Work Order #: L2240912

Project P.O. #: NOT SUBMITTED
Job Reference: FE-P 19 9254
C of C Numbers:
Legal Site Desc:

Emily Hansen
Account Manager

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Summary of Guideline Exceedances

Guideline ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)						
(No parameter exceedances)						
Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine)						
(No parameter exceedances)						

ANALYTICAL REPORT

Speciated Metals - WATER

		Guide Limits			
Lab ID				L2240912-1	L2240912-2
Sample Date				04-MAR-19	04-MAR-19
Sample ID				MW217	MW217 DUPLICATE
Analyte	**Unit**	**#1**	**#2**		
Chromium, Hexavalent	ug/L	140	140	<0.50	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)
Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
CR-CR6-IC-R511-WT	Water	Hex Chrom-O.Reg 153/04 (July 2011)	EPA 7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

**ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody Numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Quality Control Report

Workorder: L2240912 Report Date: 11-MAR-19

Client: FISHER ENVIRONMENTAL
15-400 ESNA PARK DRIVE
MARKHAM ON L3R 3K2
Contact: Kerry Tam

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CR-CR6-IC-R511-WT	**Water**							
Batch R4555771								
WG3002790-4 DUP		**WG3002790-3**						
Chromium, Hexavalent		<0.50	<0.50	RPD-NA	ug/L	N/A	20	08-MAR-19
WG3002790-2 LCS								
Chromium, Hexavalent			98.6		%		80-120	08-MAR-19
WG3002790-1 MB								
Chromium, Hexavalent			<0.50		ug/L		0.5	08-MAR-19
WG3002790-5 MS		**WG3002790-3**						
Chromium, Hexavalent			94.6		%		70-130	08-MAR-19

Quality Control Report

Workorder: L2240912 Report Date: 11-MAR-19

Client: FISHER ENVIRONMENTAL
15-400 ESNA PARK DRIVE
MARKHAM ON L3R 3K2
Contact: Kerry Tam

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental
www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2240912-COFC

COC Number: 17 - 732281

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Fisher Env. Ltd.
Contact:	Kerry Tam
Phone:	416-578-6658
	Company address below will appear on the final report
Street:	400 ESNA PK DR #15
City/Province:	MARKHAM
Postal Code:	
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☐ EXCEL | | EDD (DIGITAL)
Quality Control (QC) Report with Report ☐ YES ☐ NO
☑ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL | | MAIL ☐ FAX
Email 1 or Fax: Kerry@Fisherenvironmental.com
Email 2:
Email 3:

Invoice Distribution

Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: Kerry@fisherenvironmental.com
Email 2: Elena@

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] ☐ | 3 day [P3-25%] ☐ | 2 day [P2-50%] ☐

EMERGENCY: 1 Business day [E-100%] ☐ | Same Day, Weekend or Statutory holiday [E2-200% (Laboratory opening fees may apply)] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Project Information

ALS Account # / Quote #: Q68082
Job #: FE-P 19-9254
PO / AFE:
LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: | PO#
Major/Minor Code: | Routing Code:
Requisitioner:
Location:

ALS Lab Work Order # (lab use only): L2240912

ALS Contact: Emily Hansen | Sampler:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	C+(VH)	SAMPLES ON HOLD	Sample is hazardous (please provide further details)	NUMBER OF CONTAINERS
	MW2-17	04-Mar-19		GW	X			
	MW2-17 Duplicate	04-Mar-19		GW	X			

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO
Are samples for human consumption/ use? ☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

Table 3; Res OREG 153/04

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ | SIF Observations Yes ☐ No ☐
Ice Packs ☒ Ice Cubes ☐ | Custody seal intact Yes ☐ No ☐
Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				-0.6			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
	3/5/2019	5PM

INITIAL SHIPMENT RECEPTION (lab use only)

Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (lab use only)

Received by:	Date:	Time:
	Mar 6/19	13:25

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JULY 2017 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**

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FAX: 905 475-7718
www.fisherenvironmental.com

Client: Core FSC Lakeshore LP
Address: 287 MacPherson Ave, Suite202
Toronto, ON
M4V 1A4
Tel: (416) 966-2673
Email: bryan@coredevelopment.ca
Attn.: Bryan Nykoliation

