PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

5584 LAKESHORE ROAD, BALLANTRAE, ONTARIO

FAR SIGHT HOMES

PROJECT NO.: 161-06960-00
DATE: AUGUST 17, 2018

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August 17, 2018

Alcorn & Associates Limited
12 Greenvalley Circle, RR3
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Attention: Randy Alcorn

Dear Mr. Alcorn:

Subject: Phase Two Environmental Site Assessment
5584 Lakeshore Road, Ballantrae, Ontario

WSP Canada Inc. (WSP) is pleased to present this report to document the relevant background information, methodologies followed, work undertaken and the findings of the Phase Two Environmental Site Assessment (ESA) at 5584 Lakeshore Road, Ballantrae, Ontario, conducted by WSP in December 2016, January 2017 and June 2017.

The Phase Two ESA was conducted in accordance with Ontario Regulation 153/04 (as amended). At this time, WSP understands that filing a Record of Site Condition (RSC) is not required because the future land use is considered to be equal or less sensitive than present/past land use.

The Phase Two ESA work plan was initially developed and carried out based on information provided by the Client, following the full analysis of the Phase One ESA. The Phase Two ESA included a soil sampling program developed to assess the chemical quality of the topsoil and native material on site. Following the initial sampling program, additional testing was conducted to delineate the extent of chemical parameter exceedances in soil and to address data gaps.

The Phase Two ESA report describes the observed environmental conditions at the property and provides conclusions for your consideration.

We trust that this information is sufficient for your current needs. If you have any questions or require further information, please do not hesitate to contact this office.

Yours truly,

Lloyd A. Lemon, M.Sc., P.Geo.
Senior Project Geoscientist

JSW/nah

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EXECUTIVE SUMMARY

WSP Canada Inc. (WSP) was retained by Far Sight Homes to conduct a Phase Two Environmental Site Assessment (ESA) at 5584 Lakeshore Road in the hamlet of Ballantrae, Town of Whitchurch-Stouffville, Ontario (hereafter referred to as the Phase Two Property). The purpose of the Phase Two ESA was to assess the near surface soil conditions related to historical agricultural activities prior to development of a residential subdivision and associated roads. At this time, WSP is aware that a Record of Site Condition (RSC) will not be required because the proposed future residential land use is not considered to be more sensitive than the present/past land use. The Phase Two ESA was initiated as an investigation using hand augers to obtain soil samples, then expanded as a test pit program and subsequently a second hand auger program on a regular grid pattern to assess and delineate the identified chemical parameter exceedances in soil in the northeast corner of the Phase Two Property.

The Phase Two Property is located approximately 430 metres east of Highway 48 and approximately 200 metres south of Aurora Road in Ballantrae, Ontario. A Site Location Map is provided as Figure 1. The Phase Two Property is approximately 21.7 hectares (53.6 acres) in size, irregular in shape, and currently contains six (6) structures: two (2) occupied single family dwellings, (1) workshop/barn, two (2) storage facilities, and one (1) shed.

The Phase One ESA prepared by WSP (August 2018), identified one (1) Area of Potential Environmental Concern (APEC) resulting from one (1) potentially contaminating activity (PCA) identified on the Phase One Property. Based on historical information and aerial photographs of the Phase Two Property, it was determined that majority of the Phase Two Property was historically used as agricultural, recreational and residential land from 1850 to present. Potential Contaminants of Concern (PCOCs) based on the PCA identified on site include: Arsenic and Organochlorine Pesticides (OCPs).

Ten hand auger soil samples and one Quality QA/QC sample were collected from nine sample locations that were advanced to a maximum depth of 0.5 metres below ground surface (mbgs) at the Phase Two Property on December 1, 2016. Eleven soil samples were obtained and submitted for laboratory testing of Arsenic and OCPs. Auguring activities and soil sampling were conducted by WSP personnel in accordance with generally accepted environmental field protocols of
O.Reg 153/04.

Following the results of the initial hand auger program, five (5) test pits were excavated on January 19, 2017 to a maximum depth of 2.0 mbgs. The purpose of this test pit program was to further delineate the presence of chemical parameters identified in the previous hand auger program. Six (6) soil samples and one (1) QA/QC sample were submitted to the laboratory for Arsenic and OCP Analysis.

After the January 19, 2017 testing, a third hand auger program based on testing in a more detailed grid pattern was designed and implemented on June 7, 2017 to further delineate the extent of chemical parameters identified in the previous two sampling programs. The grid pattern delineation program included collection of an additional 48 samples collected over a 20 m by 20 m grid in the northeast corner of the Phase Two Property. Of these 48 samples, 24 samples and three (3) QA/QC samples were submitted to the laboratory for Arsenic and OCP Analysis.

The findings of the Phase Two ESA are:

1. The surficial materials at the Phase Two Property consisted of topsoil ranging between 0.0 to 0.35 mbgs, underlain by medium to coarse native sand.

2. Groundwater levels range between 7 metres and 20 metres below ground surface according to the static water level information presented on the MOECC water well records reviewed in the Phase One Environmental Site Assessment. A hydrogeological investigation which was completed concurrent with the Phase One ESA identified a local water table that ranges in depths between 0.20 m and 3.87 m beneath the Phase Two Property. The groundwater levels were reviewed from previous investigations to ensure that the sampling program plans were appropriate.

3. A search of the Ontario Ministry of Natural Resources Natural Heritage Information Centre database showed that the Phase Two Property is not within an Area of Natural and Scientific Interest (ANSI). The Phase Two Property falls within the jurisdiction of the Lake Simcoe Region Conservation Authority (LSRCA), but outside the regulated area.

4. Specific soil samples were selected for laboratory testing based on historical information, aerial photographs, and visual inspection of soils. Soil samples were compared to O.Reg 153/04 Ministry of the Environment, Conservatino, and Parks (MECP) Table 2 SCS for Residential/Parkland/Institutional (RPI) Property Use.

5. The results of soil testing programs documented herein indicates that OCP concentrations greater than the SCS values are limited to the near surface soils and are not present in the native material. The soil testing has shown persistence of the pesticide Dieldrin in 22 of the 40 samples submitted for analysis. The results did not identify concentrations of Arsenic that were greater than the Table 2 SCS values.

6. Dieldrin was variably distributed in the topsoil layer in the northeast corner of the Phase Two Property in low concentrations that are above the Table 2 SCS value. Dieldrin is known to have a half-life of 5 years (World Health Organization, 2003) and the concentrations of Dieldrin in the near surface soils will continue to be reduced over time through natural forces. WSP recommends that the affected topsoil layer can be stripped and stored separate from other soils. The OCP concentrations in the stockpiled soils will continue to decrease in accordance with the documented half-life and as controlled by moisture and air-flow conditions in the stockpile. These soils are to be handled using appropriate methods to minimize potential for cross-contamination with other soils and to protect human health and the environment. At a future time, these soils can be tested to determine if the Dieldrin concentrations are now suitable for use.

7. In accordance with O.Reg. 153 as amended, a Record of Site Condition (RSC) will not be required for the area of the identified APEC on the Phase Two Property, where this area will be used in the future for residential land use.

SIGNATURES

PREPARED BY

Jake Whittamore, EIT
Environmental Consultant

August 17, 2018
Date

APPROVED[1] BY

Lloyd A. Lemon, M.Sc., P.Geo.
Senior Geoscientist

August 17, 2018
Date

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1 INTRODUCTION

WSP Canada Inc. (WSP) was retained by Far Sight Homes to conduct a Phase Two Environmental Site Assessment (ESA) at 5584 Lakeshore Road in the hamlet of Ballantrae, Town of Whitchurch-Stouffville, Ontario (hereafter referred to as the Phase Two Property). The Phase Two ESA has been developed to address Potentially Contaminating Activities (PCAs) and Areas of Potential Environmental Concern (APECs) identified in the Phase One ESA prepared by WSP in November 2016. The work plan for the Phase Two investigation was developed in conjunction with the work plan for the Phase One ESA. The Phase Two ESA was conducted to investigate the findings of the Phase One ESA, including Hand Auger sampling program in December 2016, a Test Pit Program conducted in January 2017, and a supplemental Delineation Program in June 2017. The purpose of these investigations was to address data gaps in shallow soil quality testing and to delineate the presence of chemical parameters in soil identified in the initial hand auger program.

The Phase Two ESA was conducted in general accordance with Ontario Regulation (O.Reg.) 153/04 (as amended). Filing for a Record of Site Condition (RSC) will not be required by O.Reg.153/04 due to the proposed land use not being considered more sensitive than the present/past land use.

1.1 SITE DESCRIPTION

The Phase Two Property is located approximately 430 metres east of Highway 48 and approximately 200 metres south of Aurora Road in Ballantrae, Ontario. A Site Location Map is provided as **Figure 1**. The Phase Two Property is approximately 21.7 hectares (53.6 acres) in size, irregular in shape, and currently contains seven (7) structures: two (2) occupied single family dwellings, one (1) garage, (1) workshop/barn, two (2) storage facilities, and one (1) shed. Property information for the Phase Two Property is provided in **Table 1-1**.

Table 1-1 Property Information

CRITERION	DESCRIPTION
Property Identification Numbers (PINs)	03688-0054(LT)
Legal Description	Part Lots 19 & 20 Con 8, Whitchurch, designated as Part 1, 65R6092

The Phase Two Property consists of 21.7 hectares of agricultural land on 5584 Lakeshore Road, which is proposed for residential development, as shown in Figure 3. The Phase Two ESA focuses on the portion of land that is to be occupied by the proposed residential development.

1.2 PROPERTY OWNERSHIP

Property ownership information for the Phase Two Property is provided in **Table 1-2**.

Table 1-2 Property Ownership Information

CRITERION	PIN	DESCRIPTION
Current Site Owner	03688-0054(LT)	Richard Daniel SCHICKEDANZ & Patricia Anne SCHICKEDANZ - JT

1.3 CURRENT AND PROPOSED FUTURE USES

The Phase Two Property is currently used as residential and agricultural land, and has been since the 1850s. The Phase Two ESA focuses on the portion of land that is to be occupied by the proposed residential subdivision.

1.4 APPLICABLE SITE CONDITION STANDARD

Analytical results were compared to Table 2: Full Depth Generic Site Condition Standards (SCS) in a Potable Ground Water Condition as set out in the Ministry of the Environment, Conservation and Parks (MECP) publication *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* (April 15, 2011), hereinafter referred to as the "MECP Table 2 SCS". Parameter concentrations in soil were compared to the SCS for Residential/Parkland/Industrial Property Use (RPI). This evaluation standard for the Phase Two Property was selected for comparison purposes based on the following:

- The Phase Two Property is not located within 30 m of a body of water.
- Properties within the Phase Two Study Area derive their drinking water from local groundwater sources.

Soil obtained from hand auger samples, soil probes and test pits were used to identify whether the SCS for coarse, medium, or fine-grained soils are appropriate for this property. The soil samples reflect a medium to coarse grained soil, but because a grain size analysis was not part of the scope of work, the applicable standards for the coarse-textured soils were used. Coarse textured soils include more stringent standards for the assessment of soil quality.

2 BACKGROUND INFORMATION

2.1 PHYSICAL SETTING

Table 2-1 provides a summary of the physical attributes of the Phase Two Property as determined through the Phase One ESA.

Table 2-1 Summary of Physical Setting

	CRITERIA	DESCRIPTION
i.	Water Bodies and Areas of Natural Significance	A pond was observed on 5584 Lakeshore Road as seen on the aerial photos. The pond is not clearly visible on the 1927 aerial photographs, but is observed on all subsequent images. Based on this observation, the pond is considered to be man-made. The pond is not connected to the observed drainage pattern. There were no other permanent water bodies observed on the Phase Two Property. Mapping and available topographic records show potential for drainage to flow across the property (from North to South). A search of the Ontario Ministry of Natural Resources Natural Heritage Information Centre database showed that the Phase Two Property is not within an Area of Natural and Scientific Interest (ANSI). The Phase Two Property falls within the jurisdiction of the Lake Simcoe Region Conservation Authority (LSRCA). Regulation mapping from the LSRCA shows that the Phase Two Property does not contain regulated areas.

CRITERIA		DESCRIPTION
ii.	Topography, Hydrology, Geology	**Topography:** The topography at the Phase Two Property generally slopes from 329 metres above sea level (masl) to 334 masl. The topography is generally higher to the north and along the west and east edges and lower in the center and to the south edge of the Phase Two Property. The topography of the Phase Two Property is generally sloping toward the center and south of the property. **Hydrology:** Groundwater levels beneath the Phase Two Property were noted to vary between 7 metres and 20 metres below ground surface according to the static water level information presented on the MECP water well records. The hydrogeological investigation which was completed concurrent to the Phase One ESA identified a local water table that ranges in depths between 0.2 m and 3.87 m beneath the Phase Two Property **Regional Geology:** The Phase Two Property is in the Oak Ridges Moraine Physiographic Region and is characterized by landforms in the Kame Moraine. The depth to bedrock is estimated to be between 180 and 190 m below ground surface, based on bedrock topography and overburden thickness mapping (Gao et. al., 2006). The bedrock is mapped as the Blue Mountain Formation, which consists of shale, limestone and calcareous siltstone (Ontario Geological Survey, 2011).

2.2 PAST ASSESSMENTS AND INVESTIGATIONS

No past records of assessments and investigations were provided to WSP during this investigation. WSP had access to records and reports for previous geotechnical and hydrogeological investigations that were conducted by WSP concurrent to the Phase One ESA. A Phase One ESA in accordance with O.Reg. 153/04, as amended, was prepared in November 2016 by WSP. The Phase One ESA was updated in August 2018 after re-inspecting of the Phase One Property to identify changes. The Phase One ESA is referenced throughout this report. The original Phase One Conceptual Site Model (CSM) identified the PCAs and APECs for the Phase Two Property upon this investigation was based. That Phase One CSM was updated in August 2018 to identify changes at the Site. No changes to the Phase One CSM were identified that are affect the delineated PCAs or APECs. The Phase One CSM is outlined in Section 4.3 and attached as **Figure 2** (Phase One CSM, August 2018).

3 INVESTIGATION METHOD

This section provides a brief description of all methods employed in undertaking this Phase Two ESA. Where the method differs from the associated standard operating procedure, a detailed description of the method used and a rationale for the change in method is provided in the appropriate subsection below.

3.1 OVERVIEW OF SITE INVESTIGATION

The primary objectives of the Phase Two ESA are as follows:

- Investigate subsurface soil quality for Organochlorine pesticides (OCPs) and Arsenic
- Compare soil results to the applicable MECP Table 2 SCS (RPI) values.

The Phase Two ESA was carried out according to O. Reg. 153/04, as amended. The site investigation activities were limited to visible and accessible locations of the Phase Two Property. Soil testing, sampling, and laboratory analyses were carried out based on available historical findings, site access, and current site observations.

3.2 SAMPLING AND ANALYSIS PLAN

See **Appendix A** for the Sampling and Analysis Plan.

Per O. Reg. 153/04 Schedule E. Condition 3(5) WSP developed the standard operating procedures (SOPs) used in the field investigation as listed in **Table 3-1**.

Field work for this Phase Two ESA was undertaken following the SOPs. Deviations from the Sampling and Analysis Plan and SOPs, if any, are detailed in Section 3.5.

Table 3-1 List of Standard Operating Procedures Used in Field Investigation

CATEGORY		SOP
i.	Hand Auger	Hand Auger Soil Sample Material Descriptions
ii.	Excavating	Excavators Soil Sample Material Descriptions
iii.	Soil Sampling	Grab samples from soil walls and floor walls in test pits. Hand auger and soil probe sampling. Field Soil Sampling for OCP and Arsenic Analysis in 250 mL jars without preservative
iv.	Soil Field Testing	Visual and Olfactory Inspection
viii.	Quality Assurance/Quality Control (QA/QC) Program	Quality Assurance (QA) Quality Control (QC)

Notes:
OCPs – Organochlorine Pesticides

3.3 MEDIA INVESTIGATED

A summary of the media investigated at the Phase Two Property during the Phase Two investigation is provided in **Table 3-2:**

Table 3-2 Media Investigated During Phase Two Hand Auger Investigation

ENVIRONMENTAL CONCERN	MEDIA INVESTIGATED
APEC-1: Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large Scale Applications (PCA # 40) Agricultural machinery and equipment was observed in the storage buildings at 5584 Lakeshore Road during the site reconnaissance. A 9.4 hectare area of historic and current agricultural land use on 5584 Lakeshore Road is proposed for future residential development. The potential for subsurface environmental impacts to soil is medium, and low for groundwater.	Hand Auger Investigation (Soil) OCP Arsenic
	Test Pit Program (Soil) OCP Arsenic
	Grid Pattern Delineation Program (Soil) OCP Arsenic

Notes:
OCPs – Organochlorine Pesticides

3.4 PHASE ONE CONCEPTUAL SITE MODEL

A Phase One Conceptual Site Model (CSM) was presented in the Phase One ESA report (WSP November 2016; August 2018) and is presented in this report as Figure 2. The Phase One CSM identified the PCAs and APECs for the Phase Two Property, as described in Section 3.3.

3.5 DEVIATIONS FROM THE SAMPLING AND ANALYSIS PLAN

The Phase Two ESA followed the sampling and analysis plan provided in **Appendix A.**

3.6 IMPEDIMENTS

No impediments were encountered during this investigation, but there was snow cover during the test pit program in January 2017.

3.7 HAND AUGERING,TEST PIT PROGRAM AND DELINEATION SAMPLING

A Phase Two ESA hand auger investigation was completed on December 1, 2016, in conjunction with the Phase One ESA based on historical information and the identified APEC. Following review of the sampling results, WSP conducted a test pit program that included five test pits that were excavated and sampled on January 19, 2017. The purpose of the test pit program was to address the one (1) sample from the hand auger investigation that had Dieldrin concentrations that were greater than Table 2 SCS (RPI).

The results of the test pit program identified that Dieldrin, an OCP analyte, was detected in five of the six samples submitted for OCP and Arsenic Analysis. To further delineate the presence of the OCP analyte, Dieldrin, WSP implemented a 20m by 20m grid pattern delineation program to determine the extent of contamination. The Delineation Sampling event took place on June 7, 2017.

WSP staff inspected the Phase Two Property and identified the preferred hand auger, test pit and delineation sampling locations that would adequately determine the presence of contamination from the identified APEC and delineate the presence of contaminants that were identified in the initial hand auger investigation. The hand auger, test pit and delineation sampling locations are shown in Figure 3, Figure 4 and Figure 5, respectively. The location of underground services and utilities within the Phase Two Property were cleared prior to initiating the hand auguring and test pit program. WSP arranged for the public service locates through Ontario One Call. Details of the hand auger investigation, test pit program and delineation program are summarized in **Table 3-3**, **Table 3-4** and **Table 3-5**, respectively.

Table 3-3 Summary of Hand Auger (Soil Probe Investigation)

INFORMATION PARAMETER	DETAILS
Name of Hand Auger Field Technician	Daniel Oliveira (WSP)
Auguring Equipment Used	Hand Auger, soil probe
Measures taken to minimize the potential for cross-contamination,	The hand auger and soil probe were cleaned between each sample. Disposable nitrile gloves were used during sample collection and changed between each sample to minimize the potential for cross-contamination.
Frequency of sample collection	From a range of 0.05-0.15m for SS1 and a range of 0.30-0.46 m depth for SS2.

Ten (10) hand augured holes were completed on December 1, 2016. The hand augured holes were advanced to a maximum depth of 0.46 mbgs. Locations of the boreholes are provided in Figure 3.

Table 3-4 Summary of Excavating (Test Pit Program)

INFORMATION PARAMETER	DETAILS
Name of Excavator Contractor	Far Sight Homes Operator (Johnathan Shickedanz)
Name of Sample Collection Technician	Daniel Oliveira (WSP)
Excavator Equipment Used	JCB 214 Excavator
Measures taken to minimize the potential for cross-contamination,	Soil samples were not taken directly from the excavator bucket, but rather from the excavation walls and floor. Disposable nitrile gloves were used during sample collection and changed between each sample to minimize the potential for cross-contamination.
Frequency of sample collection	As directed by WSP staff – maximum depth of 1.4 metres.

Five (5) test pits were excavated onsite on January 19, 2017 using an excavator, model JCB 214. The test pits were advanced to maximum depths ranging from 1.0-1.4 metres below the top of grade in attempt to expose the material beneath the surficial soil. WSP staff identified the test pit locations based on the soil testing results which failed to meet the applicable MECP Table 2 SCS values at one of the hand augured locations (BH16-8). The test pits were located at the original BH16-8 location and surrounding BH16-8, as shown in Figure 3.

Table 3-5 Summary of Soil Sampling (Grid Pattern Delineation Program)

INFORMATION PARAMETER	DETAILS
Name of Sample Collection Personnel	Daniel Oliveira (WSP) Jake Whittamore (WSP)
Sampling Equipment Used	Shovel, hand auger and soil probe
Measures taken to minimize the potential for cross-contamination,	Disposable nitrile gloves were used during sample collection and changed between each sample to minimize the potential for cross-contamination.
Frequency of sample collection	From a range of 0.075-0.105 mbgs for topsoil samples and 0.4-0.6 mbgs for native soil samples.

Soil samples were collected onsite in 48 different locations on June 7, 2017. The topsoil and native soil samples were collected at depths ranging from 0.075-0.15 mbgs and 0.4-0.6 m bgs, respectively. WSP staff identified the soil sample locations based on the soil testing results which failed to meet the applicable MECP Table 2 SCS values from the two previous investigations. WSP staff created a 20m by 20m grid pattern surrounding the previous test locations and sampled both native and topsoil material. Of the 48 collected samples, 24 of these samples were submitted for OCP and Arsenic Analysis to ALS Laboratories.

3.8 SOIL INVESTIGATION

3.8.1 SOIL SAMPLING

The soil sampling program was carried out in three parts: the initial hand auger program, test pit program and the grid pattern delineation program.

For all parts of the soil sampling program, disposable nitrile gloves were used during sample collection and changed between each sample to minimize the potential for cross-contamination. Soil samples collected during the Phase Two ESA were described in the field by WSP staff and observations were recorded in a dedicated field book. All soil samples were collected directly into laboratory-supplied 250-mL clear glass jars without preservative, and were stored on-ice, at a temperature less than 10°C, in coolers provided by the laboratory. Samples selected for laboratory analysis were handled under standard chain-of-custody procedures until received at the laboratory. The soil samples selected for laboratory analysis were considered representative of worst-case conditions based on visual inspection and olfactory observations.

Soil samples from the hand auger investigation were collected from the native materials using a 50-mm diameter, 0.60-m long stainless steel split spoon sampler. Ten (10) soil samples along with one (1) field duplicate sample, were submitted to Maxxam Laboratories in Mississauga, Ontario. The soil samples submitted for chemical analysis are summarized in
Table 3-6.