F.E. Job #: 19-2452
Project Name: Phase II ESA
Project ID: FE-19-9418
Date Sampled: 29 &30 April-2019
Date Received: 3-May-19
Date Reported: 10-May-19
Location: 2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Soil	8	10-May-19	10-May-19	Metals F-18	SM 3125-B
PAHs	Soil	3	9-May-19	9-May-19	PAHs F-4	SM 6410-B
EC	Soil	4	7-May-19	7-May-19	pH-EC-SAR F-16	SW-846, 9050A
SAR	Soil	4	10-May-19	10-May-19	pH-EC-SAR F-16	SW-846, 6010C

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:



Roger Lin, Ph. D., C. Chem.
Laboratory Manager

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PAHs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-2452-1*** BH 219 0.00-0.60m	***19-2452-2*** BH 220 0.00-0.60m	***19-2452-3*** BH 221 0.00-0.60m	***19-2452-4*** BH 222 0.00-0.60m	***19-2452-5*** BH 223 0.00-0.60m	**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	<1	7.5
Arsenic	5.4	<1	1.8	3.3	2.5	18
Barium	94	62	126	137	144	390
Beryllium	<2	<2	<2	<2	<2	(5) 4
Boron	5.1	<5	<5	<5	<5	120
Cadmium	<1	<1	<1	<1	<1	1.2
Chromium	13	17	36	39	40	160
Cobalt	7.4	5.2	14	10	19	22
Copper	21	13	33	22	29	(180) 140
Lead	87	82	15	84	59	120
Molybdenum	<2	<2	<2	<2	<2	6.9
Nickel	17	13	38	21	37	(130) 100
Selenium	<1	<1	<1	<1	<1	2.4
Silver	<0.5	<0.5	<0.5	<0.5	<0.5	(25) 20
Thallium	<1	<1	<1	<1	<1	1
Uranium	<1	<1	<1	1.0	1.0	23
Vanadium	18	31	<10	52	58	86
Zinc	178	37	<30	169	44	340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PAHs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-2452-6*** BH 223 (Dup) 0.00-0.60m	***19-2452-7*** BH 224 0.00-0.60m	***19-2452-8*** BH 225 0.00-0.60m			**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1			7.5
Arsenic	2.5	2.8	3.9			18
Barium	137	72	76			390
Beryllium	<2	<2	<2			(5) 4
Boron	<5	<5	<5			120
Cadmium	<1	<1	<1			1.2
Chromium	41	25	24			160
Cobalt	19	15	14			22
Copper	28	47	63			(180) 140
Lead	60	<10	<10			120
Molybdenum	<2	<2	<2			6.9
Nickel	41	29	28			(130) 100
Selenium	<1	<1	<1			2.4
Silver	<0.5	<0.5	<0.5			(25) 20
Thallium	<1	<1	<1			1
Uranium	1.1	<1	<1			23
Vanadium	59	36	39			86
Zinc	49	32	35			340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
Metals in Soil						
Antimony	<1	1	93	80-120	113	70-130
Arsenic	<1	1	95	80-120	117	70-130
Barium	<5	5	86	80-120	105	70-130
Beryllium	<2	2	112	80-120	111	70-130
Boron	<5	5	82	80-120	114	70-130
Cadmium	<1	1	94	80-120	105	70-130
Chromium	<5	5	112	80-120	113	70-130
Cobalt	<2	2	117	80-120	129	70-130
Copper	<5	5	108	80-120	124	70-130
Lead	<10	10	93	80-120	118	70-130
Molybdenum	<2	2	112	80-120	88	70-130
Nickel	<5	5	111	80-120	118	70-130
Selenium	<1	1	89	80-120	116	70-130
Silver	<0.5	0.5	90	80-120	92	70-130
Thallium	<1	1	95	80-120	116	70-130
Uranium	<1	1	107	80-120	117	70-130
Vanadium	<10	10	108	80-120	106	70-130
Zinc	<30	30	86	80-120	101	70-130

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Soil						
Antimony	0.0	0-30				
Arsenic	2.2	0-30				
Barium	1	0-30				
Beryllium	0.0	0-30				
Boron	5	0-30				
Cadmium	0.0	0-30				
Chromium	7.4	0-30				
Cobalt	9.0	0-30				
Copper	8.7	0-30				
Lead	2.6	0-30				
Molybdenum	0.0	0-30				
Nickel	4.6	0-30				
Selenium	0.0	0-30				
Silver	0.0	0-30				
Thallium	0.0	0-30				
Uranium	0.0	0-30				
Vanadium	4	0-30				
Zinc	1.1	0-30				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PAHs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-2452-4*** BH 222 0.00-0.60m	***19-2452-5*** BH 223 0.00-0.60m	***19-2452-6*** BH 223 (Dup) 0.00-0.60m			**Soil Standards** [1]
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05			(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05			(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05			
Acenaphthylene	<0.05	<0.05	<0.05			(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05			(58) 7.9
Fluorene	<0.05	<0.05	<0.05			(69) 62
Phenanthrene	<0.05	<0.05	<0.05			(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05			(0.74) 0.67
Fluoranthene	<0.05	<0.05	<0.05			0.69
Pyrene	<0.05	<0.05	<0.05			78
Benzo [a] anthracene	<0.05	<0.05	<0.05			(0.63) 0.5
Chrysene	<0.05	<0.05	<0.05			(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05	<0.05			0.78
Benzo [k] fluoranthene	<0.05	<0.05	<0.05			0.78
Benzo [a] pyrene	<0.05	<0.05	<0.05			0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1	<0.1			(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1	<0.1			0.1
Benzo [g,h,i] perylene	<0.1	<0.1	<0.1			(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	81	77	86			50-140
Phenanthrene-d10	107	116	122			50-140
Chrysene-d12	93	102	108			50-140

< result obtained was below RL (Reporting Limit).
Bold: Result exceeds limit noted in Soil Standards.
[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
PAHs in Soil						
Naphthalene	<0.05	0.05	91	50-140	85	50-140
2-Methylnaphthalene	<0.05	0.05	88	50-140	99	50-140
1-Methylnaphthalene	<0.05	0.05	91	50-140	104	50-140
Acenaphthylene	<0.05	0.05	111	50-140	103	50-140
Acenaphthene	<0.05	0.05	92	50-140	104	50-140
Fluorene	<0.05	0.05	89	50-140	83	50-140
Phenanthrene	<0.05	0.05	95	50-140	101	50-140
Anthracene	<0.05	0.05	87	50-140	90	50-140
Fluoranthene	<0.05	0.05	87	50-140	82	50-140
Pyrene	<0.05	0.05	84	50-140	85	50-140
Benzo [a] anthracene	<0.05	0.05	109	50-140	111	50-140
Chrysene	<0.05	0.05	122	50-140	123	50-140
Benzo [b] fluoranthene	<0.05	0.05	83	50-140	95	50-140
Benzo [k] fluoranthene	<0.05	0.05	110	50-140	91	50-140
Benzo [a] pyrene	<0.05	0.05	88	50-140	101	50-140
Indeno [1,2,3-cd] pyrene	<0.1	0.1	119	50-140	116	50-140
Dibenzo [a,h] anthracene	<0.1	0.1	104	50-140	114	50-140
Benzo [g,h,i] perylene	<0.1	0.1	107	50-140	96	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	80	50-140	72	50-140	73	50-140
Phenanthrene-d10	105	50-140	110	50-140	116	50-140
Chrysene-d12	95	50-140	97	50-140	105	50-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Soil						
Naphthalene	0.0	0-40				
2-Methylnaphthalene	0.0	0-40				
1-Methylnaphthalene	0.0	0-40				
Acenaphthylene	0.0	0-40				
Acenaphthene	0.0	0-40				
Fluorene	0.0	0-40				
Phenanthrene	0.0	0-40				
Anthracene	0.0	0-40				
Fluoranthene	0.0	0-40				
Pyrene	0.0	0-40				
Benzo [a] anthracene	0.0	0-40				
Chrysene	0.0	0-40				
Benzo [b] fluoranthene	0.0	0-40				
Benzo [k] fluoranthene	0.0	0-40				
Benzo [a] pyrene	0.0	0-40				
Indeno [1,2,3-cd] pyrene	0.0	0-40				
Dibenzo [a,h] anthracene	0.0	0-40				
Benzo [g,h,i] perylene	0.0	0-40				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	75	50-140				
Phenanthrene-d10	94	50-140				
Chrysene-d12	88	50-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PAHs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-2452-3*** BH 221 0.00-0.60m	***19-2452-4*** BH 222 0.00-0.60m	***19-2452-5*** BH 223 0.00-0.60m	***19-2452-6*** BH 223 (Dup) 0.00-0.60m		**Soil Standards** [1]
***EC** (mS/cm)*	0.3	**0.8**	**1.1**	**1**		0.7