Table 3-6 Summary of Soil Samples from Hand Auger Investigation Submitted for Soil Quality Analysis

BOREHOLE ID	SOIL SAMPLE ID	DEPTH (MBGS)	SOIL TYPE	LABORATORY ANALYSIS
BH16-1	SS1	0.08-0.15	Dark Brown Sand Topsoil	OCPs, Arsenic
BH16-1	SS2	0.37-0.46	Orangey-Brown native sand	OCPs, Arsenic
BH16-3	SS1	0.08-0.15	Dark Brown Sand Topsoil	OCPs, Arsenic
BH16-4	SS1	0.08-0.15	Dark Brown Sand Topsoil	OCPs, Arsenic
BH16-4	SS2	0.35-0.44	Orangey-Brown native sand	OCPs, Arsenic
BH16-5	SS1	0.08-0.15	Dark Brown Sand Topsoil	OCPs, Arsenic
BH16-6	SS1	0.08-0.15	Dark Brown Sand Topsoil	OCPs, Arsenic
BH16-6	SS2	0.41-0.50	Orangey-Brown native sand	OCPs, Arsenic
BH16-8	SS1	0.05-0.10	Dark Brown Sand Topsoil	OCPs, Arsenic
BH16-8	SS2	0.35-0.44	Orangey-Brown native sand	OCPs, Arsenic
DUP1	Blind Duplicate BH16-5 SS1	0.08-0.15	Dark Brown Sand Topsoil	OCPs, Arsenic

Soil samples for the Test Pit Investigation were taken directly from the test pit walls and floors due to the shallow depth of the excavation. During the test pit program, a WSP representative directed the operator on the location and depths of the test pit excavations. WSP personnel made soil observations and collected soil samples ranging from 0.10 m to 0.95 m in depth.

Six (6) soil samples along with one (1) field duplicate sample, were submitted to Maxxam Laboratories for chemical analyses. The soil samples submitted for chemical analysis are summarized in **Table 3-7**.

Table 3-7 Summary of Soil Samples from Test Pit Program Submitted for Soil Quality Analysis

TEST PIT ID	SOIL SAMPLE ID	DEPTH (MBGS)	SOIL TYPE	LABORATORY ANALYSIS
TP17-1	TP17-1 SS1	0.10-0.30	Dark Brown Sand Topsoil	OCPs, Arsenic
TP17-1	TP17-1 SS2	0.80-0.95	Orange-Brown native sand	OCPs, Arsenic
TP17-2	TP17-2 SS1	0.10-0.30	Dark Brown Sand Topsoil	OCPs, Arsenic
TP17-3	TP17-3 SS1	0.10-0.30	Dark Brown Sand Topsoil	OCPs, Arsenic
TP17-4	TP17-4 SS1	0.10-0.30	Dark Brown Sand Topsoil	OCPs, Arsenic
TP17-5	TP17-5 SS1	0.10-0.30	Dark Brown Sand Topsoil to Grey native sand	OCPs, Arsenic
TP17-1	DUP 1 (duplicate TP17-1 SS2)	0.80-0.95	Orange-Brown native sand	OCPs, Arsenic

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Soil samples for the Delineation Program were collected from the topsoil and native soil by hand auger, soil probe or shovel depending on the sample depth. During the Delineation Program, WSP personnel collected topsoil and native soil samples from depths of 0.08-0.15 mbgs and 0.4-0.6 mbgs, respectively, with the maximum depth of sample from 0.95 mbgs. All samples were placed directly into jars to provide the opportunity of future testing. Samples that were not submitted in the original set on June 7, 2017 were refrigerated below 10˚C and later submitted on July 10, 2017.

Nine (9) soil samples along with one (1) field duplicate sample, were submitted to ALS Environmental for chemical analyses on the first set of samples. The soil samples submitted for chemical analyses are summarized in **Table 3-8**.

Table 3-8 Summary of Soil Samples from the Grid Pattern Delineation Program Submitted for Soil Quality Analysis

GRID SAMPLE ID	SOIL SAMPLE ID	DEPTH (MBGS)	SOIL TYPE	LABORATORY ANALYSIS
AS1	TH AS1	0.08-0.15	Dark Brown Sand Topsoil	OCPs, Arsenic
AS3	TH AS3	0.08-0.15	Dark Brown Sand Topsoil	OCPs, Arsenic
AS5	TH AS5	0.08-0.15	Dark Brown Sand Topsoil	OCPs, Arsenic
CS1	TH CS1	0.08-0.15	Dark Brown Sand Topsoil	OCPs, Arsenic
CS1	TH CS1N	0.4-0.60	Orange-Brown native sand	OCPs, Arsenic
CS5	TH CS5	0.08-0.15	Dark Brown Sand Topsoil	OCPs, Arsenic
ES1	TH ES1	0.08-0.15	Dark Brown Sand Topsoil	OCPs, Arsenic
ES3	TH ES3	0.08-0.15	Dark Brown Sand Topsoil	OCPs, Arsenic
ES5	TH ES5	0.08-0.15	Dark Brown Sand Topsoil	OCPs, Arsenic
CS1	SOIL DUP 1 (duplicate TH CS1N)	0.4-0.60	Orange-Brown native sand	OCPs, Arsenic

The soil samples that were submitted for chemical analysis of OCPs and Arsenic, were collected into laboratory-supplied 250-mL clear glass jars without preservative.

All soil samples bagged and not submitted to the laboratory were kept by WSP and stored at a temperature of less than 10°C from the time of soil sampling to the time of analysis at the laboratory. The reason for keeping the soil samples on hold was to preserve them in case additional samples or re-sampling was required to verify soil analysis.

Fifteen (15) additional soil samples along with two (2) QA/QC samples from the Delineation Program were subsequently submitted to ALS Environmental after receiving the results from the first sample submission. The soil samples submitted for chemical analyses are summarized in **Table 3-9**.

Table 3-9 Summary of Additional Soil Samples from Delineation Sampling Program Submitted for Soil Quality Analysis

GRID SAMPLE ID	SOIL SAMPLE ID	DEPTH (MBGS)	SOIL TYPE	LABORATORY ANALYSIS
BS1	TH BS1	0.08-0.15	Topsoil	OCPs, Arsenic
BS2	TH BS2	0.08-0.15	Topsoil	OCPs, Arsenic
BS3	TH BS3	0.08-0.15	Topsoil	OCPs, Arsenic
AS2	TH AS2	0.08-0.15	Topsoil	OCPs, Arsenic
CS2	TH CS2	0.08-0.15	Topsoil	OCPs, Arsenic
CS3	TH CS3	0.08-0.15	Topsoil	OCPs, Arsenic
CS4	TH CS4	0.08-0.15	Topsoil	OCPs, Arsenic
DS2	TH DS2	0.08-0.15	Topsoil	OCPs, Arsenic
DS3	TH DS3	0.08-0.15	Topsoil	OCPs, Arsenic
DS4	TH DS4	0.08-0.15	Topsoil	OCPs, Arsenic
DS5	TH DS5	0.08-0.15	Topsoil	OCPs, Arsenic
ES6	TH ES6	0.08-0.15	Topsoil	OCPs, Arsenic
FS1	TH FS1	0.08-0.15	Topsoil	OCPs, Arsenic
FS3	TH FS3	0.08-0.15	Topsoil	OCPs, Arsenic
FS5	TH FS5	0.08-0.15	Topsoil	OCPs, Arsenic
SOIL DUP2	SOIL DUP2 (TH FS1)	0.08-0.15	Topsoil	OCPs, Arsenic
SOIL DUP3	SOIL DUP3 (TH ES6)	0.08-0.15	Topsoil	OCPs, Arsenic

The additional soil samples that were submitted for chemical analysis of OCPs and Arsenic, were collected into laboratory-supplied 250-mL clear glass jars without preservative during the field program. These samples were selected to further delineate and determine the extent of the exceedances identified from the results of the previous submission.

3.8.2 FIELD SCREENING MEASUREMENTS

Soil samples collected from the Hand Auger Investigation, Test Pit Program and Delineation Program were not screened in the field for TOV concentrations due to the nature of the contaminants of concern; OCPs and Arsenic. Soil samples were field screened via visual inspection and olfactory observations.

1.1 GROUNDWATER

Groundwater sampling was not conducted as part of the Phase Two ESA because there was no identified potential for the APEC to impact groundwater quality.

3.9 SEDIMENT SAMPLING

Sediment as defined in O. Reg. 153/04, as amended was not present on the Phase Two Property and as such, sediment sampling was not conducted as part of the Phase Two ESA.

3.10 ANALYTICAL TESTING

Chemical analysis was conducted by Maxxam Laboratories located in Mississauga, Ontario, and ALS Environmental in Richmond Hill, Ontario. Both laboratories are members of the Canadian Association for Laboratory Accreditation (CALA) and meet the requirements of Section 47 of O. Reg. 153/04 (as amended) certifying that the analytical laboratory be accredited in accordance with the International Standard ISO/IEC 17025 and with standards developed by the Standards Council of Canada. Laboratory certificates are presented in **Appendix F**.

3.11 RESIDUE MANAGEMENT PROCEDURES

The management of residues such as soil cuttings and fluids from equipment cleaning was conducted as indicated in **Table 3-10**.

Table 3-10 Summary of Residue Management Procedures

	RESIDUE	MANAGEMENT PROCEDURE
i.	Soil cuttings from hand augering and excavations	Soil cuttings from the hand auger investigation were left on the ground adjacent to the boreholes. Soil cuttings from the test pit program were used to backfill the excavations.
ii.	Fluids from equipment cleaning.	Water used in equipment cleaning was emptied onto the ground adjacent to the boreholes.

3.11.1 ELEVATION SURVEY

The approximate ground elevation for each hand augured borehole and test pit was recorded using a hand-held Garmin eTrex 10 GPS unit with an approximate 3 m accuracy. Elevations of sampling locations that were part of the Delineation Program were not recorded, except for the furthest northeast sampling location AS1, reference location, which was recorded using a Sokkia differential GPS with 10 cm accuracy.

3.11.2 QUALITY ASSURANCE AND QUALITY CONTROL MEASURES

The project-specific QA/QC measures are described in **Table 3-11**.

Table 3-11 Quality Assurance and Quality Control Measures

QA/QC MEASURE		DESCRIPTION
i.	Sample containers, preservation, labelling, handling and custody for samples submitted for laboratory analysis, including any deviations from the SAP.	Soil samples from the hand auger, test pit program and Delineation Program were collected using the following laboratory supplied containers: — OCPs, and Arsenic–250 mL glass jars, no preservative, were submitted for the investigations. Soil samples were collected using non-dedicated sampling equipment that were thoroughly cleaned between each sample to reduce the potential for cross-contamination of the samples. Sample containers were labelled with unique sample identification, the project number, and the sampling date. A laboratory-supplied chain-of-custody was completed. One (1) copy was sent with the samples to the laboratory, and one (1) copy was retained for the project file.
ii.	Equipment cleaning procedures during sampling	Nitrile gloves were replaced after each sample was collected to reduce the potential for cross-contamination of the samples. Field equipment was cleaned with soap and water and was rinsed with distilled water between samples.
iii.	Field QC measures	Blind field duplicate samples of soil were collected and submitted for laboratory analysis as part of this investigation.
iv.	Deviations from the procedures set out in the QA/QC program set out in the SAP	There were no deviations from the SAP.

Maxxam Laboratories and ALS Environmental also performed QA/QC procedures as outlined in their CALA procedures. These procedures included analysis of lab duplicates as well as analysis of surrogate recovery as outlined in the Certificates of Analysis provided in **Appendix C**.

4 REVIEW AND EVALUATION

4.1 GEOLOGY

A brief summary of the subsurface conditions encountered at the Phase Two Property is presented below.

The surficial materials at the Phase Two Property consisted of topsoil ranging between 0.0 to 0.35 mbgs, and further underlain by medium to coarse grained native sand. Some parts of the sand appear to be disturbed and may represent minor regrading or disturbance from cultivation.

4.2 HYDROGEOLOGY

4.2.1 ELEVATIONS AND FLOW DIRECTION

Groundwater levels vary between 7 metres and 20 metres below ground surface according to the static water level information presented on the MECP water well records reviewed in the Phase One Environmental Site Assessment.

Work concurrent with the Phase One ESA has identified a local water table that ranges in depths between 2 m and 5 m beneath the Phase Two Property.

The inferred groundwater flow direction as a result of the observed water levels is to the south across the Phase Two Property. Monitoring wells were not installed and groundwater monitoring was not completed during the Phase Two ESA, and therefore the Phase Two ESA does not provide additional information in support of the understanding of the direction of groundwater flow beneath the Phase Two Property.

4.3 RESULTS OF ANALYSIS

4.3.1 SOIL

4.3.1.1 *COARSE GRAINED SOIL ANALYSIS*

Table 4-1 Grain Size Distribution Analysis

CRITERIA		DESCRIPTION
i.	rationale for the use of the coarse soil texture category,	The soil samples collected by WSP on the Phase Two Property consisted of sand, which in some places was disturbed. Sand is classified as a medium to coarse grained soil.
ii.	a description and rationale for the number of samples collected and analyzed	Samples were collected from both the topsoil layer and the sand layer and were taken from two (2) different depths and areas across the Phase Two Property for representative coverage.

4.3.1.2 *FIELD SCREENING*

Soil samples collected from the boreholes, test pits and delineation samples were not screened in the field for TOV concentrations due to the nature of the contaminants of concern, OCPs and Arsenic.

4.3.1.3 *SOIL QUALITY*

The soil analysis results are presented in **Tables 1A to 1C** for the hand auger investigation, **Tables 2A to 2C** for the test pit program and **Tables 3A to 3C** for the delineation program. The Laboratory Certificates of Analysis for the soil analysis completed during the present investigation are provided in Appendix C.

4.3.1.4 *ORGANOCHLORINE PESTICIDES (OCPS)*

Ten (10) soil samples (plus one duplicate sample) from the hand auger investigation, six (6) soil samples (plus one duplicate sample) from the test pit program and twenty-four (24) soil samples (plus three duplicate samples) from the delineation sampling event were submitted for OCP analysis.

The results of the laboratory analyses indicated that there were reported Dieldrin concentrations, an OCP analyte, above the MECP Table 2 SCS at the following locations;

- Two samples from the hand auger program: (BH16-8 SS1 and SS2).
- Five of the six samples from the test pit program: TP17-1 SS1, TP17-2 SS1, TP17-3 SS1, TP17-4 SS1, and TP17-5 SS1.
- 16 of the 24 soil samples from the Delineation Program: BS2, BS3, CS1, CS2, CS3, CS4, DS2, DS3, DS4, ES1, ES3, ES5, ES6, FS1, FS3 and FS5.

Refer to the Tables section for more details on the results of the laboratory analysis results.

The chemical responsible for the exceedance of Table 2 SCS for OCPs is a compound referred to as Dieldrin. Dieldrin is an insecticide that was widely used from the 1950's to 1970's to control pests in crops and domestic, agricultural and forestry situations. No sales of Dieldrin in Canada have been reported since 1984 as it is toxic to human beings and is considered a persistent organic pollutant (POP). Dieldrin has a half-life of 5 years (World Health Organization, 2003) and concentrations in soil will slowly decrease.

4.3.1.5 *ARSENIC*

Ten (10) soil samples (plus one duplicate sample) from the hand auger investigation, six (6) soil samples (plus one duplicate sample) from the test pit program and twenty-four (24) soil samples (plus three duplicate samples) from the delineation sampling event, were submitted for analysis of Arsenic. The results of the laboratory analyses for all three programs indicated that the reported concentrations from all soil samples were below the MECP Table 2 SCS for Arsenic.

4.3.2 GROUNDWATER QUALITY

Groundwater testing was not conducted as part of this investigation.

4.3.3 SEDIMENT QUALITY

Sediment as defined under O.Reg. 153/04 was not present on the Phase Two Property; therefore sediment testing was not conducted as part of this investigation.

4.4 QUALITY ASSURANCE AND QUALITY CONTROL RESULTS

Field protocols for sample collection and handling in accordance with the SOP were followed by all WSP personnel to ensure sample integrity was maintained. All field equipment was decontaminated before and between sample collection and clean nitrile gloves were used for each sample to eliminate the potential for cross-contamination of samples. All soil samples were collected directly into laboratory-supplied containers, preserved as required, and stored and shipped in ice-filled coolers. Proper chain-of-custody procedures were followed by WSP and the laboratory during sample transfer.

Field duplicate samples were assessed as part of the QA/QC program during the three Phase Two ESA sampling programs. A minimum of one field duplicate sample was collected and analyzed for every ten samples for soil.

Laboratory-prepared replicate samples and field-prepared duplicate samples were assessed as part of this assignment's QA/QC Program. Analytical results for the field duplicate sampling were evaluated for the relative percent difference (RPD) of parameter concentrations. For concentrations greater than five (5) times the laboratory reportable detection limit (RDL), a concentration difference of less than 20% was deemed acceptable. For concentrations less than five times the RDL in the field duplicate sample of non-aqueous matrices, the absolute difference between the sample concentrations must be less than or equal to four times the RDL to be deemed acceptable. The Laboratory Certificates of Analysis for the soil analysis are provided in **Appendix F**.

Table 4-2 provides a summary of the field duplicate soil samples and the results of the QA/QC comparisons of the duplicate samples.

Table 4-2 Summary of Soil QA/QC Results

DATE	SAMPLE ID	SAMPLE MEDIUM	SAMPLE ANALYSIS	FIELD DUPLICATE ID	QA/QC RESULTS
December 1, 2016	DUP1	Soil	OCPs, Arsenic	BH16-5 SS1	All results were within the QA/QC guidelines
January 19, 2017	DUP2	Soil	OCPs, Arsenic	TP17-1 SS2	All results were within the QA/QC guidelines
June 7, 2017	Soil DUP1	Soil	OCPs, Arsenic	TH CS1N	All results were within the QA/QC guidelines
June 7, 2017	Soil DUP2	Soil	OCPs, Arsenic	TH FS1	All results were within the QA/QC guideline, with the exception of Dieldrin, which had a concentration difference of 20.5%.
June 7, 2017	Soil DUP3	Soil	OCPs, Arsenic	TH ES6	All results were within the QA/QC guideline with the exception of Dieldrin, which had a concentration difference of 45%

Maxxam Laboratories and ALS Environmental carried out internal QA/QC measures including process recoveries, blanks, and replicate samples. The laboratory QA/QC results are provided on the Certificates of Analysis in Appendix C. The results were acceptable and therefore suitable for interpretation.

It is WSP's understanding that the variability in Dieldrin concentrations is consistent with our understanding of the variable distribution in soils and the use of grab sampling methodology conducted by WSP.

4.5 PHASE TWO CONCEPTUAL SITE MODEL

Through analysis and interpretation of the field data gathered during the Phase Two ESA, a Phase Two Conceptual Site Model was developed. The Phase Two Conceptual Site Model is presented as **Figure 6**.

Prior to the completion of the Phase One ESA, contaminants of potential concern were identified based on information provided by The Client, and displayed in **Table 4-3**, prepared in accordance with clause 16(2) (a), Schedule D, O. Reg. 153/04.

Table 4-3 Summary of Areas of Potential Environmental Concern Identified in Phase One ESA

AREA OF POTENTIAL ENVIRONMENTAL CONCERN	LOCATION OF AREA OF POTENTIAL ENVIRONMENTAL CONCERN ON PHASE ONE PROPERTY	POTENTIALLY CONTAMINATING ACTIVITY (O.REG.153 SCHEDULE E TABLE 2)	LOCATION OF PCA (ON-SITE OR OFF-SITE)	CONTAMINANTS OF POTENTIAL CONCERN	MEDIA POTENTIALLY IMPACTED (GROUNDWATER, SOIL AND/OR SEDIMENT)
APEC 1	5584 Lakeshore Road	40. Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	On –Site	OC Pesticides	Soil

Notes:
OCPs – Organochlorine Pesticides

The above observations and potential contaminants of concern were used to determine the test locations for the sampling programs. The results of soil testing programs documented herein indicates that OCP concentrations greater than the SCS values are limited to the near surface soils and are not present in the native material. The soil testing has shown persistence of the pesticide Dieldrin in 22 of the 40 samples submitted for analysis. The results did not identify concentrations of Arsenic that were greater than the Table 2 SCS values.

Table 4-4 provides a summary discussion of the interpreted field data that is incorporated into the Phase Two CSM.

Table 4-4 Summary of Phase Two Conceptual Site Model

CRITERIA		DISCUSSION
i.	a description and assessment of, A. areas where potentially contaminating activity has occurred, B. areas of potential environmental concern, and C. any subsurface structures and utilities on, in or under the phase two property that may affect contaminant distribution and transport,	A. The original Phase One ESA identified potentially contaminating activities (PCAs) that contributed to the identification of one (1) area of potential environmental concern (APECs); detailed in **Table 4-3** of this report, respectively. A second site reconnaissance was conducted in August 2018 and it was determined that the previously identified PCAs and APECs had not changed. The Phase One Conceptual Site Model (**Figure 2**) and the Phase Two Conceptual Site Model (**Figure 6**) for the Phase Two Property incorporates the information and data collected from both investigations (WSP 2016). The on- and off-site PCAs that were identified as contributing to on-Site APECs were: ▪ PCA 40. Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications. During the site reconnaissance, a large tote was observed at 5584 Lakeshore Road, used for Pesticide storage. Pesticides are applied across the agricultural land on an annual basis. Parameter concentrations in soil were above the applicable MECP Table 2 SCS values in samples tested during the borehole investigation and test pit program relating to this PCA/APEC.

CRITERIA		DISCUSSION
		B. The Phase 2 ESA confirmed the presence of the one (1) APEC in the northeast corner of the Site based on the results of the soil sampling programs.
ii.	a description of and, as appropriate, figures illustrating, the physical setting of the phase two property and any areas under it including, A. stratigraphy from ground surface to the deepest aquifer or aquitard investigated, B. hydrogeological characteristics, including aquifers, aquitards and, in each hydro stratigraphic unit where one or more contaminants is present at concentrations above the applicable site condition standards, lateral and vertical gradients, C. approximate depth to bedrock, D. approximate depth to water table, E. any respect in which section 41 or 43.1 of the regulation applies to the property, F. areas where soil has been brought from another property and placed on, in or under the phase two property, and approximate locations, if known, of any proposed buildings and other structures	A. The Phase Two Property is situated in the Oak Ridges Moraine physiographic regions as described by Chapman and Putnam (1984). The Phase Two Property stratigraphy consists of topsoil ranging between 0.0 to 0.35 mbgs, underlain by sand fill. B. Based on bedrock topography and overburden thickness mapping (Gao, 2006) the depth to bedrock is anticipated at depths between 180 mbgs and 190mbgs. C. A hydrogeological investigation which was completed concurrent to the Phase One ESA identified groundwater in the overburden material at approximately 0.20 mbgs to 3.87 mbgs. D. Section 41 and 43.1 (of the regulation) does not apply to the Phase Two Property, as no areas of national significance were identified within the Phase Two Property. E. Soil was not brought from another property and placed on, in, or under the Phase Two Property, as part of this Phase Two ESA. F. The Phase Two Property is proposed to be developed for residential development. Proposed building plans and the subdivision layout were provided to WSP at the time of this investigation and, therefore, the future locations of buildings and roads on-site were known.