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
***EC** (mS/cm)*	<0.01	0.01	101	90-110	9.5	0-10

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PAHs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-2452-3*** BH 221 0.00-0.60m	***19-2452-4*** BH 222 0.00-0.60m	***19-2452-5*** BH 223 0.00-0.60m	***19-2452-6*** BH 223 (Dup) 0.00-0.60m		**Soil Standards** [1]
SAR *(no unit)*	0.5	4	4.8	4.9		5

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**LCS**	**AR**	**Duplicate**	**AR**		
			RPD (%)			
SAR *(no unit)*	0.37	0.30-0.50	1.9	0-30		

LEGEND:
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

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Client: Core FSC Lakeshore LP
Address: 287 MacPherson Ave, Suite202
Toronto, ON
M4V 1A4
Tel: (416) 966-2673
Email: bryan@coredevelopment.ca
Attn.: Bryan Nykoliation

F.E. Job #: 19-2463
Project Name: Delineation
Project ID: FE-19-9418
Date Sampled: 29 &30 April-2019
Date Received: 7-May-2019
Date Reported: 14-May-2019
Location: 2093, 2097, 2101 Old Lakeshore Rd & 2096, 2100 Lakeshore Rd, Burlington

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Soil	8	10-May-19	10-May-19	Metals F-18	SM 3125-B
PAHs	Soil	3	10-May-19	10-May-19	PAHs F-4	SM 6410-B
EC	Soil	4	8-May-19	8-May-19	pH-EC-SAR F-16	SW-846, 9050A
SAR	Soil	4	10-May-19	10-May-19	pH-EC-SAR F-16	SW-846, 6010C

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Authorized by:

Roger Lin, Ph. D., C. Chem.
Laboratory Manager

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
Ronggen (Roger) Lin
CHEMIST

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PAHs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-2463-1*** BH 219 0.75-1.35m	***19-2463-2*** BH 220 0.75-1.35m	***19-2463-3*** BH 221 0.75-1.35m	***19-2463-4*** BH 222 0.75-1.35m	***19-2463-5*** BH 223 0.75-1.35m	**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	<1	7.5
Arsenic	3.1	2.2	2.5	3	3.9	18
Barium	156	92	79	170	100	390
Beryllium	<2	<2	<2	<2	<2	(5) 4
Boron	<5	<5	<5	<5	<5	120
Cadmium	<1	<1	<1	<1	<1	1.2
Chromium	41	25	24	47	29	160
Cobalt	18	12	13	18	16	22
Copper	30	44	42	28	51	(180) 140
Lead	18	<10	14	16	<10	120
Molybdenum	<2	<2	<2	<2	<2	6.9
Nickel	44	32	32	42	37	(130) 100
Selenium	<1	<1	<1	<1	<1	2.4
Silver	<0.5	<0.5	<0.5	<0.5	<0.5	(25) 20
Thallium	<1	<1	<1	<1	<1	1
Uranium	<1	<1	<1	1.8	<1	23
Vanadium	59	38	36	67	40	86
Zinc	92	34	38	58	42	340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PAHs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-2463-6*** BH 223 (Dup) 0.75-1.35m	***19-2463-7*** BH 224 0.60-1.20m	***19-2463-8*** BH 225 0.60-1.20m			**Soil Standards [1]**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1			7.5
Arsenic	3.5	8.8	6.6			18
Barium	102	84	160			390
Beryllium	<2	<2	<2			(5) 4
Boron	<5	<5	<5			120
Cadmium	<1	1	<1			1.2
Chromium	29	13	17			160
Cobalt	15	9.4	12			22
Copper	49	40	30			(180) 140
Lead	<10	<10	<10			120
Molybdenum	<2	<2	<2			6.9
Nickel	34	23	26			(130) 100
Selenium	<1	<1	<1			2.4
Silver	<0.5	<0.5	<0.5			(25) 20
Thallium	<1	<1	<1			1
Uranium	<1	<1	<1			23
Vanadium	38	17	21			86
Zinc	44	79	95			340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
Metals in Soil						
Antimony	<1	1	93	80-120	113	70-130
Arsenic	<1	1	95	80-120	117	70-130
Barium	<5	5	86	80-120	105	70-130
Beryllium	<2	2	112	80-120	111	70-130
Boron	<5	5	82	80-120	114	70-130
Cadmium	<1	1	94	80-120	105	70-130
Chromium	<5	5	112	80-120	113	70-130
Cobalt	<2	2	117	80-120	129	70-130
Copper	<5	5	108	80-120	124	70-130
Lead	<10	10	93	80-120	118	70-130
Molybdenum	<2	2	112	80-120	88	70-130
Nickel	<5	5	111	80-120	118	70-130
Selenium	<1	1	89	80-120	116	70-130
Silver	<0.5	0.5	90	80-120	92	70-130
Thallium	<1	1	95	80-120	116	70-130
Uranium	<1	1	107	80-120	117	70-130
Vanadium	<10	10	108	80-120	106	70-130
Zinc	<30	30	86	80-120	101	70-130