4.6 INVESTIGATION OUTCOMES

Based on the results of the soil sampling programs, it was determined that Dieldrin was variably distributed in the topsoil layer in the northeast corner of the Phase Two Property in low concentrations that are above the Table 2 SCS value. Dieldrin is known to have a half-life of 5 years (World Health Organization, 2003) and the concentrations of Dieldrin in the near surface soils will continue to be reduced through natural forces. WSP recommends that the affected topsoil layer can be stripped and stored separate from other soils. These soils are to be handled using appropriate methods to minimize potential for cross-contamination with other soils and to protect human health and the environment. At a future time, these soils can be tested to determine if the Dieldrin concentrations are now suitable for use.

5 CONCLUSIONS

Based on the findings of this Phase Two ESA, WSP presents the following conclusions and recommendations:

- The applicable Site Condition Standards for the Phase Two Property are Table 2 Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Residential/Parkland/Institutional (RPI) Property Use (MECP Table 2 SCS).
- The surficial materials at the Phase Two Property consisted of topsoil ranging between 0.0 to 0.35 mbgs, underlain by medium to coarse native sand.
- Groundwater levels range between 7 metres and 20 metres below ground surface according to the static water level information presented on the MOECC water well records reviewed in the Phase One Environmental Site Assessment. Work concurrent with the Phase One ESA has identified a local water table that ranges in depths between 0.20 m and 3.87 m beneath the Phase Two Property. The groundwater levels were reviewed from previous investigations to ensure that the sampling program plans were appropriate.
- A search of the Ontario Ministry of Natural Resources Natural Heritage Information Centre database showed that the Phase Two Property is not within an Area of Natural and Scientific Interest (ANSI). The Phase Two Property falls within the jurisdiction of the Lake Simcoe Region Conservation Authority (LSRCA), but outside the regulated area.
- Specific soil samples were selected for laboratory testing based on historical information, aerial photographs, and visual inspection of soils. Soil samples were compared to O.Reg 153/04 MOECC Table 2 SCS for Residential/Parkland/Institutional (RPI) Property Use.
- The results of soil testing programs documented herein indicates that OCP concentrations greater than the SCS values are limited to the near surface soils and are not present in the native material. The soil testing has shown persistence of the pesticide Dieldrin in 22 of the 40 samples submitted for analysis. The results did not identify concentrations of Arsenic that were greater than the Table 2 SCS values.
- Dieldrin was variably distributed in the topsoil layer in the northeast corner of the Phase Two Property in low concentrations that are above the Table 2 SCS value. Dieldrin is known to have a half-life of 5 years (World Health Organization, 2003) and the concentrations of Dieldrin in the near surface soils will continue to be reduced over time through natural forces. WSP recommends that the affected topsoil layer can be stripped and stored separate from other soils. The OCP concentrations in the stockpiled soils will continue to decrease in accordance with the documented half-life and as controlled by moisture and air-flow conditions in the stockpile. These soils are to be handled using appropriate methods to minimize potential for cross-contamination with other soils and to protect human health and the environment. At a future time, these soils can be tested to determine if the Dieldrin concentrations are now suitable for use.
- In accordance with O.Reg. 153 as amended, a Record of Site Condition (RSC) will not be required for the area of the identified APEC on the Phase Two Property, where this area will be used in the future for residential land use.

5.1 LIMITATIONS

Limited use: This Report was prepared for the Alcorn and Associates Ltd., solely for their exclusive use to provide an Assessment of current environmental conditions in association with the property at 5584 Lakeshore Road, Ballantrae. WSP will not be responsible for any use of this report by any other party, for any decisions to be made based on it, or for the consequences thereof, unless written reliance is granted by WSP. Unless otherwise agreed in writing by WSP, it shall not be used to express or imply warranty as to the suitability of the property for a particular purpose. WSP disclaims responsibility of consequential financial effects on transactions or property values, or requirements for follow-up actions and costs. WSP reserves the right to amend and/or supplement this report in the event additional information, documentation or evidence becomes available.

Excerpts: The Report is intended to be used in its entirety. No excerpts may be taken to be representative of the findings in the assessment.

Info by others: In evaluating the Site, WSP has relied in good faith on information provided by others, as noted in the Report. WSP has assumed that the information provided is correct and WSP assumes no responsibility for the accuracy, completeness or workmanship of any such information.

Standard of care: This project has been carried out using investigation techniques and engineering analysis methods consistent with those ordinarily exercised by WSP and other engineering/scientific practitioners, working under similar conditions and subject to the time, financial and physical constraints applicable to this project. The conclusions presented in this Report are based on Work undertaken by trained professional and technical staff and the reasonable and professional interpretation using accepted engineering and scientific practices current at the time the work was performed. Conclusions presented in this report should not be construed as legal advice. WSP makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in the Report, including, but not limited to, ownership of any property, or the application of any law to the findings of the Assessment.

Limited scope: The Report summarizes WSP's review of available data in accordance with the principal components of the stated regulations, standards and guidelines and the scope, terms and conditions of the contract or proposal to which the Assignment was conducted. No other warranties are either expressed or implied with respect to the professional services provided under the terms of the contract or proposal and represented in this Report. Conditions may exist which were not detected given the nature of the inquiry WSP was retained to undertake with respect to the Site. Additional environmental studies and actions may be recommended.

Changes over time: The Report is based on data and information collected at the time of this Assessment, as stated in the Report. Site use or conditions change and the information and conclusions in the Report may no longer apply following the date of this Report. If any conditions become apparent that differ significantly from that presented in this Report, we request that we be notified to reassess the conclusions and recommendations provided herein. WSP disclaims any obligation to update this Report for conditions that may be identified after the date of this Report; however, WSP reserves the right to amend or supplement this report based on additional information, documentation or evidence.

Variability between test locations: Conclusions are based on the Site conditions observed by WSP at the time the work was performed and may include information obtained at specific testing and/or sampling locations. It is recognized that overall conditions can only be extrapolated to an undefined limited area around these testing and sampling locations. The conditions that WSP interprets to exist between testing and sampling points may differ from those that actually exist. The accuracy of any extrapolation and interpretation beyond the sampling locations will depend on natural conditions, the history of Site development and changes through construction and other activities. In addition, analysis has been carried out for the identified chemical and physical parameters only, and it should not be inferred that other chemical species or physical conditions are not present. WSP cannot warrant against undiscovered environmental liabilities or adverse impacts off-Site.

Conclusions: Conclusions presented in this report should not be construed as legal advice and represent the best technical judgment of WSP staff. The conclusions are based on the Phase Two Property conditions observed by WSP at the time the work was performed at the specific testing and/or sampling locations, and can only be

extrapolated to an undefined limited area around these locations. The extent of the limited area depends on the soil and groundwater conditions, as well as the history of the Phase Two Property reflecting natural, construction and other activities. In addition, analysis has been carried out for a limited number of chemical parameters, and it should not be inferred that other chemical species are not present. Due to the nature of the investigation and the limited data available, WSP cannot warrant against undiscovered environmental liabilities or adverse impacts off-Site. If any conditions become apparent that differ significantly from our understanding of conditions as presented in this report, we request that we be notified immediately to reassess the conclusions and recommendations provided herein.

5.2 QUALIFICATIONS OF THE ASSESSORS

The Phase Two site visit and field work was completed by Mr. Daniel Oliveira. Mr. Jake Whittamore assisted with the Phase Two ESA field work and conducted the update of the Phase One ESA (August 2018) and corresponding update of the Phase Two ESA. The Phase Two ESA was directed and overseen by Mr. Lloyd Lemon.

Mr. Daniel Oliveira, P.Eng., applies his four (4) plus years of environmental consulting experience at commercial, residential, and industrial properties, landfill sites and agricultural properties across Ontario. Mr. Oliveira has conducted numerous Phase One and Phase Two Environmental Site Assessments, compliance monitoring programs, subsurface investigations, remediation work, and hydrogeological field work across the Greater Toronto Area and Ottawa region since 2011. Routine tasks have both field and office components including water quality monitoring activities, site reconnaissance activities, drill rig and contractor supervision, soil and aggregate inspection and identification, and report and proposal writing.

Mr. Jake Whittamore, B. Eng., E.I.T., applies his nearly two (2) years of environmental consulting experience at commercial, residential, industrial properties, landfill sites, and agricultural properties across Ontario. Mr. Whittamore has completed multiple Phase One and Phase Two Environmental Site Assessments, subsurface investigations, and hydrogeological field work across the Greater Toronto Area since 2014. Routine tasks have both field and office components including water quality monitoring activities, site reconnaissance activities, drill rig and contractor supervision, soil inspection and identification, and report and proposal writing.

Mr. Lloyd Lemon, M.Sc., P.Geo. is a Qualified Person under the Ministry of Environment Brownfield Regulation 153/04. He is a Senior Geoscientist with WSP. Mr. Lemon has more than 35 years' experience as a geoscientist and has been registered as a Professional Geoscientist since 2001. Mr. Lemon has a strong technical background with experience in disciplines ranging from regional geological and hydrogeological understanding, contaminant hydrogeology, contaminant fate and transport, contaminant removal/remediation, groundwater geochemistry, rock-water interaction (chemical), environmental impact assessments, drinking water source protection, and risk management. Mr. Lemon has applied this technical background in environmental assessment and remediation projects on many scales and involving many contaminant types in Ontario, Atlantic Canada, and Maine. Mr. Lemon has expertise in detailed characterization of complex sites involving hydrocarbons, dense non-aqueous phase liquids, and fractured rock.

WSP carried out this Phase Two ESA and confirms the findings and conclusions presented in this report.

6 REFERENCES

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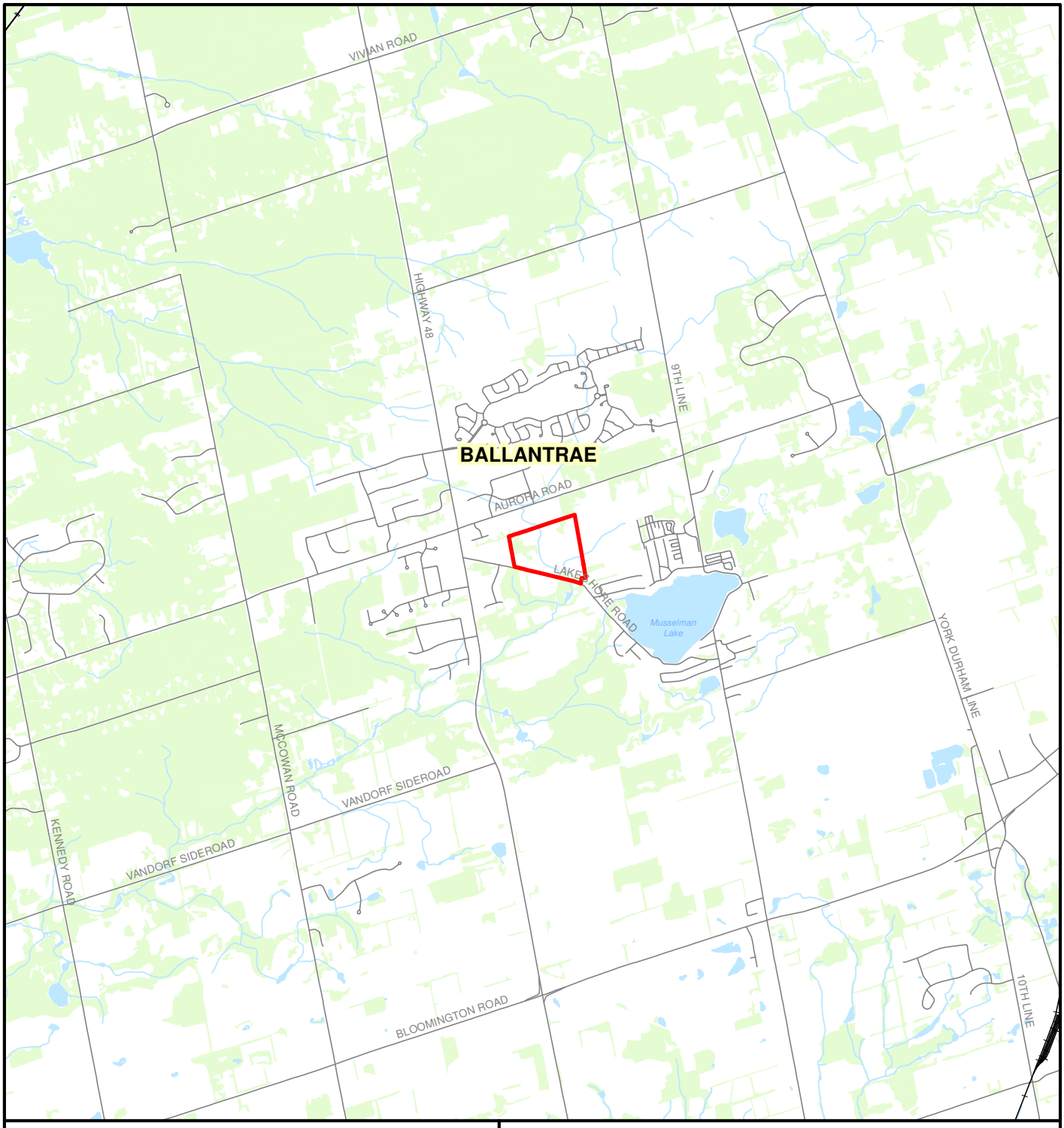
FIGURES



LEGEND

APPROXIMATE SITE LOCATION

N
W E
S

Data Source: Ministry of Natural Resources, Ontario Base Mapping, March 2014.

500 250 0 500 Metres

SITE LOCATION

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT SAMPLING PROGRAM
5426, 5452 & 5584 Lakeshore Road
Ballantrae, Ontario
For Far Sight Homes

DATE: AUGUST 2018	SCALE: 1:50000
PROJECT: 161-06960-00 118	FILE. NO.:161-06960-00 118 F1

wsp

FIGURE 1

LEGEND

- APPROXIMATE SITE LOCATION
- INVESTIGATED AREA
- 250 m SITE RADIUS
- WATERBODIES
- WATERCOURSE
- NON EVALUATED WETLAND
- PROVINCIALLY SIGNIFICANT WETLAND
- ANSI
- TOPOGRAPHIC CONTOURS (mASL) (1m INTERVAL)
- INFERRED GROUNDWATER FLOW DIRECTION
- MOECC WATER WELL LOCATION
- TEST PIT LOCATION (5452 LAKESHORE RD PROPERTY)
- TEST PIT AND INFILTRATION TESTING LOCATION
- SURFACE WATER STATION
- BOREHOLE LOCATION
- 2015 MONITORING WELL LOCATION
- OBSERVATION WELL
- GROUND TRANSFORMER (PCA #55)
- POLE TOP TRANSFORMER (PCA #55)
- APEC # 1 (PCA 40)

Data Source: Ministry of Natural Resources, Ontario Base Mapping, March 2014. Imagery, York Region, 2015.

0 50 m

N

PHASE ONE CONCEPTUAL SITE MODEL

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT SAMPLING PROGRAM
5584 Lakeshore Road
Ballantrae, Ontario
For Far Sight Homes

DATE: AUGUST 2018	SCALE: 1:4500
PROJECT: 161-06960-00 118	FILE. NO.:161-06960-00 118 F2
wsp	FIGURE 2

BH16-8				
Parameter	**Sample #**	**Units**	**T2 SCS**	**Value**
Dieldrin	SS1	µg/g	0.05	0.13
Dieldrin	SS2	µg/g	0.05	0.12

BH16-8
BH16-6
BH16-7
BH16-9
BH16-5
BH16-4
BH16-2
BH16-3
BH16-1
LAKESHORE ROAD

LEGEND

- APPROXIMATE SITE LOCATION
- INVESTIGATED AREA
- SOIL SAMPLING LOCATIONS (DEC 2016)

LINEWORK SHOWS CURRENT PROPOSED PLAN FOR RESIDENTIAL DEVELOPMENT (SUBJECT TO ENVIRONMENTAL APPROVALS)

Data Source: Ministry of Natural Resources, Ontario Base Mapping, March 2014.
Imagery, York Region, 2015.

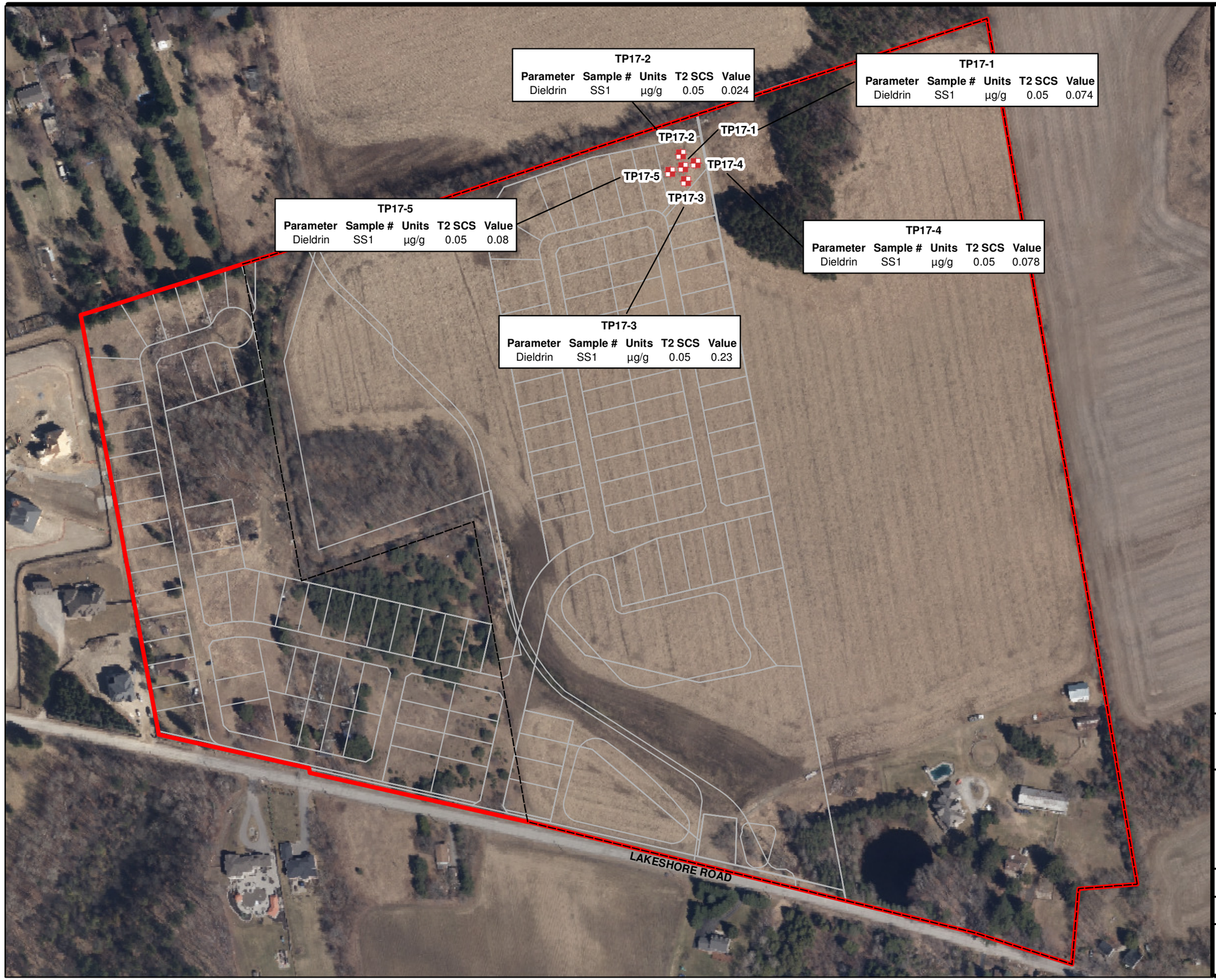
0 50 m

N

SOIL SAMPLE PROGRAM WITH EXCEEDANCES (DECEMBER, 2016)

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT SAMPLING PROGRAM
5584 Lakeshore Road
Ballantrae, Ontario
For Far Sight Homes

DATE: AUGUST 2018	SCALE: 1:2500
PROJECT: 161-06960-00 118	FILE. NO.:161-06960-00 118 F3
wsp	FIGURE 3



LEGEND

- APPROXIMATE SITE LOCATION
- INVESTIGATION AREA
- TEST PIT LOCATION (JANUARY 2017)

LINEWORK SHOWS CURRENT PROPOSED PLAN FOR RESIDENTIAL DEVELOPMENT (SUBJECT TO ENVIRONMENTAL APPROVALS)

Data Source: Ministry of Natural Resources, Ontario Base Mapping, March 2014.
Imagery, York Region, 2015.

0 50 m

N

TEST PIT PROGRAM WITH EXCEEDANCES (JANUARY 2017)

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT SAMPLING PROGRAM
5584 Lakeshore Road
Ballantrae, Ontario
For Far Sight Homes

DATE: AUGUST 2018	SCALE: 1:2500
PROJECT: 161-06960-00 118	FILE. NO.:161-06960-00 118 F4
wsp	FIGURE 4

LEGEND

- APPROXIMATE SITE LOCATION
- SOIL SAMPLING LOCATIONS (DEC 2016)
- TEST PIT LOCATION (JANUARY 2017)
- SOIL SAMPLING LOCATION DEC 2016 & TEST PIT LOCATION JAN 2017
- SOIL SAMPLE LOCATIONS - JUNE 7, 2017
- SAMPLES SUBMITTED FOR ANALYSIS
- TABLE 2 EXCEEDANCE - DIELDRIN

LINEWORK SHOWS CURRENT PROPOSED PLAN FOR RESIDENTIAL DEVELOPMENT (SUBJECT TO ENVIRONMENTAL APPROVALS)

Dieldrin Exceedances (µg/g)		
Sample #	T2 SCS	Value
TH CS1	0.05	0.067
TH CS2	0.05	0.061
TH CS3	0.05	0.133
TH CS4	0.05	0.099
TH DS2	0.05	0.569
TH DS3	0.05	0.370
TH DS4	0.05	0.251
TH ES1	0.05	0.056
TH ES3	0.05	0.300
TH ES5	0.05	0.094
TH FS1	0.05	0.057
TH FS3	0.05	0.137
TH FS5	0.05	0.120

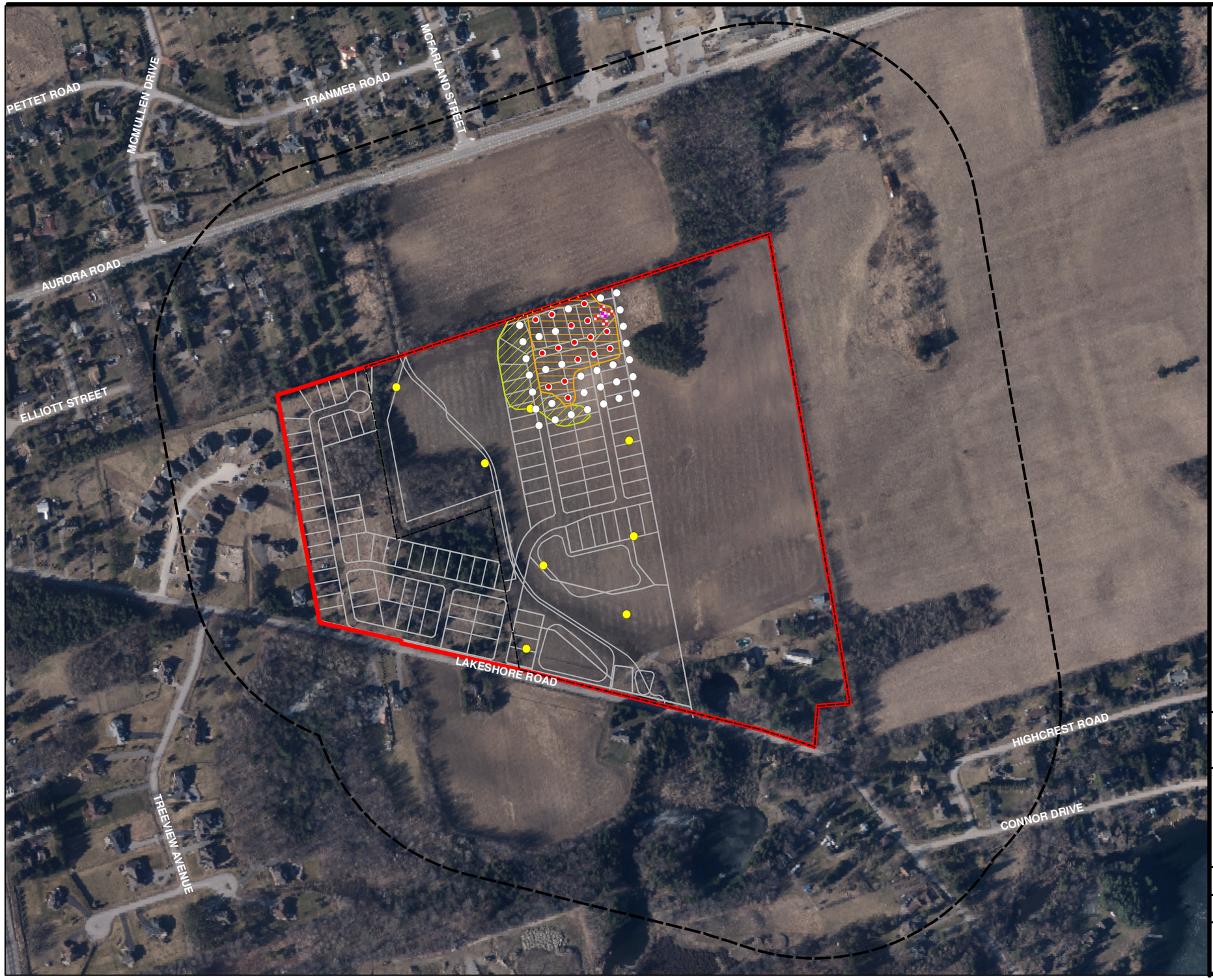
Data Source: Ministry of Natural Resources,
Ontario Base Mapping, March 2014. Imagery, York Region, 2015.
0 10 m

N

SOIL SAMPLING DELINEATION PROGRAM WITH EXCEEDANCES (JUNE 2017)

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT SAMPLING PROGRAM
5584 Lakeshore Road
Ballantrae, Ontario
For Far Sight Homes

DATE: AUGUST 2018	SCALE: 1:600
PROJECT: 161-06960-00 118	FILE. NO.:161-06960-00 118 F5
wsp	FIGURE 5



LEGEND

- APPROXIMATE SITE LOCATION
- INVESTIGATED AREA
- 250 m SITE RADIUS
- SOIL SAMPLING LOCATIONS (DEC 2016)
- TEST PIT LOCATION (JANUARY 2017)
- SOIL SAMPLING LOCATION DEC 2016 & TEST PIT LOCATION JAN 2017
- SOIL SAMPLE LOCATIONS - JUNE 7, 2017
- TABLE 2 EXCEEDANCE - DIELDRIN
- CONFIRMED AREA WITH EXCEEDANCES
- UNCONFIRMED NEAR SURFACE SOIL QUAILITY

LINEWORK SHOWS CURRENT PROPOSED PLAN FOR RESIDENTIAL DEVELOPMENT (SUBJECT TO ENVIRONMENTAL APPROVALS)

Data Source: Ministry of Natural Resources, Ontario Base Mapping, March 2014. Imagery, York Region, 2015.

0 50 m

N

PHASE TWO CONCEPTUAL SITE MODEL

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT SAMPLING PROGRAM
5584 Lakeshore Road
Ballantrae, Ontario
For Far Sight Homes

DATE: AUGUST 2018	SCALE: 1:4600
PROJECT: 161-06960-00 118	FILE. NO.:161-06960-00 118 F6
wsp	FIGURE 6

TABLES

Table 1A: Dec 2016 Hand Auger Investigation
Summary of Soil Samples Submitted for Chemical Analysis

Borehole	Surface Elevation (masl)	Date	Sample No.	Depth (mbgs)	Sample Elevation (masl)	Chemical Analyses		Rationale
						OC Pesticides	Arsenic	
BH16-1	341	1-Dec-16	SS1	0.08-0.15	340.92-340.85	✓	✓	Investigate APEC 1
			SS2	0.37-0.46	340.63-340.54	✓	✓	Investigate APEC 1
BH16-3	328	1-Dec-16	SS1	0.08-0.15	327.92-327.85	✓	✓	Investigate APEC 1
BH16-4	317	1-Dec-16	SS1	0.08-0.15	316.92-316.85	✓	✓	Investigate APEC 1
			SS2	0.35-0.44	316.65-316.56	✓	✓	Investigate APEC 1
BH16-5	338	1-Dec-16	SS1	0.08-0.15	337.92-337.85	✓	✓	Investigate APEC 1
			DUP1	0.08-0.15	337.92-337.85	✓	✓	Investigate APEC 1
BH16-6	337	1-Dec-16	SS1	0.08-0.15	336.92-336.85	✓	✓	Investigate APEC 1
			SS2	0.41-0.50	336.59-336.50	✓	✓	Investigate APEC 1
BH16-8	333	1-Dec-16	SS1	0.05-0.10	332.95-332.90	✓	✓	Investigate APEC 1
			SS2	0.35-0.45	332.65-332.55	✓	✓	Investigate APEC 1

Table 1B: Dec 2016 Hand Auger Investigation
Summary of OC Pesticides in Soil

Parameter	Table 2 RPI CT		BH16-1 SS1	BH16-1 SS2	BH16-3 SS1	BH16-4 SS1	BH16-4 SS2	BH16-5 SS1
Date of Collection			12/01/2016	12/01/2016	12/01/2016	12/01/2016	12/01/2016	12/01/2016
Date Reported			12/09/2016	12/09/2016	12/09/2016	12/09/2016	12/09/2016	12/09/2016
Sampling Depth (mbgs)			0.15	0.46	0.08-0.15	0.08-0.15	0.35-0.44	0.08-0.15
Sample Elevation (masl)			340.92-340.85	340.63-340.54	327.92-327.85	316.92-316.85	316.65-316.56	337.92-337.85
Analytical Report Reference No.			R4281613	R4281613	R4281613	R4281613	R4281613	R4281613
Calculated Parameters	**Units**	**Criteria**						
Chlordane (Total)	ug/g	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
o,p-DDD + p,p-DDD	ug/g	-	<0.0020	<0.0020	0.0037	<0.0020	<0.0020	0.0033
o,p-DDE + p,p-DDE	ug/g	-	0.076	0.0034	0.072	0.17	0.016	0.17
o,p-DDT + p,p-DDT	ug/g	-	0.056	0.0020	0.028	0.072	0.0038	0.11
Total Endosulfan	ug/g	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total PCB	ug/g	**0.35**	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Pesticides & Herbicides								
Aldrin	ug/g	**0.05**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
a-Chlordane	ug/g	**0.05**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
g-Chlordane	ug/g	**0.05**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
o,p-DDD	ug/g	**3.3**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
p,p-DDD	ug/g	**3.3**	<0.0020	<0.0020	0.0037	<0.0020	<0.0020	0.0033
o,p-DDE	ug/g	**0.26**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
p,p-DDE	ug/g	**0.26**	0.076	0.0034	0.072	0.17	0.016	0.17
o,p-DDT	ug/g	**1.4**	0.011	<0.0020	0.0065	0.015	<0.0020	0.022
p,p-DDT	ug/g	**1.4**	0.044	0.0020	0.022	0.057	0.0038	0.083
Dieldrin	ug/g	**0.05**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lindane	ug/g	**0.056**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endosulfan I (alpha)	ug/g	**0.04**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endosulfan II (beta)	ug/g	**0.04**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endrin	ug/g	**0.04**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor	ug/g	**0.15**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor epoxide	ug/g	**0.05**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobenzene	ug/g	**0.52**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobutadiene	ug/g	**0.012**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachloroethane	ug/g	**0.089**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Methoxychlor	ug/g	**0.13**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aroclor 1242	ug/g	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Aroclor 1248	ug/g	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Aroclor 1254	ug/g	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Aroclor 1260	ug/g	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Surrogate Recovery (%)								
2,4,5,6-Tetrachloro-m-xylene	%	-	73	78	82	83	78	85
Decachlorobiphenyl	%	-	109	112	116	105	127	127

Standards exceedances will turn BOLD with Yellow Background.

NOTES:
1) NV = No value
2) Standards refer to Ministry of Environment "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004 amended as of July 1, 2011.
3) This Table represents a summary of the data presented in the Laboratory Certificate of Analysis for convenience purposes only.
4) This summary is to be used in conjuction with, not as a replacement of the Laboratory Certificate of Analysis which contains all QA/QC information.

Table 1B: Dec 2016 Hand Auger Investigation
Summary of OC Pesticides in Soil

Parameter	Table 2 RPI CT		DUP1	BH16-6 SS1	BH16-6 SS2	BH16-8 SS1	BH16-8 SS2
Date of Collection			12/01/2016	12/01/2016	12/01/2016	12/01/2016	12/01/2016
Date Reported			12/09/2016	12/09/2016	12/09/2016	12/09/2016	12/09/2016
Sampling Depth (mbgs)			0.08-0.15	0.08-0.15	0.41-0.50	0.05-0.10	0.35-0.45
Sample Elevation (masl)			337.92-337.85	336.92-336.85	336.59-336.50	332.95-332.90	332.65-332.55
Analytical Report Reference No.			R4281613	R4281613	R4281613	R4281613	R4281613
Calculated Parameters	**Units**	**Criteria**					
Chlordane (Total)	ug/g	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
o,p-DDD + p,p-DDD	ug/g	-	0.0028	<0.0020	<0.0020	<0.0020	<0.0020
o,p-DDE + p,p-DDE	ug/g	-	0.16	0.065	0.0035	0.076	0.011
o,p-DDT + p,p-DDT	ug/g	-	0.11	0.050	<0.0020	0.058	0.0031
Total Endosulfan	ug/g	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total PCB	ug/g	**0.35**	<0.015	<0.015	<0.015	<0.015	<0.015
Pesticides & Herbicides							
Aldrin	ug/g	**0.05**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
a-Chlordane	ug/g	**0.05**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
g-Chlordane	ug/g	**0.05**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
o,p-DDD	ug/g	**3.3**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
p,p-DDD	ug/g	**3.3**	0.0028	<0.0020	<0.0020	<0.0020	<0.0020
o,p-DDE	ug/g	**0.26**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
p,p-DDE	ug/g	**0.26**	0.16	0.065	0.0035	0.076	0.011
o,p-DDT	ug/g	**1.4**	0.020	0.011	<0.0020	0.014	<0.0020
p,p-DDT	ug/g	**1.4**	0.093	0.039	<0.0020	0.045	0.0031
Dieldrin	ug/g	**0.05**	<0.0020	<0.0020	<0.0020	**0.13**	**0.12**
Lindane	ug/g	**0.056**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endosulfan I (alpha)	ug/g	**0.04**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endosulfan II (beta)	ug/g	**0.04**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endrin	ug/g	**0.04**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor	ug/g	**0.15**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor epoxide	ug/g	**0.05**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobenzene	ug/g	**0.52**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobutadiene	ug/g	**0.012**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachloroethane	ug/g	**0.089**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Methoxychlor	ug/g	**0.13**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aroclor 1242	ug/g	-	<0.015	<0.015	<0.015	<0.015	<0.015
Aroclor 1248	ug/g	-	<0.015	<0.015	<0.015	<0.015	<0.015
Aroclor 1254	ug/g	-	<0.015	<0.015	<0.015	<0.015	<0.015
Aroclor 1260	ug/g	-	<0.015	<0.015	<0.015	<0.015	<0.015
Surrogate Recovery (%)							
2,4,5,6-Tetrachloro-m-xylene	%	-	77	81	82	86	82
Decachlorobiphenyl	%	-	123	107	112	111	127

Standards exceedances will turn BOLD with Yellow Background.

NOTES: 1) NV = No value

2) Standards refer to Ministry of Environment "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004 amended as of July 1, 2011.

3) This Table represents a summary of the data presented in the Laboratory Certificate of Analysis for convenience purposes only.

4) This summary is to be used in conjuction with, not as a replacement of the Laboratory Certificate of Analysis which contains all QA/QC information.

Table 1C: Dec 2016 Hand Auger Investigation

Summary of Arsenic in Soil

Parameter	Table 2 RPI CT		BH16-1 SS1	BH16-1 SS2	BH16-3 SS1	BH16-4 SS1	BH16-4 SS2	BH16-5 SS1
Date of Collection			12/01/2016	12/01/2016	12/01/2016	12/01/2016	12/01/2016	12/01/2016
Date Reported			12/09/2016	12/09/2016	12/09/2016	12/09/2016	12/09/2016	12/09/2016
Sampling Depth (mbgs)			0.15	0.46	0.08-0.15	0.08-0.15	0.35-0.44	0.08-0.15
Sample Elevation (masl)			340.92-340.85	340.63-340.54	327.92-327.85	316.92-316.85	316.65-316.56	337.92-337.85
Analytical Report Reference No.	Units	Criteria	R4281613	R4281613	R4281613	R4281613	R4281613	R4281613
Acid Extractable Arsenic (As)	ug/g	**18**	8.6	<1.0	11	4.2	<1.0	4.7

Standards exceedances will turn BOLD with Yellow Background.

NOTES:
1) NV = No value
2) Standards refer to Ministry of Environment "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004 amended as of July 1, 2011.
3) This Table represents a summary of the data presented in the Laboratory Certificate of Analysis for convenience purposes only.
4) This summary is to be used in conjuction with, not as a replacement of the Laboratory Certificate of Analysis which contains all QA/QC information.

Table 1C: Dec 2016 Hand Auger Investigation

Summary of Arsenic in Soil

Parameter		DUP1	BH16-6 SS1	BH16-6 SS2	BH16-8 SS1	BH16-8 SS2
Date of Collection		12/01/2016	12/01/2016	12/01/2016	12/01/2016	12/01/2016
Date Reported	Table 2	12/09/2016	12/09/2016	12/09/2016	12/09/2016	12/09/2016
Sampling Depth (mbgs)		0.08-0.15	0.08-0.15	0.41-0.50	0.05-0.10	0.35-0.45
Sample Elevation (masl)		337.92-337.85	336.92-336.85	336.59-336.50	332.95-332.90	332.65-332.55
Analytical Report Reference No.	Units	R4281613	R4281613	R4281613	R4281613	R4281613
Acid Extractable Arsenic (As)	ug/g	4.9	3.40	<1.0	2.30	<1.0

Standards exceedances will turn BOLD with Yellow Background.

NOTES:
1) NV = No value
2) Standards refer to Ministry of Environment "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004 amended as of July 1, 2011.
3) This Table represents a summary of the data presented in the Laboratory Certificate of Analysis for convenience purposes only.
4) This summary is to be used in conjuction with, not as a replacement of the Laboratory Certificate of Analysis which contains all QA/QC information.

Table 2A: Jan 2017 Test Pit Program
Summary of Soil Samples Submitted for Chemical Analysis

Borehole	Surface Elevation (masl)	Date	Sample No.	Depth (mbgs)	Sample Elevation (masl)	Chemical Analyses		Rationale
						OC Pesticides	Arsenic	
TP17-1	333	9-Jan-17	SS1	0.10-0.30	332.90-332.70	✓	✓	Investigate APEC 1
			SS2	0.80-0.95	333.20-332.05	✓	✓	Investigate APEC 1
			DUP2	0.80-0.95	333.20-332.05	✓	✓	Investigate APEC 1
TP17-2	333	9-Jan-17	SS1	0.10-0.30	332.90-332.70	✓	✓	Investigate APEC 1
TP17-3	333	9-Jan-17	SS1	0.10-0.30	332.90-332.70	✓	✓	Investigate APEC 1
TP17-4	333	9-Jan-17	SS1	0.10-0.30	332.90-332.70	✓	✓	Investigate APEC 1
TP17-5	333	9-Jan-17	SS1	0.10-0.30	332.90-332.70	✓	✓	Investigate APEC 1

Table 2B: Jan 2017 Test Pit Program
Summary of OC Pesticides in Soil

Parameter			TP17-1 SS1	TP17-1 SS2	DUP2	TP17-2 SS1	TP17-3 SS1	TP17-4 SS1	TP17-5 SS1
Date of Collection	Table 2 RPI CT		01/19/2017	01/19/2017	01/19/2017	01/19/2017	01/19/2017	01/19/2017	01/19/2017
Date Reported			01/31/2017	01/31/2017	01/31/2017	01/31/2017	01/31/2017	01/31/2017	01/31/2017
Sampling Depth (m bgs)			0.10-0.15	0.79-0.85	0.79-0.85	0.0-0.60	0.0-0.60	0.0-0.60	0.0-0.60
Sample Elevation (m asl)			332.90-332.85	333.21-332.15	333.21-332.15	333.00-332.40	333.00-332.40	333.00-332.40	333.00-332.40
Analytical Report Reference No.									
Calculated Parameters	**Units**	**Criteria**							
Chlordane (Total)	ug/g	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
o,p-DDD + p,p-DDD	ug/g	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
o,p-DDE + p,p-DDE	ug/g	-	0.047	<0.0020	<0.0020	0.15	0.14	0.048	0.062
o,p-DDT + p,p-DDT	ug/g	-	0.041	<0.0020	<0.0020	0.15	0.14	0.039	0.055
Total Endosulfan	ug/g	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total PCB	ug/g	**0.35**	<0.015	<0.015	<0.015	<0.015	<0.020	<0.015	<0.015
Pesticides & Herbicides									
Aldrin	ug/g	**0.05**	<0.0020	<0.0020	<0.0020	0.0022	0.0028	<0.0020	<0.0020
a-Chlordane	ug/g	**0.05**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
g-Chlordane	ug/g	**0.05**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
o,p-DDD	ug/g	**3.3**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
p,p-DDD	ug/g	**3.3**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
o,p-DDE	ug/g	**0.26**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
p,p-DDE	ug/g	**0.26**	0.047	<0.0020	<0.0020	0.15	0.14	0.048	0.062
o,p-DDT	ug/g	**1.4**	0.0068	<0.0020	<0.0020	0.024	0.022	0.0065	0.0087
p,p-DDT	ug/g	**1.4**	0.034	<0.0020	<0.0020	0.13	0.11	0.032	0.046
Dieldrin	ug/g	**0.05**	**0.074**	<0.0020	<0.0020	**0.24**	**0.23**	**0.078**	**0.080**
Lindane	ug/g	**0.056**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endosulfan I (alpha)	ug/g	**0.04**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endosulfan II (beta)	ug/g	**0.04**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endrin	ug/g	**0.04**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor	ug/g	**0.15**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor epoxide	ug/g	**0.05**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobenzene	ug/g	**0.52**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobutadiene	ug/g	**0.012**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachloroethane	ug/g	**0.089**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Methoxychlor	ug/g	**0.13**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aroclor 1242	ug/g	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Aroclor 1248	ug/g	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Aroclor 1254	ug/g	-	<0.015	<0.015	<0.015	<0.015	<0.020	<0.015	<0.015
Aroclor 1260	ug/g	-	<0.015	<0.015	<0.015	<0.015	<0.020	<0.015	<0.015
Surrogate Recovery (%)									
2,4,5,6-Tetrachloro-m-xylene	%	-	75	79	77	79	76	75	77
Decachlorobiphenyl	%	-	95	102	94	107	98	97	98

Standards exceedances will turn BOLD with Yellow Background.

NOTES:
1) NV = No value
2) Standards refer to Ministry of Environment "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004 amended as of July 1, 2011.
3) This Table represents a summary of the data presented in the Laboratory Certificate of Analysis for convenience purposes only.
4) This summary is to be used in conjuction with, not as a replacement of the Laboratory Certificate of Analysis which contains all QA/QC information.

Table 2C: Jan 2017 Test Pit Program

Summary of Arsenic in Soil

Parameter			TP17-1 SS1	TP17-1 SS2	DUP2	TP17-2 SS1	TP17-3 SS1	TP17-4 SS1	TP17-5 SS1
Date of Collection	Table 2 RPI CT		01/19/2017	01/19/2017	01/19/2017	01/19/2017	01/19/2017	01/19/2017	01/19/2017
Date Reported			01/31/2017	01/31/2017	01/31/2017	01/31/2017	01/31/2017	01/31/2017	01/31/2017
Sampling Depth (m bgs)			0.10-0.15	0.79-0.85	0.79-0.85	0.0-0.60	0.0-0.60	0.0-0.60	0.0-0.60
Sample Elevation (m asl)			332.90-332.85	333.21-332.15	333.21-332.15	333.00-332.40	333.00-332.40	333.00-332.40	333.00-332.40
Analytical Report Reference No.	Units	Criteria							
Acid Extractable Arsenic (As)	ug/g	**18**	1.2	<1.0	<1.0	2.3	1.9	1.3	1

Standards exceedances will turn BOLD with Yellow Background.