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Soil						
Antimony	0.0	0-30				
Arsenic	2.2	0-30				
Barium	1	0-30				
Beryllium	0.0	0-30				
Boron	5	0-30				
Cadmium	0.0	0-30				
Chromium	7.4	0-30				
Cobalt	9	0-30				
Copper	8.7	0-30				
Lead	2.6	0-30				
Molybdenum	0.0	0-30				
Nickel	4.6	0-30				
Selenium	0.0	0-30				
Silver	0.0	0-30				
Thallium	0.0	0-30				
Uranium	0.0	0-30				
Vanadium	4.0	0-30				
Zinc	1.1	0-30				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PAHs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-2463-4*** BH 222 0.75-1.35m	***19-2463-5*** BH 223 0.75-1.35m	***19-2463-6*** BH 223 (Dup) 0.75-1.35m			**Soil Standards** [1]
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05			(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05			(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05			
Acenaphthylene	<0.05	<0.05	<0.05			(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05			(58) 7.9
Fluorene	<0.05	<0.05	<0.05			(69) 62
Phenanthrene	<0.05	<0.05	<0.05			(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05			(0.74) 0.67
Fluoranthene	<0.05	<0.05	<0.05			0.69
Pyrene	<0.05	<0.05	<0.05			78
Benzo [a] anthracene	<0.05	<0.05	<0.05			(0.63) 0.5
Chrysene	<0.05	<0.05	<0.05			(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05	<0.05			0.78
Benzo [k] fluoranthene	<0.05	<0.05	<0.05			0.78
Benzo [a] pyrene	<0.05	<0.05	<0.05			0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1	<0.1			(0.48) 0.38
Dibenzo [a,h] anthracene	<0.1	<0.1	<0.1			0.1
Benzo [g,h,i] perylene	<0.1	<0.1	<0.1			(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	76	111	121			50-140
Phenanthrene-d10	99	119	101			50-140
Chrysene-d12	93	81	97			50-140

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Soil Standards.

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use **(R/P/I)**; ( ) Standard value in brackets applies to medium and fine textured soils.

Results related only to the items tested

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
PAHs in Soil						
Naphthalene	<0.05	0.05	105	50-140	98	50-140
2-Methylnaphthalene	<0.05	0.05	93	50-140	83	50-140
1-Methylnaphthalene	<0.05	0.05	94	50-140	97	50-140
Acenaphthylene	<0.05	0.05	89	50-140	93	50-140
Acenaphthene	<0.05	0.05	94	50-140	97	50-140
Fluorene	<0.05	0.05	88	50-140	119	50-140
Phenanthrene	<0.05	0.05	98	50-140	106	50-140
Anthracene	<0.05	0.05	95	50-140	101	50-140
Fluoranthene	<0.05	0.05	117	50-140	117	50-140
Pyrene	<0.05	0.05	90	50-140	89	50-140
Benzo [a] anthracene	<0.05	0.05	112	50-140	116	50-140
Chrysene	<0.05	0.05	128	50-140	122	50-140
Benzo [b] fluoranthene	<0.05	0.05	87	50-140	91	50-140
Benzo [k] fluoranthene	<0.05	0.05	87	50-140	90	50-140
Benzo [a] pyrene	<0.05	0.05	89	50-140	89	50-140
Indeno [1,2,3-cd] pyrene	<0.1	0.1	96	50-140	86	50-140
Dibenzo [a,h] anthracene	<0.1	0.1	106	50-140	91	50-140
Benzo [g,h,i] perylene	<0.1	0.1	71	50-140	86	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	126	50-140	127	50-140	116	50-140
Phenanthrene-d10	113	50-140	130	50-140	131	50-140
Chrysene-d12	107	50-140	96	50-140	117	50-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