NOTES:
1) NV = No value
2) Standards refer to Ministry of Environment "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004 amended as of July 1, 2011.
3) This Table represents a summary of the data presented in the Laboratory Certificate of Analysis for convenience purposes only.
4) This summary is to be used in conjuction with, not as a replacement of the Laboratory Certificate of Analysis which contains all QA/QC information.

Table 3A: June 2017 Grid Pattern Delineation Program
Summary of Soil Samples Submitted for Chemical Analysis

Borehole	Surface Elevation* (masl)	Date	Sample No.	Depth (mbgs)	Sample Elevation (masl)	Chemical Analyses		Rationale
						OC Pesticides	Arsenic	
AS1	-	7-Jun-17	TH AS1	0.075 - 0.150	-	✓	✓	Investigate APEC 1
AS3	-	7-Jun-17	TH AS3	0.075 - 0.150	-	✓	✓	Investiate APEC 1
AS5	-	7-Jun-17	TH AS5	0.075 - 0.150	-	✓	✓	Investigate APEC 1
CS1	-	7-Jun-17	TH CS1	0.075 - 0.150	-	✓	✓	Investigate APEC 1
			TH CS1N	0.40-0.60	-	✓	✓	Investigate APEC 1
CS5	-	7-Jun-17	TH CS5	0.075 - 0.150	-	✓	✓	Investigate APEC 1
ES1	-	7-Jun-17	TH ES1	0.075 - 0.150	-	✓	✓	Investigate APEC 1
ES3	-	7-Jun-17	TH ES3	0.075 - 0.150	-	✓	✓	Investigate APEC 1
ES5	-	7-Jun-17	TH ES5	0.075 - 0.150	-	✓	✓	Investigate APEC 1
SOIL DUP 1	-	7-Jun-17	SOIL DUP 1	0.40-0.60	-	✓	✓	Investigate APEC 1
BS1	-	6-Jul-17	TH BS1	0.075 - 0.150	-	✓	✓	Investigate APEC 1
BS2	-	6-Jul-17	TH BS2	0.075 - 0.150	-	✓	✓	Investigate APEC 1
BS3	-	6-Jul-17	TH BS3	0.075 - 0.150	-	✓	✓	Investigate APEC 1
AS2	-	6-Jul-17	TH AS2	0.075 - 0.150	-	✓	✓	Investigate APEC 1
CS2	-	6-Jul-17	TH CS2	0.075 - 0.150	-	✓	✓	Investigate APEC 1
CS3	-	6-Jul-17	TH CS3	0.075 - 0.150	-	✓	✓	Investigate APEC 1
CS4	-	6-Jul-17	TH CS4	0.075 - 0.150	-	✓	✓	Investigate APEC 1
DS2	-	6-Jul-17	TH DS2	0.075 - 0.150	-	✓	✓	Investigate APEC 1
DS3	-	6-Jul-17	TH DS3	0.075 - 0.150	-	✓	✓	Investigate APEC 1
DS4	-	6-Jul-17	TH DS4	0.075 - 0.150	-	✓	✓	Investigate APEC 1
DS5	-	6-Jul-17	TH DS5	0.075 - 0.150	-	✓	✓	Investigate APEC 1
ES6	-	6-Jul-17	TH ES6	0.075 - 0.150	-	✓	✓	Investigate APEC 1
FS1	-	6-Jul-17	TH FS1	0.075 - 0.150	-	✓	✓	Investigate APEC 1
FS3	-	6-Jul-17	TH FS3	0.075 - 0.150	-	✓	✓	Investigate APEC 1
FS5	-	6-Jul-17	TH FS5	0.075 - 0.150	-	✓	✓	Investigate APEC 1
SOIL DUP2	-	6-Jul-17	SOIL DUP2	0.075 - 0.150	-	✓	✓	Investigate APEC 1
SOIL DUP3	-	6-Jul-17	SOIL DUP3	0.075 - 0.150	-	✓	✓	Investigate APEC 1

*Surface elevations of each sample location was not recorded. The elevation of the reference stake in north east corner was recorded as 336.151 m.

Table 3B: June 2017 Grid Pattern Delineation Program
Summary of OC Pesticides in Soil

Parameter			TH AS1	TH AS3	TH AS5	TH CS1	TH CS5	TH CS1N	TH ES1	TH ES3	TH ES5	SOIL DUP 1 (TH CS1N)
Date of Collection	**Table 2 RPI CT**		06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017
Date Reported			06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017
Sampling Depth (m bgs)			0.075-0.105	0.075-0.105	0.075-0.105	0.075-0.105	0.075-0.105	0.40-0.60	0.075-0.105	0.075-0.105	0.075-0.105	0.40-0.60
Sample Elevation (m asl)			-	-	-	-	-	-	-	-	-	-
Analytical Report Reference No.			L1938870-1	L1938870-2	L1938870-3	L1938870-4	L1938870-5	L1938870-6	L1938870-7	L1938870-8	L1938870-9	L1938870-10
Calculated Parameters	**Units**	**Criteria**										
Chlordane (Total)	ug/g	-	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
o,p-DDD + p,p-DDD	ug/g	-	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
o,p-DDE + p,p-DDE	ug/g	-	0.098	0.0310	0.070	0.080	<0.028	<0.028	0.12	0.113	0.077	<0.028
o,p-DDT + p,p-DDT	ug/g	-	0.055	<0.028	0.057	0.044	<0.028	<0.028	0.05	0.086	0.044	<0.028
Total Endosulfan	ug/g	-	<0.028	<0.054	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
Pesticides & Herbicides												
Aldrin	ug/g	**0.05**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
a-Chlordane	ug/g	**0.05**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
g-Chlordane	ug/g	**0.05**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
o,p-DDD	ug/g	**3.3**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
p,p-DDD	ug/g	**3.3**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
o,p-DDE	ug/g	**0.26**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
p,p-DDE	ug/g	**0.26**	0.098	0.031	0.0700	0.08	0.021	<0.020	0.1180	0.113	0.077	<0.020
o,p-DDT	ug/g	**1.4**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
p,p-DDT	ug/g	**1.4**	0.055	<0.020	0.0570	0.044	<0.020	<0.020	0.0450	0.086	0.044	<0.020
Dieldrin	ug/g	**0.05**	<0.020	<0.020	0.0240	0.067	<0.020	<0.020	0.0560	0.300	0.094	<0.020
Endosulfan I (alpha)	ug/g	**0.04**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endosulfan II (beta)	ug/g	**0.04**	<0.020	<0.050	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endrin	ug/g	**0.04**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Heptachlor	ug/g	**0.15**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Heptachlor epoxide	ug/g	**0.05**	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Hexachlorobenzene	ug/g	**0.52**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Hexachlorobutadiene	ug/g	**0.012**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Hexachloroethane	ug/g	**0.089**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Methoxychlor	ug/g	**0.13**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
2-Fluorobiphenyl	%		90.3	92.3	90.9000	90.7	93.1	96.2000	89.9000	90	90.1	92.4
d14-Terphenyl	%		84.5	91.2	79.5000	82.3	89.2	88.0000	82.5000	77.7	81.3	85

Standards exceedances will turn BOLD with Yellow Background.

NOTES: 1) NV = No value
2) Standards refer to Ministry of Environment "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004 amended as of July 1, 2011.
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Parameter			TH BS1	TH BS2	TH BS3	TH AS2	TH CS2	TH CS3	TH CS4	TH DS2	TH DS3	TH DS4
Date of Collection	Table 2 RPI CT		06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017
Date Reported			07/18/2017	07/18/2017	07/18/2017	07/18/2017	07/18/2017	07/18/2017	07/18/2017	07/18/2017	07/18/2017	07/18/2017
Sampling Depth (m bgs)			0.075-0.105	0.075-0.105	0.075-0.105	0.075-0.105	0.075-0.105	0.075-0.105	0.075-0.105	0.075-0.105	0.075-0.105	0.075-0.105
Sample Elevation (m asl)			-	-	-	-	-	-	-	-	-	-
Analytical Report Reference No.			L1956637-1	L1956637-2	L1956637-3	L1956637-4	L1956637-5	L1956637-6	L1956637-7	L1956637-8	L1956637-9	L1956637-10
Calculated Parameters	**Units**	**Criteria**										
Chlordane (Total)	ug/g	-	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
o,p-DDD + p,p-DDD	ug/g	-	<0.028	<0.028	<0.028	<0.028	<0.028	0.0350	<0.028	<0.036	0.031	<0.028
o,p-DDE + p,p-DDE	ug/g	-	0.092	0.072	0.1030	0.031	0.046	0.1570	0.0980	0.13	0.149	0.119
o,p-DDT + p,p-DDT	ug/g	-	0.035	<0.028	0.0400	<0.028	<0.028	0.0340	<0.028	0.036	0.038	<0.028
Total Endosulfan	ug/g	-	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
Pesticides & Herbicides												
Aldrin	ug/g	**0.05**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
a-Chlordane	ug/g	**0.05**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
g-Chlordane	ug/g	**0.05**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
o,p-DDD	ug/g	**3.3**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.030	<0.020	<0.020
p,p-DDD	ug/g	**3.3**	<0.020	<0.020	<0.020	<0.020	<0.020	0.0350	0.0230	0.033	0.031	<0.020
o,p-DDE	ug/g	**0.26**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
p,p-DDE	ug/g	**0.26**	0.092	0.072	0.1030	0.031	0.046	0.1570	0.0980	0.13	0.149	0.119
o,p-DDT	ug/g	**1.4**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
p,p-DDT	ug/g	**1.4**	0.035	0.028	0.0400	<0.020	<0.020	0.0340	<0.020	0.036	0.038	<0.020
Dieldrin	ug/g	**0.05**	0.034	0.126	0.1450	<0.020	0.061	0.1330	0.0990	0.569	0.37	0.251
Endosulfan I (alpha)	ug/g	**0.04**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endosulfan II (beta)	ug/g	**0.04**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endrin	ug/g	**0.04**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Heptachlor	ug/g	**0.15**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Heptachlor epoxide	ug/g	**0.05**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Hexachlorobenzene	ug/g	**0.52**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Hexachlorobutadiene	ug/g	**0.012**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Hexachloroethane	ug/g	**0.089**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Methoxychlor	ug/g	**0.13**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
2-Fluorobiphenyl	%		88.2	93.8	93.5000	86	88.4	92.1000	91.9000	89.9	89.2	90.7
d14-Terphenyl	%		86.9	89	86.3000	86.6	85.5	86.5000	85.8000	84.2	86.4	85.7

Standards exceedances will turn BOLD with Yellow Background.

NOTES:
1) NV = No value
2) Standards refer to Ministry of Environment "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004 amended as of July 1, 2011.
3) This Table represents a summary of the data presented in the Laboratory Certificate of Analysis for convenience purposes only.
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Parameter	Table 2 RPI CT		TH DS5	TH ES6	TH FS1	TH FS3	TH FS5	SOIL DUP2 (TH FS1)	SOIL DUP3 (TH ES6)
Date of Collection			06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017
Date Reported			07/18/2017	07/18/2017	07/18/2017	07/18/2017	07/18/2017	07/18/2017	07/18/2017
Sampling Depth (m bgs)			0.075-0.105	0.075-0.105	0.075-0.105	0.075-0.105	0.075-0.105	0.075-0.105	0.075-0.105
Sample Elevation (m asl)			-	-	-	-	-	-	-
Analytical Report Reference No.			L1956637-11	L1956637-12	L1956637-13	L1956637-14	L1956637-15	L1956637-16	L1956637-17
Calculated Parameters	**Units**	**Criteria**							
Chlordane (Total)	ug/g	-	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
o,p-DDD + p,p-DDD	ug/g	-	<0.028	<0.028	0.0310	0.042	0.032	0.0320	<0.028
o,p-DDE + p,p-DDE	ug/g	-	0.038	0.054	0.1670	0.172	0.125	0.1590	0.05
o,p-DDT + p,p-DDT	ug/g	-	<0.028	<0.028	0.0310	<0.028	<0.028	0.0300	<0.028
Total Endosulfan	ug/g	-	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
Pesticides & Herbicides									
Aldrin	ug/g	**0.05**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
a-Chlordane	ug/g	**0.05**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
g-Chlordane	ug/g	**0.05**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
o,p-DDD	ug/g	**3.3**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
p,p-DDD	ug/g	**3.3**	<0.020	<0.020	0.031	0.0420	0.032	0.032	<0.020
o,p-DDE	ug/g	**0.26**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
p,p-DDE	ug/g	**0.26**	0.038	0.054	0.167	0.1720	0.125	0.159	0.0540
o,p-DDT	ug/g	**1.4**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
p,p-DDT	ug/g	**1.4**	<0.020	<0.020	0.031	<0.020	<0.020	0.03	<0.020
Dieldrin	ug/g	**0.05**	0.05	0.058	0.057	0.1370	0.12	0.07	0.0920
Endosulfan I (alpha)	ug/g	**0.04**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endosulfan II (beta)	ug/g	**0.04**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endrin	ug/g	**0.04**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Heptachlor	ug/g	**0.15**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Heptachlor epoxide	ug/g	**0.05**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Hexachlorobenzene	ug/g	**0.52**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Hexachlorobutadiene	ug/g	**0.012**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Hexachloroethane	ug/g	**0.089**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Methoxychlor	ug/g	**0.13**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
2-Fluorobiphenyl	%		88.5	90.9	87.7	87.2	88.8	85.3	88.4
d14-Terphenyl	%		83.9	88.4	90.0	83.1	85.3	87.6	87.4

Standards exceedances will turn BOLD with Yellow Background.

NOTES:
1) NV = No value
2) Standards refer to Ministry of Environment "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004 amended as of July 1, 2011.
3) This Table represents a summary of the data presented in the Laboratory Certificate of Analysis for convenience purposes only.
4) This summary is to be used in conjuction with, not as a replacement of the Laboratory Certificate of Analysis which contains all QA/QC information.

Table 3C: June 2017 Grid Pattern Delineation Program
Summary of Arsenic in Soil

Parameter			TH AS1	TH AS3	TH AS5	TH CS1	TH CS5
Date of Collection	Table 2 RPI CT		06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017
Date Reported			06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017
Sampling Depth (m bgs)			0.0705-0.105	0.0705-0.105	0.0705-0.105	0.0705-0.105	0.0705-0.105
Sample Elevation (m asl)			-	-	-	-	-
Analytical Report Reference No.	Units	Criteria	L1938870-1	L1938870-2	L1938870-3	L1938870-4	L1938870-5
Acid Extractable Arsenic (As)	ug/g	**18**	3.45	1.66	2.25	4.81	2.24

Parameter			TH BS1	TH BS2	TH BS3	TH AS2	TH CS2
Date of Collection	Table 2 RPI CT		06/07//2017	06/07//2017	06/07//2017	06/07//2017	06/07//2017
Date Reported			07/18/2017	07/18/2017	07/18/2017	07/18/2017	07/18/2017
Sampling Depth (m bgs)			0.0705-0.105	0.0705-0.105	0.0705-0.105	0.0705-0.105	0.0705-0.105
Sample Elevation (m asl)			-	-	-	-	-
Analytical Report Reference No.	Units	Criteria	L1956637-1	L1956637-2	L1956637-3	L1956637-4	L1956637-5
Acid Extractable Arsenic (As)	ug/g	**18**	3.12	2.67	2.58	1.19	3.92

Parameter			TH DS5	TH ES6	TH FS1	TH FS3	TH FS5
Date of Collection	Table 2 RPI CT		06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017
Date Reported			07/18/2017	07/18/2017	07/18/2017	07/18/2017	07/18/2017
Sampling Depth (m bgs)			0.0705-0.105	0.0705-0.105	0.0705-0.105	0.0705-0.105	0.0705-0.105
Sample Elevation (m asl)			-	-	-	-	-
Analytical Report Reference No.	Units	Criteria	L1956637-11	L1956637-12	L1956637-13	L1956637-14	L1956637-15
Acid Extractable Arsenic (As)	ug/g	**18**	2.73	4.78	6.26	6.98	6.82

Standards exceedances will turn BOLD with Yellow Background.

NOTES:
1) NV = No value
2) Standards refer to Ministry of Environment "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004 amended as of July 1, 2011.
3) This Table represents a summary of the data presented in the Laboratory Certificate of Analysis for convenience purposes only.
4) This summary is to be used in conjuction with, not as a replacement of the Laboratory Certificate of Analysis which contains all QA/QC information.

Table 3C: June 2017 Grid Pattern Delineation Program
Summary of Arsenic in Soil

Parameter			TH CS1N	TH ES1	TH ES3	TH ES5	SOIL DUP 1
Date of Collection	Table 2 RPI CT		06/07/2017	06/07/2017	06/07/2017	06/07/2017	06/07/2017
Date Reported			06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017
Sampling Depth (m bgs)			0.40-0.60	0.0705-0.105	0.0705-0.105	0.0705-0.105	0.0705-0.105
Sample Elevation (m asl)			-	-	-	-	-
Analytical Report Reference No.	Units	Criteria	L1938870-6	L1938870-7	L1938870-8	L1938870-9	L1938870-10
Acid Extractable Arsenic (As)	ug/g	**18**	1.18	6.42	5.68	4.64	1.13

Parameter			TH CS3	TH CS4	TH DS2	TH DS3	TH DS4
Date of Collection	Table 2 RPI CT		06/07//2017	06/07//2017	06/07//2017	06/07//2017	06/07//2017
Date Reported			07/18/2017	07/18/2017	07/18/2017	07/18/2017	07/18/2017
Sampling Depth (m bgs)			0.0705-0.105	0.0705-0.105	0.0705-0.105	0.0705-0.105	0.0705-0.105
Sample Elevation (m asl)			-	-	-	-	-
Analytical Report Reference No.	Units	Criteria	L1956637-6	L1956637-7	L1956637-8	L1956637-9	L1956637-10
Acid Extractable Arsenic (As)	ug/g	**18**	4.80	4.92	5.95	5.76	5.03

Parameter			SOILD DUP2	SOIL DUP3
Date of Collection	Table 2 RPI CT		06/07/2017	06/07/2017
Date Reported			07/18/2017	07/18/2017
Sampling Depth (m bgs)			0.075-0.105	0.0705-0.105
Sample Elevation (m asl)			-	-
Analytical Report Reference No.	Units	Criteria	L1956637-16	L1956637-17
Acid Extractable Arsenic (As)	ug/g	**18**	6.73	4.04

Standards exceedances will turn BOLD with Yellow Background.

NOTES: 1) NV = No value
2) Standards refer to Ministry of Environment "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004 amended as of July 1, 2011.
3) This Table represents a summary of the data presented in the Laboratory Certificate of Analysis for convenience purposes only.
4) This summary is to be used in conjuction with, not as a replacement of the Laboratory Certificate of Analysis which contains all QA/QC information.

APPENDIX

A SAMPLING AND ANALYSIS PLAN

SAMPLING AND ANALYSIS PLAN A – HAND AUGER INVESTIGATION

WSP was retained by Far Sight Homes to conduct a Phase Two Environmental Site Assessment (ESA) at 5584 Lakeshore Road in the hamlet of Ballantrae, Town of Whitchurch-Stouffville, Ontario (hereafter referred to as the Phase Two Property). The purpose of the Phase Two ESA was to assess the near surface soil conditions regarding historical agricultural activities prior to development of a residential subdivision and associated roads.

The Phase Two ESA will involve an intrusive hand auger investigation in the areas determined in the site reconnaissance and Phase One ESA to be areas of potential environmental concern (APEC), and will be completed in general accordance with O.Reg 153/04 (as amended). Based on the findings of the field and laboratory analyses, a Phase Two ESA report will be prepared.

The Site Investigation Program will be completed as follows:

- Public and private underground utilities and services will be cleared prior to commencement of intrusive investigation activities
- A Health and Safety Plan will be prepared and all work will be executed safely
- Ten (10) soil samples will be collected to a maximum depth of 0.6 metres below ground surface (mbgs); using a hand auger and soil probe and be submitted for Organochlorine Pesticides (OCPs) and Arsenic analysis. The soil profile from each borehole will be logged in the field and samples will be screened via visual and olfactory inspection. The location of the hand auger samples will be selected to investigate any areas of potential environmental concern identified during the site visit, as well as to delineate the horizontal and vertical extents of relevant parameters of concern.
- Based on field screening and visual/olfactory observations, worst-case/representative soil samples from the hand auger locations will be submitted for laboratory testing of relevant parameters of concern.
- Soil samples will be submitted for chemical analysis by a CALA laboratory in accordance with the Ontario Ministry of the Environment standards and requirements of O.Reg. 153/04 under the Environmental Protection Act.

Groundwater flow directions are known based on concurrent investigations completed by WSP on the Phase Two Property. No monitoring wells or groundwater monitoring/sampling to be conducted as part of this Phase Two ESA.

The proposed analytical program is outlined below (proposed program subject to change as a result of site observations/findings). All soil sampling will be carried out in accordance with WSP's Standard Operating Procedures (SOPs).

<u>Soils:</u>

- Ten (10) soil samples for OCP and Arsenic Analysis
- One (1) soil sample for QA/QC purposes (duplicates)

Following receipt of all of the results, a report will be prepared in accordance with O.Reg. 153/04 (as amended).

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In the event that the Phase Two ESA identifies parameter concentrations greater than the applicable standards set out in *Ontario Regulation 153/04,* then additional work (i.e., supplemental delineation, additional sampling, analysis, and/or site remediation activities) will be deemed necessary prior to RSC filing, where a RSC is required. This additional work is not within the scope of the current Sampling & Analysis Plan.

FINALIZED SAMPLING & ANALYSIS PLAN

The finalized sampling and analysis plan (SAP) was created based on the request to conduct a Phase Two ESA prior to residential redevelopment of the Phase Two Property. The SAP was compiled to collect data to provide information on soil quality at the identified APEC.

Figure 3 (within the Phase Two ESA report) outlines the hand auger sample locations.

Additional delineation may be required following the implementation of this SAP to meet the requirements of O. Reg. 153/04 to delineate all areas where concentrations are above the applicable SCS such as in the following conditions:

- Unexpected contamination not previously discovered, or not related to identified APECs, will need to be further delineated to identify source(s); and
- Requirement for a minimum of three (3) monitoring wells per stratigraphic unit would have to extend to underlying units if there is evidence of contamination extending into it; the SAP assumes contamination is limited to the upper stratigraphic unit (confirmed with clean sample) then the underlying units do not necessarily have to be characterized. The SAP has been developed using the available data, and may require additional delineation if sampling results come out suggesting impacts are deeper than initially expected.

SAMPLING AND ANALYSIS PLAN B – TEST PIT PROGRAM

WSP was retained by Far Sight Homes to conduct a Phase Two Environmental Site Assessment (ESA) at 5584 Lakeshore Road in the hamlet of Ballantrae, Town of Whitchurch-Stouffville, Ontario (hereafter referred to as the Phase Two Property). The purpose of the Phase Two ESA was to assess the near surface soil conditions regarding historical agricultural activities prior to development of a residential subdivision and associated roads.

Following the results of the initial hand auger investigation completed in December 2016, a test pit program is to implemented to include five (5) test pits to be excavated to a maximum depth of 2.0 mbgs. The purpose of this test pit program is to further delineate the presence of chemical parameters identified in the previous hand auger program. Six (6) soil samples and one (1) QA/QC sample were submitted to the laboratory for Arsenic and OCP Analysis.

The Test Pit Program will involve intrusive investigation in the areas determined in the site reconnaissance and Phase One ESA to be areas of potential environmental concern (APEC), and will be completed in general accordance with O.Reg 153/04 (as amended). Based on the findings of the field and laboratory analyses, a Phase Two ESA report will be prepared.

The Site Investigation Program will be completed as follows:

- Public and private underground utilities and services will be cleared prior to commencement of intrusive investigation activities
- A Health and Safety Plan will be prepared and all work will be executed safely
- Six (6) soil samples will be collected to a maximum depth of 2.0 metres below ground surface (mbgs) inside a test pit. Soil samples will be collected directly from the test pit walls and floors following the test pit being excavated.
- Six (6) soil samples will be submitted for Organochlorine Pesticides (OCPs) and Arsenic analysis to a CALA laboratory in accordance with the Ontario Ministry of the Environment standards and requirements of O.Reg. 153/04 under the Environmental Protection Act.
- The soil profile from each test pit will be logged in the field and samples will be screened via visual and olfactory inspection. The location of the test pits will be selected to investigate any areas of potential environmental concern identified during the site visit, as well as to delineate the horizontal and vertical extents of relevant parameters of concern.
- Based on field screening and visual/olfactory observations, worst-case/representative soil samples from the test pits will be submitted for laboratory testing of relevant parameters of concern.

Groundwater flow directions are known based on concurrent investigations completed by WSP on the Phase Two Property. No monitoring wells or groundwater monitoring/sampling to be conducted as part of this Phase Two ESA.

The proposed analytical program is outlined below (proposed program subject to change as a result of site observations/findings). All soil sampling will be carried out in accordance with WSP's Standard Operating Procedures (SOPs).

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Soils:

- Six (6) soil samples for OCP and Arsenic Analysis
- One (1) soil sample for QA/QC purposes (duplicates)

Following receipt of all of the results, a report will be prepared in accordance with O.Reg. 153/04 (as amended).

In the event that the Phase Two ESA identifies parameter concentrations greater than the applicable standards set out in *Ontario Regulation 153/04,* then additional work (i.e., supplemental delineation, additional sampling, analysis, and/or site remediation activities) will be deemed necessary prior to RSC filing, where a RSC is required. This additional work is not within the scope of the current Sampling & Analysis Plan.

FINALIZED SAMPLING & ANALYSIS PLAN

The finalized sampling and analysis plan (SAP) was created based on the request to conduct a Phase Two ESA prior to residential redevelopment of the Phase Two Property. The SAP was compiled to collect data to provide information on soil quality at the identified APEC.

Figure 4 (within the Phase Two ESA report) outlines the test pit locations.

Additional delineation may be required following the implementation of this SAP to meet the requirements of O. Reg. 153/04 to delineate all areas where concentrations are above the applicable SCS such as in the following conditions:

→ Unexpected contamination not previously discovered, or not related to identified APECs, will need to be further delineated to identify source(s); and

→ Requirement for a minimum of three (3) monitoring wells per stratigraphic unit would have to extend to underlying units if there is evidence of contamination extending into it; the SAP assumes contamination is limited to the upper stratigraphic unit (confirmed with clean sample) then the underlying units do not necessarily have to be characterized. The SAP has been developed using the available data, and may require additional delineation if sampling results come out suggesting impacts are deeper than initially expected.

SAMPLING AND ANALYSIS PLAN C – GRID PATTERN DELINEATION PROGRAM

WSP was retained by Far Sight Homes to conduct a Phase Two Environmental Site Assessment (ESA) at 5584 Lakeshore Road in the hamlet of Ballantrae, Town of Whitchurch-Stouffville, Ontario (hereafter referred to as the Phase Two Property). The purpose of the Phase Two ESA was to assess the near surface soil conditions regarding historical ag

Following the January 2017 test pit program, another hand auger program in the form of detailed grid pattern is to be implemented to further delineate the extent of chemical parameters identified in the previous two sampling programs. The grid pattern delineation program is to include the collection of a maximum 50 samples collected over a 20 m by 20 m grid in the northeast corner of the Phase Two Property. Of these samples, a minimum of ten (10) samples and one (1) QA/QC samples are to be submitted to the laboratory for Arsenic and OCP Analysis.

The Phase Two ESA will involve intrusive investigation in the areas determined in the site reconnaissance and Phase One ESA to be areas of potential environmental concern (APEC), and will be completed in general accordance with O.Reg 153/04 (as amended). Based on the findings of the field and laboratory analyses, a Phase Two ESA report will be prepared.

The Site Investigation Program will be completed as follows:

- Public and private underground utilities and services will be cleared prior to commencement of intrusive investigation activities
- A Health and Safety Plan will be prepared and all work will be executed safely
- A maximum of 50 soil samples will be collected to a maximum depth of 0.6 metres below ground surface (mbgs), and a minimum of ten (10) soil samples will be submitted for Organochlorine Pesticides (OCPs) and Arsenic analysis. The soil profile from each test location will be logged in the field and samples will be screened via visual and olfactory inspection. The location of the hand auger samples will be selected to investigate any areas of potential environmental concern identified during the site visit, as well as to delineate the horizontal and vertical extents of relevant parameters of concern.
- Based on field screening and visual/olfactory observations, worst-case/representative soil samples from the hand auger locations will be submitted for laboratory testing of relevant parameters of concern.
- Soil samples will be submitted for chemical analysis by a CALA laboratory in accordance with the Ontario Ministry of the Environment standards and requirements of O.Reg. 153/04 under the Environmental Protection Act.

Groundwater flow directions are known based on concurrent investigations completed by WSP on the Phase Two Property. No monitoring wells or groundwater monitoring/sampling to be conducted as part of this Phase Two ESA.

The proposed analytical program is outlined below (proposed program subject to change as a result of site observations/findings). All soil and groundwater sampling will be carried out in accordance with WSP's Standard Operating Procedures (SOPs).

<u>Soils:</u>

- Minimum of ten (10) soil samples for OCP and Arsenic Analysis

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- Minimum of one (1) soil sample for QA/QC purposes (duplicates)

Following receipt of all of the results, a report will be prepared in accordance with O.Reg. 153/04 (as amended).

In the event that the grid pattern delineation program identifies parameter concentrations greater than the applicable standards set out in *Ontario Regulation 153/04,* then additional samples will be submitted for OCP and Arsenic Analysis. It is noted that all samples collected during the grid pattern delineation program must be sampled directly into jars during the field program and refrigerated below 10˚C following the program.

FINALIZED SAMPLING & ANALYSIS PLAN

The finalized sampling and analysis plan (SAP) was created based on the request to conduct a Phase Two ESA prior to residential redevelopment of the Phase Two Property. The SAP was compiled to collect data to provide information on soil quality at the identified APEC.

Figure 5 (within the Phase Two ESA report) outlines the identified grid pattern delineation locations.

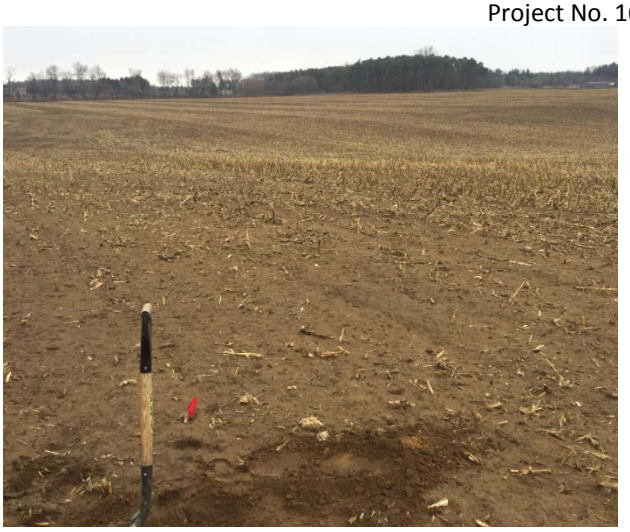
Additional delineation may be required following the implementation of this SAP to meet the requirements of O. Reg. 153/04 to delineate all areas where concentrations are above the applicable SCS such as in the following conditions:

→ Unexpected contamination not previously discovered, or not related to identified APECs, will need to be further delineated to identify source(s); and

→ Requirement for a minimum of three (3) monitoring wells per stratigraphic unit would have to extend to underlying units if there is evidence of contamination extending into it; the SAP assumes contamination is limited to the upper stratigraphic unit (confirmed with clean sample) then the underlying units do not necessarily have to be characterized. The SAP has been developed using the available data, and may require additional delineation if sampling results come out suggesting impacts are deeper than initially expected.

APPENDIX

B SITE PHOTOGRAPHS



Photograph 1. View looking northeast from the southwest corner of the Phase Two Property (5584 Lakeshore Road).

Photograph 2. View of the BH16-3 sampling location. Looking southeast to the residence on 5584 Lakeshore Road.

Photograph 3. View looking northeast from the northwest corner of the Phase Two Property.

Photograph 4. Jan 2017 test pit program on the Phase Two Property.

Photograph 5. Looking north/northeast at TP 17-4; test pit program conducted in Jan 2017.

Photograph 6. Test Pit program conducted in Jan 2017 at the Phase Two Property.

APPENDIX

C CERTIFICATES OF ANALYSIS

APPENDIX

C-1 DECEMBER 2016 CERTIFICATES OF ANALYSIS - SOIL

Your Project #: 161-06960-00/118/ FAR SIGHT
Your C.O.C. #: 589583-05-01, 589583-03-01

Attention:Daniel Oliveira

WSP Canada Inc
126 Don Hillock Dr
Unit 2
Aurora, ON
L4G 0G9

Report Date: 2016/12/09
Report #: R4281613
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6Q3852
Received: 2016/12/03, 10:38

Sample Matrix: Soil
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Strong Acid Leachable Metals by ICPMS	11	2016/12/08	2016/12/08	CAM SOP-00447	EPA 6020B m
Moisture	11	N/A	2016/12/07	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (1)	11	2016/12/06	2016/12/07	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	11	N/A	2016/12/08	CAM SOP-00307	EPA 8081/8082 m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods. Results relate to samples tested.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Your Project #: 161-06960-00/118/ FAR SIGHT
Your C.O.C. #: 589583-05-01, 589583-03-01

Attention:Daniel Oliveira

WSP Canada Inc
126 Don Hillock Dr
Unit 2
Aurora, ON
L4G 0G9

Report Date: 2016/12/09
Report #: R4281613
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6Q3852
Received: 2016/12/03, 10:38

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ashton Gibson, Project Manager
Email: AGibson@maxxam.ca
Phone# (905) 817-5700
==========
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B6Q3852
Report Date: 2016/12/09

WSP Canada Inc
Client Project #: 161-06960-00/118/ FAR SIGHT

O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID			DOK910		DOK911		DOK912	DOK913		
Sampling Date			2016/12/01 12:20		2016/12/01 12:30		2016/12/01 12:45	2016/12/01		
COC Number			589583-05-01		589583-05-01		589583-05-01	589583-05-01		
	UNITS	Criteria	BH16-1 SS1	RDL	BH16-1 SS2	RDL	BH16-5 SS1	DUP1	RDL	QC Batch
Inorganics										
Moisture	%	-	14	1.0	9.8	1.0	21	20	1.0	4783135
Calculated Parameters										
Chlordane (Total)	ug/g	-	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4777766
o,p-DDD + p,p-DDD	ug/g	-	<0.0020	0.0020	<0.0020	0.0020	0.0033	0.0028	0.0020	4777766
o,p-DDE + p,p-DDE	ug/g	-	0.076	0.010	0.0034	0.0020	0.17	0.16	0.020	4777766
o,p-DDT + p,p-DDT	ug/g	-	0.056	0.010	0.0020	0.0020	0.11	0.11	0.020	4777766
Total Endosulfan	ug/g	-	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4777766
Total PCB	ug/g	**0.35**	<0.015	0.015	<0.015	0.015	<0.015	<0.015	0.015	4777766
Pesticides & Herbicides										
Aldrin	ug/g	**0.05**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
a-Chlordane	ug/g	**0.05**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
g-Chlordane	ug/g	**0.05**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
o,p-DDD	ug/g	**3.3**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
p,p-DDD	ug/g	**3.3**	<0.0020	0.0020	<0.0020	0.0020	0.0033	0.0028	0.0020	4780832
o,p-DDE	ug/g	**0.26**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
p,p-DDE	ug/g	**0.26**	0.076	0.010	0.0034	0.0020	0.17	0.16	0.020	4780832
o,p-DDT	ug/g	**1.4**	0.011	0.0020	<0.0020	0.0020	0.022	0.020	0.0020	4780832
p,p-DDT	ug/g	**1.4**	0.044	0.010	0.0020	0.0020	0.083	0.093	0.020	4780832
Dieldrin	ug/g	**0.05**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
Lindane	ug/g	**0.056**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
Endosulfan I (alpha)	ug/g	**0.04**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
Endosulfan II (beta)	ug/g	**0.04**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
Endrin	ug/g	**0.04**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
Heptachlor	ug/g	**0.15**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
Heptachlor epoxide	ug/g	**0.05**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
Hexachlorobenzene	ug/g	**0.52**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
Hexachlorobutadiene	ug/g	**0.012**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
Hexachloroethane	ug/g	**0.089**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	0.0020	4780832
Methoxychlor	ug/g	**0.13**	<0.0050	0.0050	<0.0050	0.0050	<0.0050	<0.0050	0.0050	4780832
Aroclor 1242	ug/g	-	<0.015	0.015	<0.015	0.015	<0.015	<0.015	0.015	4780832
Aroclor 1248	ug/g	-	<0.015	0.015	<0.015	0.015	<0.015	<0.015	0.015	4780832
Aroclor 1254	ug/g	-	<0.015	0.015	<0.015	0.015	<0.015	<0.015	0.015	4780832

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B6Q3852
Report Date: 2016/12/09

WSP Canada Inc
Client Project #: 161-06960-00/118/ FAR SIGHT

O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID			DOK910		DOK911		DOK912	DOK913		
Sampling Date			2016/12/01 12:20		2016/12/01 12:30		2016/12/01 12:45	2016/12/01		
COC Number			589583-05-01		589583-05-01		589583-05-01	589583-05-01		
	UNITS	Criteria	BH16-1 SS1	RDL	BH16-1 SS2	RDL	BH16-5 SS1	DUP1	RDL	QC Batch
Aroclor 1260	ug/g	-	<0.015	0.015	<0.015	0.015	<0.015	<0.015	0.015	4780832
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	-	73		78		85	77		4780832
Decachlorobiphenyl	%	-	109		112		127	123		4780832

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

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O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID			DOK914		DOK915	DOK915		DOK916		
Sampling Date			2016/12/01 13:00		2016/12/01 13:05	2016/12/01 13:05		2016/12/01 13:15		
COC Number			589583-05-01		589583-05-01	589583-05-01		589583-05-01		
	UNITS	Criteria	BH16-6 SS1	RDL	BH16-6 SS2	BH16-6 SS2 Lab-Dup	RDL	BH16-8 SS1	RDL	QC Batch
Inorganics										
Moisture	%	-	14	1.0	7.7	8.1	1.0	14	1.0	4783135
Calculated Parameters										
Chlordane (Total)	ug/g	-	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4777766
o,p-DDD + p,p-DDD	ug/g	-	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4777766
o,p-DDE + p,p-DDE	ug/g	-	0.065	0.010	0.0035		0.0020	0.076	0.020	4777766
o,p-DDT + p,p-DDT	ug/g	-	0.050	0.010	<0.0020		0.0020	0.058	0.020	4777766
Total Endosulfan	ug/g	-	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4777766
Total PCB	ug/g	**0.35**	<0.015	0.015	<0.015		0.015	<0.015	0.015	4777766
Pesticides & Herbicides										
Aldrin	ug/g	**0.05**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
a-Chlordane	ug/g	**0.05**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
g-Chlordane	ug/g	**0.05**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
o,p-DDD	ug/g	**3.3**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
p,p-DDD	ug/g	**3.3**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
o,p-DDE	ug/g	**0.26**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
p,p-DDE	ug/g	**0.26**	0.065	0.010	0.0035		0.0020	0.076	0.020	4780832
o,p-DDT	ug/g	**1.4**	0.011	0.0020	<0.0020		0.0020	0.014	0.0020	4780832
p,p-DDT	ug/g	**1.4**	0.039	0.010	<0.0020		0.0020	0.045	0.020	4780832
Dieldrin	ug/g	**0.05**	<0.0020	0.0020	<0.0020		0.0020	**0.13**	0.020	4780832
Lindane	ug/g	**0.056**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
Endosulfan I (alpha)	ug/g	**0.04**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
Endosulfan II (beta)	ug/g	**0.04**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
Endrin	ug/g	**0.04**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
Heptachlor	ug/g	**0.15**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
Heptachlor epoxide	ug/g	**0.05**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
Hexachlorobenzene	ug/g	**0.52**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
Hexachlorobutadiene	ug/g	**0.012**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
Hexachloroethane	ug/g	**0.089**	<0.0020	0.0020	<0.0020		0.0020	<0.0020	0.0020	4780832
Methoxychlor	ug/g	**0.13**	<0.0050	0.0050	<0.0050		0.0050	<0.0050	0.0050	4780832
Aroclor 1242	ug/g	**-**	<0.015	0.015	<0.015		0.015	<0.015	0.015	4780832
Aroclor 1248	ug/g	**-**	<0.015	0.015	<0.015		0.015	<0.015	0.015	4780832

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

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O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID			DOK914		DOK915	DOK915		DOK916		
Sampling Date			2016/12/01 13:00		2016/12/01 13:05	2016/12/01 13:05		2016/12/01 13:15		
COC Number			589583-05-01		589583-05-01	589583-05-01		589583-05-01		
	UNITS	Criteria	BH16-6 SS1	RDL	BH16-6 SS2	BH16-6 SS2 Lab-Dup	RDL	BH16-8 SS1	RDL	QC Batch
Aroclor 1254	ug/g	-	<0.015	0.015	<0.015		0.015	<0.015	0.015	4780832
Aroclor 1260	ug/g	-	<0.015	0.015	<0.015		0.015	<0.015	0.015	4780832
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	-	81		82			86		4780832
Decachlorobiphenyl	%	-	107		112			111		4780832

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

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O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID			DOK917		DOK918		DOK919		DOK920		
Sampling Date			2016/12/01 13:20		2016/12/01 13:50		2016/12/01 14:00		2016/12/01 14:30		
COC Number			589583-05-01		589583-05-01		589583-05-01		589583-03-01		
	UNITS	Criteria	BH16-8 SS2	RDL	BH16-4 SS1	RDL	BH16-4 SS2	RDL	BH16-3 SS1	RDL	QC Batch
Inorganics											
Moisture	%	-	7.6	1.0	15	1.0	12	1.0	19	1.0	4783135
Calculated Parameters											
Chlordane (Total)	ug/g	-	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4777766
o,p-DDD + p,p-DDD	ug/g	-	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	0.0037	0.0020	4777766
o,p-DDE + p,p-DDE	ug/g	-	0.011	0.0020	0.17	0.020	0.016	0.0020	0.072	0.010	4777766
o,p-DDT + p,p-DDT	ug/g	-	0.0031	0.0020	0.072	0.020	0.0038	0.0020	0.028	0.010	4777766
Total Endosulfan	ug/g	-	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4777766
Total PCB	ug/g	**0.35**	<0.015	0.015	<0.015	0.015	<0.015	0.015	<0.015	0.015	4777766
Pesticides & Herbicides											
Aldrin	ug/g	**0.05**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
a-Chlordane	ug/g	**0.05**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
g-Chlordane	ug/g	**0.05**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
o,p-DDD	ug/g	**3.3**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
p,p-DDD	ug/g	**3.3**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	0.0037	0.0020	4780832
o,p-DDE	ug/g	**0.26**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
p,p-DDE	ug/g	**0.26**	0.011	0.0020	0.17	0.020	0.016	0.0020	0.072	0.010	4780832
o,p-DDT	ug/g	**1.4**	<0.0020	0.0020	0.015	0.0020	<0.0020	0.0020	0.0065	0.0020	4780832
p,p-DDT	ug/g	**1.4**	0.0031	0.0020	0.057	0.020	0.0038	0.0020	0.022	0.010	4780832
Dieldrin	ug/g	**0.05**	**0.12**	0.010	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
Lindane	ug/g	**0.056**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
Endosulfan I (alpha)	ug/g	**0.04**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
Endosulfan II (beta)	ug/g	**0.04**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
Endrin	ug/g	**0.04**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
Heptachlor	ug/g	**0.15**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
Heptachlor epoxide	ug/g	**0.05**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
Hexachlorobenzene	ug/g	**0.52**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
Hexachlorobutadiene	ug/g	**0.012**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
Hexachloroethane	ug/g	**0.089**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4780832
Methoxychlor	ug/g	**0.13**	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	4780832
Aroclor 1242	ug/g	-	<0.015	0.015	<0.015	0.015	<0.015	0.015	<0.015	0.015	4780832
Aroclor 1248	ug/g	-	<0.015	0.015	<0.015	0.015	<0.015	0.015	<0.015	0.015	4780832
Aroclor 1254	ug/g	-	<0.015	0.015	<0.015	0.015	<0.015	0.015	<0.015	0.015	4780832

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

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O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID			DOK917		DOK918		DOK919		DOK920		
Sampling Date			2016/12/01 13:20		2016/12/01 13:50		2016/12/01 14:00		2016/12/01 14:30		
COC Number			589583-05-01		589583-05-01		589583-05-01		589583-03-01		
	UNITS	**Criteria**	**BH16-8 SS2**	**RDL**	**BH16-4 SS1**	**RDL**	**BH16-4 SS2**	**RDL**	**BH16-3 SS1**	**RDL**	**QC Batch**
Aroclor 1260	ug/g	-	<0.015	0.015	<0.015	0.015	<0.015	0.015	<0.015	0.015	4780832
Surrogate Recovery (%)											
2,4,5,6-Tetrachloro-m-xylene	%	-	82		83		78		82		4780832
Decachlorobiphenyl	%	-	127		105		127		116		4780832