Results related only to the items tested

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Soil						
Naphthalene	0.0	0-40				
2-Methylnaphthalene	0.0	0-40				
1-Methylnaphthalene	0.0	0-40				
Acenaphthylene	0.0	0-40				
Acenaphthene	0.0	0-40				
Fluorene	0.0	0-40				
Phenanthrene	0.0	0-40				
Anthracene	0.0	0-40				
Fluoranthene	0.0	0-40				
Pyrene	0.0	0-40				
Benzo [a] anthracene	0.0	0-40				
Chrysene	0.0	0-40				
Benzo [b] fluoranthene	0.0	0-40				
Benzo [k] fluoranthene	0.0	0-40				
Benzo [a] pyrene	0.0	0-40				
Indeno [1,2,3-cd] pyrene	0.0	0-40				
Dibenzo [a,h] anthracene	0.0	0-40				
Benzo [g,h,i] perylene	0.0	0-40				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	100	50-140				
Phenanthrene-d10	111	50-140				
Chrysene-d12	100	50-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PAHs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-2463-3*** BH 221 0.75-1.35m	***19-2463-4*** BH 222 0.75-1.35m	***19-2463-5*** BH 223 0.75-1.35m	***19-2463-6*** BH 223 (Dup) 0.75-1.35m		**Soil Standards [1]**
***EC** (mS/cm)*	0.3	0.4	0.4	0.4		0.7

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
***EC** (mS/cm)*	<0.01	0.01	101	90-110	9.5	0-10

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, PAHs, EC, SAR
Sample Description:	8 Soil Samples

Parameter	***19-2463-3*** BH 221 0.75-1.35m	***19-2463-4*** BH 222 0.75-1.35m	***19-2463-5*** BH 223 0.75-1.35m	***19-2463-6*** BH 223 (Dup) 0.75-1.35m		**Soil Standards [1]**
SAR *(no unit)*	0.4	4.5	2.3	2.7		5

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.
Residential/Parkland/Institutional Property Use **(R/P/I)**.

QA/QC Report

Parameter	**LCS**	**AR**	**Duplicate**	**AR**		
			RPD (%)			
SAR *(no unit)*	0.37	0.30-0.50	1.9	0-30		

LEGEND:
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Results related only to the items tested

APPENDIX D – NON-POTABLE GROUNDWATER USE NON-OBJECTION LETTER

Legislative & Planning Services
Planning Services
1151 Bronte Road
Oakville ON L6M 3L1

April 23, 2019

Dave Fisher
Fisher Environmental Ltd.
400 Esna Park Drive, Unit #15
Markham, ON L3R 3K2

Dear Dave Fisher:

RE: **Notification of Intent to Use Non-Potable Groundwater Site Condition Standards**
Subject Property: **2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road, Burlington**

Further to your correspondence received by Halton Region Planning Services on **April 11, 2019**, Regional Municipality of Halton staff has prepared this letter in response to your O. Reg. 153/04 Records of Site Condition – Part XV.1 of the Environmental Protection Act request to assume that the groundwater beneath the subject property "does not or will not serve as a raw water supply for a drinking water system, as defined in the Safe Drinking Water Act (2002)".

The key features for this request are presented in Table 1 below:

Table 1: Key Features Assessment

Key Feature	Are the properties located within or nearby these Key Features (yes/no)
Wellhead Protection Area	**No**
Highly Vulnerable Aquifer	**No**
Environmentally Sensitive Area (within 30m)	**No**
Rural Area	**No**
Water Well Records Within 250 metres	**No**

Region of Halton records indicate that the properties are located within the **City of Burlington** and **are not** within a wellhead protection area, **nor** located within a highly vulnerable aquifer, as identified in the Region's Source Water Protection Planning under the Clean Water Act, 2006. The properties **are not** located within 30m of environmentally sensitive areas (see definition in O. Reg. 153/04). There are **no** potable well records that are located within 250m of the properties.

Based on this information, Halton Region **does not object** to the intention to apply non-potable water use criteria for the assessment of the subject properties.

If you have any questions regarding this information, please contact the undersigned at ext. 7865.

Sincerely,

Gena Ali
Manager, Sustainable Planning

c. Tim Edwards, District Engineer, Ministry of the Environment, Halton-Peel District Office
Nicole Mathews, Manager, Environmental Health, Halton Region (email)
Ang Capone, City of Burlington (email)