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID			DOK910		DOK911		DOK912		
Sampling Date			2016/12/01 12:20		2016/12/01 12:30		2016/12/01 12:45		
COC Number			589583-05-01		589583-05-01		589583-05-01		
	UNITS	Criteria	BH16-1 SS1	QC Batch	BH16-1 SS2	QC Batch	BH16-5 SS1	RDL	QC Batch
Metals									
Acid Extractable Arsenic (As)	ug/g	**18**	8.6	4784374	<1.0	4784090	4.7	1.0	4784374

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

Maxxam ID			DOK913		DOK914	DOK915	DOK915	DOK916		
Sampling Date			2016/12/01		2016/12/01 13:00	2016/12/01 13:05	2016/12/01 13:05	2016/12/01 13:15		
COC Number			589583-05-01		589583-05-01	589583-05-01	589583-05-01	589583-05-01		
	UNITS	Criteria	DUP1	QC Batch	BH16-6 SS1	BH16-6 SS2	BH16-6 SS2 Lab-Dup	BH16-8 SS1	RDL	QC Batch
Metals										
Acid Extractable Arsenic (As)	ug/g	**18**	4.9	4784090	3.4	<1.0	<1.0	2.3	1.0	4784374

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

Maxxam ID			DOK917		DOK918		DOK919		
Sampling Date			2016/12/01 13:20		2016/12/01 13:50		2016/12/01 14:00		
COC Number			589583-05-01		589583-05-01		589583-05-01		
	UNITS	Criteria	BH16-8 SS2	QC Batch	BH16-4 SS1	QC Batch	BH16-4 SS2	RDL	QC Batch
Metals									
Acid Extractable Arsenic (As)	ug/g	**18**	<1.0	4784090	4.2	4784374	<1.0	1.0	4784090

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID			DOK920		
Sampling Date			2016/12/01 14:30		
COC Number			589583-03-01		
	UNITS	**Criteria**	**BH16-3 SS1**	**RDL**	**QC Batch**
Metals					
Acid Extractable Arsenic (As)	ug/g	**18**	11	1.0	4784374

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

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TEST SUMMARY

Maxxam ID: DOK910 **Collected:** 2016/12/01
Sample ID: BH16-1 SS1 **Shipped:**
Matrix: Soil **Received:** 2016/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4784374	2016/12/08	2016/12/08	Daniel Teclu
Moisture	BAL	4783135	N/A	2016/12/07	Prgya Panchal
OC Pesticides (Selected) & PCB	GC/ECD	4780832	2016/12/06	2016/12/07	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4777766	N/A	2016/12/08	Automated Statchk

Maxxam ID: DOK911 **Collected:** 2016/12/01
Sample ID: BH16-1 SS2 **Shipped:**
Matrix: Soil **Received:** 2016/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4784090	2016/12/08	2016/12/08	Daniel Teclu
Moisture	BAL	4783135	N/A	2016/12/07	Prgya Panchal
OC Pesticides (Selected) & PCB	GC/ECD	4780832	2016/12/06	2016/12/07	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4777766	N/A	2016/12/08	Automated Statchk

Maxxam ID: DOK912 **Collected:** 2016/12/01
Sample ID: BH16-5 SS1 **Shipped:**
Matrix: Soil **Received:** 2016/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4784374	2016/12/08	2016/12/08	Daniel Teclu
Moisture	BAL	4783135	N/A	2016/12/07	Prgya Panchal
OC Pesticides (Selected) & PCB	GC/ECD	4780832	2016/12/06	2016/12/07	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4777766	N/A	2016/12/08	Automated Statchk

Maxxam ID: DOK913 **Collected:** 2016/12/01
Sample ID: DUP1 **Shipped:**
Matrix: Soil **Received:** 2016/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4784090	2016/12/08	2016/12/08	Daniel Teclu
Moisture	BAL	4783135	N/A	2016/12/07	Prgya Panchal
OC Pesticides (Selected) & PCB	GC/ECD	4780832	2016/12/06	2016/12/07	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4777766	N/A	2016/12/08	Automated Statchk

Maxxam ID: DOK914 **Collected:** 2016/12/01
Sample ID: BH16-6 SS1 **Shipped:**
Matrix: Soil **Received:** 2016/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4784374	2016/12/08	2016/12/08	Daniel Teclu
Moisture	BAL	4783135	N/A	2016/12/07	Prgya Panchal
OC Pesticides (Selected) & PCB	GC/ECD	4780832	2016/12/06	2016/12/07	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4777766	N/A	2016/12/08	Automated Statchk

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TEST SUMMARY

Maxxam ID: DOK915 **Collected:** 2016/12/01
Sample ID: BH16-6 SS2 **Shipped:**
Matrix: Soil **Received:** 2016/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4784374	2016/12/08	2016/12/08	Daniel Teclu
Moisture	BAL	4783135	N/A	2016/12/07	Prgya Panchal
OC Pesticides (Selected) & PCB	GC/ECD	4780832	2016/12/06	2016/12/07	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4777766	N/A	2016/12/08	Automated Statchk

Maxxam ID: DOK915 Dup **Collected:** 2016/12/01
Sample ID: BH16-6 SS2 **Shipped:**
Matrix: Soil **Received:** 2016/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4784374	2016/12/08	2016/12/08	Daniel Teclu
Moisture	BAL	4783135	N/A	2016/12/07	Prgya Panchal

Maxxam ID: DOK916 **Collected:** 2016/12/01
Sample ID: BH16-8 SS1 **Shipped:**
Matrix: Soil **Received:** 2016/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4784374	2016/12/08	2016/12/08	Daniel Teclu
Moisture	BAL	4783135	N/A	2016/12/07	Prgya Panchal
OC Pesticides (Selected) & PCB	GC/ECD	4780832	2016/12/06	2016/12/07	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4777766	N/A	2016/12/08	Automated Statchk

Maxxam ID: DOK917 **Collected:** 2016/12/01
Sample ID: BH16-8 SS2 **Shipped:**
Matrix: Soil **Received:** 2016/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4784090	2016/12/08	2016/12/08	Daniel Teclu
Moisture	BAL	4783135	N/A	2016/12/07	Prgya Panchal
OC Pesticides (Selected) & PCB	GC/ECD	4780832	2016/12/06	2016/12/07	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4777766	N/A	2016/12/08	Automated Statchk

Maxxam ID: DOK918 **Collected:** 2016/12/01
Sample ID: BH16-4 SS1 **Shipped:**
Matrix: Soil **Received:** 2016/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4784374	2016/12/08	2016/12/08	Daniel Teclu
Moisture	BAL	4783135	N/A	2016/12/07	Prgya Panchal
OC Pesticides (Selected) & PCB	GC/ECD	4780832	2016/12/06	2016/12/07	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4777766	N/A	2016/12/08	Automated Statchk

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TEST SUMMARY

Maxxam ID: DOK919
Sample ID: BH16-4 SS2
Matrix: Soil

Collected: 2016/12/01
Shipped:
Received: 2016/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4784090	2016/12/08	2016/12/08	Daniel Teclu
Moisture	BAL	4783135	N/A	2016/12/07	Prgya Panchal
OC Pesticides (Selected) & PCB	GC/ECD	4780832	2016/12/06	2016/12/07	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4777766	N/A	2016/12/08	Automated Statchk

Maxxam ID: DOK920
Sample ID: BH16-3 SS1
Matrix: Soil

Collected: 2016/12/01
Shipped:
Received: 2016/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4784374	2016/12/08	2016/12/08	Daniel Teclu
Moisture	BAL	4783135	N/A	2016/12/07	Prgya Panchal
OC Pesticides (Selected) & PCB	GC/ECD	4780832	2016/12/06	2016/12/07	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4777766	N/A	2016/12/08	Automated Statchk

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C

OC Pesticide Analysis: Due to high concentrations of the target analytes, some samples required dilution. Detection limits were adjusted accordingly.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4780832	FSO	Matrix Spike	2,4,5,6-Tetrachloro-m-xylene	2016/12/07		118	%	50 - 130
			Decachlorobiphenyl	2016/12/07		115	%	50 - 130
			Aldrin	2016/12/07		104	%	50 - 130
			a-Chlordane	2016/12/07		127	%	50 - 130
			g-Chlordane	2016/12/07		125	%	50 - 130
			o,p-DDD	2016/12/07		107	%	50 - 130
			p,p-DDD	2016/12/07		126	%	50 - 130
			o,p-DDE	2016/12/07		120	%	50 - 130
			p,p-DDE	2016/12/07		118	%	50 - 130
			o,p-DDT	2016/12/07		117	%	50 - 130
			p,p-DDT	2016/12/07		162 (1)	%	50 - 130
			Dieldrin	2016/12/07		122	%	50 - 130
			Lindane	2016/12/07		97	%	50 - 130
			Endosulfan I (alpha)	2016/12/07		82	%	50 - 130
			Endosulfan II (beta)	2016/12/07		124	%	50 - 130
			Endrin	2016/12/07		121	%	50 - 130
			Heptachlor	2016/12/07		108	%	50 - 130
			Heptachlor epoxide	2016/12/07		109	%	50 - 130
			Hexachlorobenzene	2016/12/07		113	%	50 - 130
			Hexachlorobutadiene	2016/12/07		88	%	50 - 130
			Hexachloroethane	2016/12/07		60	%	50 - 130
			Methoxychlor	2016/12/07		176 (1)	%	50 - 130
4780832	FSO	Spiked Blank	2,4,5,6-Tetrachloro-m-xylene	2016/12/07		68	%	50 - 130
			Decachlorobiphenyl	2016/12/07		118	%	50 - 130
			Aldrin	2016/12/07		68	%	50 - 130
			a-Chlordane	2016/12/07		80	%	50 - 130
			g-Chlordane	2016/12/07		102	%	50 - 130
			o,p-DDD	2016/12/07		112	%	50 - 130
			p,p-DDD	2016/12/07		112	%	50 - 130
			o,p-DDE	2016/12/07		85	%	50 - 130
			p,p-DDE	2016/12/07		68	%	50 - 130
			o,p-DDT	2016/12/07		96	%	50 - 130
			p,p-DDT	2016/12/07		83	%	50 - 130
			Dieldrin	2016/12/07		117	%	50 - 130
			Lindane	2016/12/07		95	%	50 - 130
			Endosulfan I (alpha)	2016/12/07		81	%	50 - 130
			Endosulfan II (beta)	2016/12/07		110	%	50 - 130
			Endrin	2016/12/07		114	%	50 - 130
			Heptachlor	2016/12/07		69	%	50 - 130
			Heptachlor epoxide	2016/12/07		109	%	50 - 130
			Hexachlorobenzene	2016/12/07		83	%	50 - 130
			Hexachlorobutadiene	2016/12/07		84	%	50 - 130
			Hexachloroethane	2016/12/07		55	%	50 - 130
			Methoxychlor	2016/12/07		125	%	50 - 130
4780832	FSO	RPD	Aroclor 1242	2016/12/07	NC		%	40
			Aldrin	2016/12/07	NC		%	40
			a-Chlordane	2016/12/07	NC		%	40
			g-Chlordane	2016/12/07	NC		%	40
			o,p-DDD	2016/12/07	NC		%	40
			p,p-DDD	2016/12/07	NC		%	40
			o,p-DDE	2016/12/07	NC		%	40
			p,p-DDE	2016/12/07	NC		%	40
			o,p-DDT	2016/12/07	NC		%	40
			p,p-DDT	2016/12/07	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dieldrin	2016/12/07	NC		%	40
			Lindane	2016/12/07	NC		%	40
			Endosulfan I (alpha)	2016/12/07	NC		%	40
			Endosulfan II (beta)	2016/12/07	NC		%	40
			Endrin	2016/12/07	NC		%	40
			Heptachlor	2016/12/07	NC		%	40
			Heptachlor epoxide	2016/12/07	NC		%	40
			Hexachlorobenzene	2016/12/07	NC		%	40
			Hexachlorobutadiene	2016/12/07	NC		%	40
			Hexachloroethane	2016/12/07	NC		%	40
			Methoxychlor	2016/12/07	NC		%	40
			Aroclor 1242	2016/12/07	NC		%	40
			Aroclor 1248	2016/12/07	NC		%	40
			Aroclor 1254	2016/12/07	NC		%	40
			Aroclor 1260	2016/12/07	NC		%	40
4780832	FSO	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2016/12/07		72	%	50 - 130
			Decachlorobiphenyl	2016/12/07		118	%	50 - 130
			Aldrin	2016/12/07	<0.0050		ug/g	
			a-Chlordane	2016/12/07	<0.0050		ug/g	
			g-Chlordane	2016/12/07	<0.0050		ug/g	
			o,p-DDD	2016/12/07	<0.0050		ug/g	
			p,p-DDD	2016/12/07	<0.0050		ug/g	
			o,p-DDE	2016/12/07	<0.0050		ug/g	
			p,p-DDE	2016/12/07	<0.0050		ug/g	
			o,p-DDT	2016/12/07	<0.0050		ug/g	
			p,p-DDT	2016/12/07	<0.0050		ug/g	
			Dieldrin	2016/12/07	<0.0050		ug/g	
			Lindane	2016/12/07	<0.0050		ug/g	
			Endosulfan I (alpha)	2016/12/07	<0.0050		ug/g	
			Endosulfan II (beta)	2016/12/07	<0.0050		ug/g	
			Endrin	2016/12/07	<0.0050		ug/g	
			Heptachlor	2016/12/07	<0.0050		ug/g	
			Heptachlor epoxide	2016/12/07	<0.0050		ug/g	
			Hexachlorobenzene	2016/12/07	<0.0050		ug/g	
			Hexachlorobutadiene	2016/12/07	<0.0050		ug/g	
			Hexachloroethane	2016/12/07	<0.0050		ug/g	
			Methoxychlor	2016/12/07	<0.013		ug/g	
			Aroclor 1242	2016/12/07	<0.038		ug/g	
			Aroclor 1248	2016/12/07	<0.038		ug/g	
			Aroclor 1254	2016/12/07	<0.038		ug/g	
			Aroclor 1260	2016/12/07	<0.038		ug/g	
4783135	KP8	RPD [DOK915-01]	Moisture	2016/12/07	5.1		%	20
4784090	DT1	Matrix Spike	Acid Extractable Arsenic (As)	2016/12/09		96	%	75 - 125
4784090	DT1	Spiked Blank	Acid Extractable Arsenic (As)	2016/12/08		95	%	80 - 120
4784090	DT1	Method Blank	Acid Extractable Arsenic (As)	2016/12/08	<1.0		ug/g	
4784090	DT1	RPD	Acid Extractable Arsenic (As)	2016/12/09	NC		%	30
4784374	DT1	Matrix Spike [DOK915-01]	Acid Extractable Arsenic (As)	2016/12/08		99	%	75 - 125
4784374	DT1	Spiked Blank	Acid Extractable Arsenic (As)	2016/12/08		97	%	80 - 120
4784374	DT1	Method Blank	Acid Extractable Arsenic (As)	2016/12/08	<1.0		ug/g	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4784374	DT1	RPD [DOK915-01]	Acid Extractable Arsenic (As)	2016/12/08	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Matrix spike recovery was above the upper control limit. This may represent a high bias in some results for this specific analyte. For results that were not detected (ND), this potential bias has no impact.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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03-Dec-16 10:38
Ashton Gibson
B6Q3852
MAF ENV-643

Page 1 of 2

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#1089 WSP Canada Inc	Company Name:	WSP Canada Inc.	Quotation #:	B62738
Attention:	Accounts Payable	Attention:	Daniel Oliveira	P.O. #:	
Address:	126 Don Hillock Dr Unit 2 Aurora ON L4G 0G9	Address:	126 Don Hillock Drive, Unit 2 Aurora, ON L4G 6G9	Project:	161-06960-00/118
Tel:	(905) 750-3080 x Fax: (905) 727-0463 x	Tel:	(905) 750-3080 x Fax:	Project Name:	Far Sight Homes.
Email:	payables.ontario@wspgroup.com	Email:	Daniel.Oliveira@wspgroup.com	Site #:	
				Sampled By:	DAO

Bottle Order #: 589583
COC #: C#589583-05-01
Project Manager: Ashton Gibson

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011): ☐ Table 1 ☒ Res/Park ☐ Medium/Fine ☒ Table 2 ☐ Ind/Comm ☒ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ___

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ___ ☐ PWQO ☐ Other ___

Special Instructions:

Include Criteria on Certificate of Analysis (Y/N)? ___

Field Filtered (please circle): Metals / Hg / Cr VI

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	O Reg 153 OC Pesticides	Arsenic	# of Bottles	Comments
1		BH 16-1 SS1	2016/12/01	12:20	SOIL	X	X	1	
2		BH 16-1 SS2		12:30	SOIL	X	X	1	
3		BH 16-5 SS1		12:45	SOIL	X	X	1	
4		DUP 1		~~13:00~~	SOIL	X	X	1	
5		BH 16-6 SS1		13:00	SOIL	X	X	1	
6		BH 16-6 SS2		13:05	SOIL	X	X	1	
7		BH 16-8 SS1		13:15	SOIL	X	X	1	
8		BH 16-8 SS2		13:20	SOIL	X	X	1	
9		BH 16-4 SS1		13:50	SOIL	X	X	1	
10		~~BH 16-4 SS2~~		14:00	SOIL	X	X	1	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Daniel Oliveira	2016/12/02	8:00 AM		2016/12/03	10:38	0

Laboratory Use Only

Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
	1/1/2	Present		
		Intact	✓	

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

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CHAIN OF CUSTODY RECORD

Page 2 of 2

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#1089 WSP Canada Inc	Company Name:	WSP Canada Inc.	Quotation #:	B62738	Maxxam Job #: B6Q3852	Bottle Order #: 589583
Attention:	Accounts Payable	Attention:	Daniel Oliveira	P.O. #:			
Address:	126 Don Hillock Dr Unit 2 Aurora ON L4G 0G9	Address:	126 Don Hillock Drive, Unit 2 Aurora, ON L4G 0G9	Project:	161-06960-00/118	COC #: C#589583-03-01	Project Manager: Ashton Gibson
Tel:	(905) 750-3080 x Fax: (905) 727-0463 x	Tel:	(905) 750-3080 x Fax:	Project Name:	Far Sight Homes		
Email:	payables.ontario@wspgroup.com	Email:	Daniel.Oliveira@wspgroup.com	Site #:			
				Sampled By:	DAO		

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☒ Res/Park ☐ Medium/Fine ☒ Table 2 ☐ Ind/Comm ☒ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ___	☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ___ ☐ PWQO ☐ Other ___	

* Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified).
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O Reg 153 OC Pesticides	Arsenic	# of Bottles	Comments
1		BH 16-3 SS1	2016/12/01	14:30	SOIL		X	X	1	
2					SOIL					
3					SOIL					
4					SOIL					
5					SOIL					
6					SOIL					
7					SOIL					
8					SOIL					
9					SOIL					
10					SOIL					

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
Daniel Oliveira	2016/12/02	8:00AM		2016/12/02	10:38	0		1/1/2	Present	✓	
									Intact	✓	

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

APPENDIX

C-2 *JANUARY 2017 CERTIFICATES OF ANALYSIS - SOIL*

Maxxam
A Bureau Veritas Group Company

Your Project #: 161-06960-00/118/003
Site Location: 5426-5584 LAKESHORE RD
Your C.O.C. #: 566639-04-01

Attention:Daniel Oliveira

WSP Canada Inc
126 Don Hillock Dr
Unit 2
Aurora, ON
L4G 0G9

Report Date: 2017/01/31
Report #: R4342964
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B712914
Received: 2017/01/20, 09:12

Sample Matrix: Soil
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Strong Acid Leachable Metals by ICPMS	7	2017/01/26	2017/01/26	CAM SOP-00447	EPA 6020B m
Moisture	7	N/A	2017/01/27	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (1)	7	2017/01/27	2017/01/31	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	7	N/A	2017/01/26	CAM SOP-00307	EPA 8081/8082 m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods. Results relate to samples tested.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Your Project #: 161-06960-00/118/003
Site Location: 5426-5584 LAKESHORE RD
Your C.O.C. #: 566639-04-01

Attention:Daniel Oliveira

WSP Canada Inc
126 Don Hillock Dr
Unit 2
Aurora, ON
L4G 0G9

Report Date: 2017/01/31
Report #: R4342964
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B712914
Received: 2017/01/20, 09:12

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ashton Gibson, Project Manager
Email: AGibson@maxxam.ca
Phone# (905) 817-5700

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B712914
Report Date: 2017/01/31

WSP Canada Inc
Client Project #: 161-06960-00/118/003
Site Location: 5426-5584 LAKESHORE RD

O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID			DUC064		DUC065		DUC065		DUC066		
Sampling Date			2017/01/19 09:00		2017/01/19 09:10		2017/01/19 09:10		2017/01/19		
COC Number			566639-04-01		566639-04-01		566639-04-01		566639-04-01		
	UNITS	Criteria	TP17-3 SS1	RDL	TP17-2 SS1	RDL	TP17-2 SS1 Lab-Dup	RDL	DUP 2	RDL	QC Batch
Inorganics											
Moisture	%	-	12	1.0	12	1.0		1.0	7.1	1.0	4841384
Calculated Parameters											
Chlordane (Total)	ug/g	-	<0.0020	0.0020	<0.0020	0.0020		0.0020	<0.0020	0.0020	4834904
o,p-DDD + p,p-DDD	ug/g	-	<0.0020	0.0020	<0.0020	0.0020		0.0020	<0.0020	0.0020	4834904
o,p-DDE + p,p-DDE	ug/g	-	0.14	0.020	0.15	0.020		0.020	<0.0020	0.0020	4834904
o,p-DDT + p,p-DDT	ug/g	-	0.14	0.020	0.15	0.020		0.020	<0.0020	0.0020	4834904
Total Endosulfan	ug/g	-	<0.0020	0.0020	<0.0020	0.0020		0.0020	<0.0020	0.0020	4834904
Total PCB	ug/g	**0.35**	<0.020	0.020	<0.015	0.015		0.015	<0.015	0.015	4834904
Pesticides & Herbicides											
Aldrin	ug/g	**0.05**	0.0028	0.0020	0.0022	0.0020	0.0023	0.0020	<0.0020	0.0020	4841367
a-Chlordane	ug/g	**0.05**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
g-Chlordane	ug/g	**0.05**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
o,p-DDD	ug/g	**3.3**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
p,p-DDD	ug/g	**3.3**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
o,p-DDE	ug/g	**0.26**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
p,p-DDE	ug/g	**0.26**	0.14	0.020	0.15	0.020	0.16	0.020	<0.0020	0.0020	4841367
o,p-DDT	ug/g	**1.4**	0.022	0.0020	0.024	0.0020	0.031	0.020	<0.0020	0.0020	4841367
p,p-DDT	ug/g	**1.4**	0.11	0.020	0.13	0.020	0.12	0.020	<0.0020	0.0020	4841367
Dieldrin	ug/g	**0.05**	**0.23**	0.020	**0.24**	0.020	**0.24**	0.020	<0.0020	0.0020	4841367
Lindane	ug/g	**0.056**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Endosulfan I (alpha)	ug/g	**0.04**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Endosulfan II (beta)	ug/g	**0.04**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Endrin	ug/g	**0.04**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Heptachlor	ug/g	**0.15**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Heptachlor epoxide	ug/g	**0.05**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Hexachlorobenzene	ug/g	**0.52**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Hexachlorobutadiene	ug/g	**0.012**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Hexachloroethane	ug/g	**0.089**	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Methoxychlor	ug/g	**0.13**	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	4841367
Aroclor 1242	ug/g	**-**	<0.015	0.015	<0.015	0.015	<0.015	0.015	<0.015	0.015	4841367

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B712914
Report Date: 2017/01/31

WSP Canada Inc
Client Project #: 161-06960-00/118/003
Site Location: 5426-5584 LAKESHORE RD

O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID			DUC064		DUC065		DUC065		DUC066		
Sampling Date			2017/01/19 09:00		2017/01/19 09:10		2017/01/19 09:10		2017/01/19		
COC Number			566639-04-01		566639-04-01		566639-04-01		566639-04-01		
	UNITS	Criteria	TP17-3 SS1	RDL	TP17-2 SS1	RDL	TP17-2 SS1 Lab-Dup	RDL	DUP 2	RDL	QC Batch
Aroclor 1248	ug/g	-	<0.015	0.015	<0.015	0.015	<0.015	0.015	<0.015	0.015	4841367
Aroclor 1254	ug/g	-	<0.020	0.020	<0.015	0.015	<0.015	0.015	<0.015	0.015	4841367
Aroclor 1260	ug/g	-	<0.020	0.020	<0.015	0.015	<0.015	0.015	<0.015	0.015	4841367
Surrogate Recovery (%)											
2,4,5,6-Tetrachloro-m-xylene	%	-	76		79		76		77		4841367
Decachlorobiphenyl	%	-	98		107		103		94		4841367

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B712914
Report Date: 2017/01/31

WSP Canada Inc
Client Project #: 161-06960-00/118/003
Site Location: 5426-5584 LAKESHORE RD

O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID			DUC066		DUC067		DUC068		DUC069		
Sampling Date			2017/01/19		2017/01/19 09:30		2017/01/19 09:35		2017/01/19 09:45		
COC Number			566639-04-01		566639-04-01		566639-04-01		566639-04-01		
	UNITS	Criteria	DUP 2 Lab-Dup	RDL	TP17-1 SS1	RDL	TP17-1 SS2	RDL	TP17-4 SS1	RDL	QC Batch
Inorganics											
Moisture	%	-	7.1	1.0	12	1.0	7.2	1.0	12	1.0	4841384
Calculated Parameters											
Chlordane (Total)	ug/g	-		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4834904
o,p-DDD + p,p-DDD	ug/g	-		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4834904
o,p-DDE + p,p-DDE	ug/g	-		0.0020	0.047	0.010	<0.0020	0.0020	0.048	0.010	4834904
o,p-DDT + p,p-DDT	ug/g	-		0.0020	0.041	0.010	<0.0020	0.0020	0.039	0.010	4834904
Total Endosulfan	ug/g	-		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4834904
Total PCB	ug/g	**0.35**		0.015	<0.015	0.015	<0.015	0.015	<0.015	0.015	4834904
Pesticides & Herbicides											
Aldrin	ug/g	**0.05**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
a-Chlordane	ug/g	**0.05**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
g-Chlordane	ug/g	**0.05**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
o,p-DDD	ug/g	**3.3**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
p,p-DDD	ug/g	**3.3**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
o,p-DDE	ug/g	**0.26**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
p,p-DDE	ug/g	**0.26**		0.0020	0.047	0.010	<0.0020	0.0020	0.048	0.010	4841367
o,p-DDT	ug/g	**1.4**		0.0020	0.0068	0.0020	<0.0020	0.0020	0.0065	0.0020	4841367
p,p-DDT	ug/g	**1.4**		0.0020	0.034	0.010	<0.0020	0.0020	0.032	0.010	4841367
Dieldrin	ug/g	**0.05**		0.0020	**0.074**	0.010	<0.0020	0.0020	**0.078**	0.010	4841367
Lindane	ug/g	**0.056**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Endosulfan I (alpha)	ug/g	**0.04**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Endosulfan II (beta)	ug/g	**0.04**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Endrin	ug/g	**0.04**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Heptachlor	ug/g	**0.15**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Heptachlor epoxide	ug/g	**0.05**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Hexachlorobenzene	ug/g	**0.52**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Hexachlorobutadiene	ug/g	**0.012**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Hexachloroethane	ug/g	**0.089**		0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	4841367
Methoxychlor	ug/g	**0.13**		0.0050	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	4841367
Aroclor 1242	ug/g	**-**		0.015	<0.015	0.015	<0.015	0.015	<0.015	0.015	4841367

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

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Maxxam Job #: B712914
Report Date: 2017/01/31

WSP Canada Inc
Client Project #: 161-06960-00/118/003
Site Location: 5426-5584 LAKESHORE RD

O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID			DUC066		DUC067		DUC068		DUC069		
Sampling Date			2017/01/19		2017/01/19 09:30		2017/01/19 09:35		2017/01/19 09:45		
COC Number			566639-04-01		566639-04-01		566639-04-01		566639-04-01		
	UNITS	Criteria	DUP 2 Lab-Dup	RDL	TP17-1 SS1	RDL	TP17-1 SS2	RDL	TP17-4 SS1	RDL	QC Batch
Aroclor 1248	ug/g	-		0.015	<0.015	0.015	<0.015	0.015	<0.015	0.015	4841367
Aroclor 1254	ug/g	-		0.015	<0.015	0.015	<0.015	0.015	<0.015	0.015	4841367
Aroclor 1260	ug/g	-		0.015	<0.015	0.015	<0.015	0.015	<0.015	0.015	4841367
Surrogate Recovery (%)											
2,4,5,6-Tetrachloro-m-xylene	%	-			75		79		75		4841367
Decachlorobiphenyl	%	-			95		102		97		4841367

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

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Maxxam Job #: B712914
Report Date: 2017/01/31

WSP Canada Inc
Client Project #: 161-06960-00/118/003
Site Location: 5426-5584 LAKESHORE RD

O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID			DUC070		
Sampling Date			2017/01/19 09:55		
COC Number			566639-04-01		
	UNITS	Criteria	TP17-5 SS1	RDL	QC Batch
Inorganics					
Moisture	%	-	12	1.0	4841384
Calculated Parameters					
Chlordane (Total)	ug/g	-	<0.0020	0.0020	4834904
o,p-DDD + p,p-DDD	ug/g	-	<0.0020	0.0020	4834904
o,p-DDE + p,p-DDE	ug/g	-	0.062	0.010	4834904
o,p-DDT + p,p-DDT	ug/g	-	0.055	0.010	4834904
Total Endosulfan	ug/g	-	<0.0020	0.0020	4834904
Total PCB	ug/g	**0.35**	<0.015	0.015	4834904
Pesticides & Herbicides					
Aldrin	ug/g	**0.05**	<0.0020	0.0020	4841367
a-Chlordane	ug/g	**0.05**	<0.0020	0.0020	4841367
g-Chlordane	ug/g	**0.05**	<0.0020	0.0020	4841367
o,p-DDD	ug/g	**3.3**	<0.0020	0.0020	4841367
p,p-DDD	ug/g	**3.3**	<0.0020	0.0020	4841367
o,p-DDE	ug/g	**0.26**	<0.0020	0.0020	4841367
p,p-DDE	ug/g	**0.26**	0.062	0.010	4841367
o,p-DDT	ug/g	**1.4**	0.0087	0.0020	4841367
p,p-DDT	ug/g	**1.4**	0.046	0.010	4841367
Dieldrin	ug/g	**0.05**	**0.080**	0.010	4841367
Lindane	ug/g	**0.056**	<0.0020	0.0020	4841367
Endosulfan I (alpha)	ug/g	**0.04**	<0.0020	0.0020	4841367
Endosulfan II (beta)	ug/g	**0.04**	<0.0020	0.0020	4841367
Endrin	ug/g	**0.04**	<0.0020	0.0020	4841367
Heptachlor	ug/g	**0.15**	<0.0020	0.0020	4841367
Heptachlor epoxide	ug/g	**0.05**	<0.0020	0.0020	4841367
Hexachlorobenzene	ug/g	**0.52**	<0.0020	0.0020	4841367
Hexachlorobutadiene	ug/g	**0.012**	<0.0020	0.0020	4841367
Hexachloroethane	ug/g	**0.089**	<0.0020	0.0020	4841367
Methoxychlor	ug/g	**0.13**	<0.0050	0.0050	4841367
Aroclor 1242	ug/g	**-**	<0.015	0.015	4841367

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

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O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID			DUC070		
Sampling Date			2017/01/19 09:55		
COC Number			566639-04-01		
	UNITS	Criteria	TP17-5 SS1	RDL	QC Batch
Aroclor 1248	ug/g	-	<0.015	0.015	4841367
Aroclor 1254	ug/g	-	<0.015	0.015	4841367
Aroclor 1260	ug/g	-	<0.015	0.015	4841367
Surrogate Recovery (%)					
2,4,5,6-Tetrachloro-m-xylene	%	-	77		4841367
Decachlorobiphenyl	%	-	98		4841367

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B712914
Report Date: 2017/01/31

WSP Canada Inc
Client Project #: 161-06960-00/118/003
Site Location: 5426-5584 LAKESHORE RD

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID			DUC064	DUC065	DUC066	DUC067	DUC067		
Sampling Date			2017/01/19 09:00	2017/01/19 09:10	2017/01/19	2017/01/19 09:30	2017/01/19 09:30		
COC Number			566639-04-01	566639-04-01	566639-04-01	566639-04-01	566639-04-01		
	UNITS	Criteria	TP17-3 SS1	TP17-2 SS1	DUP 2	TP17-1 SS1	TP17-1 SS1 Lab-Dup	RDL	QC Batch
Metals									
Acid Extractable Arsenic (As)	ug/g	**18**	1.9	2.3	<1.0	1.2	1.2	1.0	4839878

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

Maxxam ID			DUC068	DUC069	DUC070		
Sampling Date			2017/01/19 09:35	2017/01/19 09:45	2017/01/19 09:55		
COC Number			566639-04-01	566639-04-01	566639-04-01		
	UNITS	Criteria	TP17-1 SS2	TP17-4 SS1	TP17-5 SS1	RDL	QC Batch
Metals							
Acid Extractable Arsenic (As)	ug/g	**18**	<1.0	1.3	1.0	1.0	4839878

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Texture

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Maxxam Job #: B712914
Report Date: 2017/01/31

WSP Canada Inc
Client Project #: 161-06960-00/118/003
Site Location: 5426-5584 LAKESHORE RD

TEST SUMMARY

Maxxam ID: DUC064 **Collected:** 2017/01/19
Sample ID: TP17-3 SS1 **Shipped:**
Matrix: Soil **Received:** 2017/01/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4839878	2017/01/26	2017/01/26	Daniel Teclu
Moisture	BAL	4841384	N/A	2017/01/27	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	4841367	2017/01/27	2017/01/31	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4834904	N/A	2017/01/26	Automated Statchk

Maxxam ID: DUC065 **Collected:** 2017/01/19
Sample ID: TP17-2 SS1 **Shipped:**
Matrix: Soil **Received:** 2017/01/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4839878	2017/01/26	2017/01/26	Daniel Teclu
Moisture	BAL	4841384	N/A	2017/01/27	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	4841367	2017/01/27	2017/01/31	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4834904	N/A	2017/01/26	Automated Statchk

Maxxam ID: DUC065 Dup **Collected:** 2017/01/19
Sample ID: TP17-2 SS1 **Shipped:**
Matrix: Soil **Received:** 2017/01/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	4841367	2017/01/27	2017/01/31	Farahnaz Somwaru

Maxxam ID: DUC066 **Collected:** 2017/01/19
Sample ID: DUP 2 **Shipped:**
Matrix: Soil **Received:** 2017/01/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4839878	2017/01/26	2017/01/26	Daniel Teclu
Moisture	BAL	4841384	N/A	2017/01/27	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	4841367	2017/01/27	2017/01/31	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4834904	N/A	2017/01/26	Automated Statchk

Maxxam ID: DUC066 Dup **Collected:** 2017/01/19
Sample ID: DUP 2 **Shipped:**
Matrix: Soil **Received:** 2017/01/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4841384	N/A	2017/01/27	Min Yang

Maxxam ID: DUC067 **Collected:** 2017/01/19
Sample ID: TP17-1 SS1 **Shipped:**
Matrix: Soil **Received:** 2017/01/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4839878	2017/01/26	2017/01/26	Daniel Teclu
Moisture	BAL	4841384	N/A	2017/01/27	Min Yang

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Maxxam Job #: B712914
Report Date: 2017/01/31

WSP Canada Inc
Client Project #: 161-06960-00/118/003
Site Location: 5426-5584 LAKESHORE RD

TEST SUMMARY

Maxxam ID: DUC067 **Collected:** 2017/01/19
Sample ID: TP17-1 SS1 **Shipped:**
Matrix: Soil **Received:** 2017/01/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	4841367	2017/01/27	2017/01/31	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4834904	N/A	2017/01/26	Automated Statchk

Maxxam ID: DUC067 Dup **Collected:** 2017/01/19
Sample ID: TP17-1 SS1 **Shipped:**
Matrix: Soil **Received:** 2017/01/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4839878	2017/01/26	2017/01/26	Daniel Teclu

Maxxam ID: DUC068 **Collected:** 2017/01/19
Sample ID: TP17-1 SS2 **Shipped:**
Matrix: Soil **Received:** 2017/01/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4839878	2017/01/26	2017/01/26	Daniel Teclu
Moisture	BAL	4841384	N/A	2017/01/27	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	4841367	2017/01/27	2017/01/31	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4834904	N/A	2017/01/26	Automated Statchk

Maxxam ID: DUC069 **Collected:** 2017/01/19
Sample ID: TP17-4 SS1 **Shipped:**
Matrix: Soil **Received:** 2017/01/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4839878	2017/01/26	2017/01/26	Daniel Teclu
Moisture	BAL	4841384	N/A	2017/01/27	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	4841367	2017/01/27	2017/01/31	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4834904	N/A	2017/01/26	Automated Statchk

Maxxam ID: DUC070 **Collected:** 2017/01/19
Sample ID: TP17-5 SS1 **Shipped:**
Matrix: Soil **Received:** 2017/01/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	4839878	2017/01/26	2017/01/26	Daniel Teclu
Moisture	BAL	4841384	N/A	2017/01/27	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	4841367	2017/01/27	2017/01/31	Farahnaz Somwaru
OC Pesticides Summed Parameters	CALC	4834904	N/A	2017/01/26	Automated Statchk

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Maxxam Job #: B712914
Report Date: 2017/01/31

WSP Canada Inc
Client Project #: 161-06960-00/118/003
Site Location: 5426-5584 LAKESHORE RD

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.3°C

OC Pesticide Analysis: Due to high concentrations of the target analytes, most samples required dilution. Detection limits were adjusted accordingly.

Sample DUC064 [TP17-3 SS1] : OC Pesticide Analysis: Detection limits were raised due to matrix interferences.

Results relate only to the items tested.

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Maxxam Job #: B712914
Report Date: 2017/01/31

WSP Canada Inc
Client Project #: 161-06960-00/118/003
Site Location: 5426-5584 LAKESHORE RD

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4839878	DT1	Matrix Spike [DUC067-01]	Acid Extractable Arsenic (As)	2017/01/26		99	%	75 - 125
4839878	DT1	Spiked Blank	Acid Extractable Arsenic (As)	2017/01/26		101	%	80 - 120
4839878	DT1	Method Blank	Acid Extractable Arsenic (As)	2017/01/26	<1.0		ug/g	
4839878	DT1	RPD [DUC067-01]	Acid Extractable Arsenic (As)	2017/01/26	NC		%	30
4841367	FSO	Matrix Spike [DUC065-01]	2,4,5,6-Tetrachloro-m-xylene	2017/01/31		81	%	50 - 130
			Decachlorobiphenyl	2017/01/31		108	%	50 - 130
			Aldrin	2017/01/31		99	%	50 - 130
			a-Chlordane	2017/01/31		100	%	50 - 130
			g-Chlordane	2017/01/31		91	%	50 - 130
			o,p-DDD	2017/01/31		105	%	50 - 130
			p,p-DDD	2017/01/31		94	%	50 - 130
			o,p-DDE	2017/01/31		125	%	50 - 130
			p,p-DDE	2017/01/31		NC	%	50 - 130
			o,p-DDT	2017/01/31		97	%	50 - 130
			p,p-DDT	2017/01/31		NC	%	50 - 130
			Dieldrin	2017/01/31		NC	%	50 - 130
			Lindane	2017/01/31		81	%	50 - 130
			Endosulfan I (alpha)	2017/01/31		97	%	50 - 130
			Endosulfan II (beta)	2017/01/31		93	%	50 - 130
			Endrin	2017/01/31		101	%	50 - 130
			Heptachlor	2017/01/31		88	%	50 - 130
			Heptachlor epoxide	2017/01/31		87	%	50 - 130
			Hexachlorobenzene	2017/01/31		92	%	50 - 130
			Hexachlorobutadiene	2017/01/31		80	%	50 - 130
			Hexachloroethane	2017/01/31		63	%	50 - 130
			Methoxychlor	2017/01/31		97	%	50 - 130
4841367	FSO	Spiked Blank	2,4,5,6-Tetrachloro-m-xylene	2017/01/31		76	%	50 - 130
			Decachlorobiphenyl	2017/01/31		103	%	50 - 130
			Aldrin	2017/01/31		81	%	50 - 130
			a-Chlordane	2017/01/31		84	%	50 - 130
			g-Chlordane	2017/01/31		87	%	50 - 130
			o,p-DDD	2017/01/31		95	%	50 - 130
			p,p-DDD	2017/01/31		89	%	50 - 130
			o,p-DDE	2017/01/31		94	%	50 - 130
			p,p-DDE	2017/01/31		106	%	50 - 130
			o,p-DDT	2017/01/31		88	%	50 - 130
			p,p-DDT	2017/01/31		86	%	50 - 130
			Dieldrin	2017/01/31		99	%	50 - 130
			Lindane	2017/01/31		77	%	50 - 130
			Endosulfan I (alpha)	2017/01/31		95	%	50 - 130
			Endosulfan II (beta)	2017/01/31		85	%	50 - 130
			Endrin	2017/01/31		91	%	50 - 130
			Heptachlor	2017/01/31		78	%	50 - 130
			Heptachlor epoxide	2017/01/31		82	%	50 - 130
			Hexachlorobenzene	2017/01/31		82	%	50 - 130
			Hexachlorobutadiene	2017/01/31		82	%	50 - 130
			Hexachloroethane	2017/01/31		67	%	50 - 130
			Methoxychlor	2017/01/31		91	%	50 - 130
4841367	FSO	RPD	Aroclor 1242	2017/01/31	NC		%	40
4841367	FSO	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2017/01/31		77	%	50 - 130
			Decachlorobiphenyl	2017/01/31		106	%	50 - 130
			Aldrin	2017/01/31	<0.0020		ug/g	
			a-Chlordane	2017/01/31	<0.0020		ug/g	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			g-Chlordane	2017/01/31	<0.0020		ug/g	
			o,p-DDD	2017/01/31	<0.0020		ug/g	
			p,p-DDD	2017/01/31	<0.0020		ug/g	
			o,p-DDE	2017/01/31	<0.0020		ug/g	
			p,p-DDE	2017/01/31	<0.0020		ug/g	
			o,p-DDT	2017/01/31	<0.0020		ug/g	
			p,p-DDT	2017/01/31	<0.0020		ug/g	
			Dieldrin	2017/01/31	<0.0020		ug/g	
			Lindane	2017/01/31	<0.0020		ug/g	
			Endosulfan I (alpha)	2017/01/31	<0.0020		ug/g	
			Endosulfan II (beta)	2017/01/31	<0.0020		ug/g	
			Endrin	2017/01/31	<0.0020		ug/g	
			Heptachlor	2017/01/31	<0.0020		ug/g	
			Heptachlor epoxide	2017/01/31	<0.0020		ug/g	
			Hexachlorobenzene	2017/01/31	<0.0020		ug/g	
			Hexachlorobutadiene	2017/01/31	<0.0020		ug/g	
			Hexachloroethane	2017/01/31	<0.0020		ug/g	
			Methoxychlor	2017/01/31	<0.0050		ug/g	
			Aroclor 1242	2017/01/31	<0.015		ug/g	
			Aroclor 1248	2017/01/31	<0.015		ug/g	
			Aroclor 1254	2017/01/31	<0.015		ug/g	
			Aroclor 1260	2017/01/31	<0.015		ug/g	
4841367	FSO	RPD [DUC065-01]	Aldrin	2017/01/31	NC		%	40
			a-Chlordane	2017/01/31	NC		%	40
			g-Chlordane	2017/01/31	NC		%	40
			o,p-DDD	2017/01/31	NC		%	40
			p,p-DDD	2017/01/31	NC		%	40
			o,p-DDE	2017/01/31	NC		%	40
			p,p-DDE	2017/01/31	6.8		%	40
			o,p-DDT	2017/01/31	NC		%	40
			p,p-DDT	2017/01/31	5.2		%	40
			Dieldrin	2017/01/31	0.71		%	40
			Lindane	2017/01/31	NC		%	40
			Endosulfan I (alpha)	2017/01/31	NC		%	40
			Endosulfan II (beta)	2017/01/31	NC		%	40
			Endrin	2017/01/31	NC		%	40
			Heptachlor	2017/01/31	NC		%	40
			Heptachlor epoxide	2017/01/31	NC		%	40
			Hexachlorobenzene	2017/01/31	NC		%	40
			Hexachlorobutadiene	2017/01/31	NC		%	40
			Hexachloroethane	2017/01/31	NC		%	40
			Methoxychlor	2017/01/31	NC		%	40
			Aroclor 1242	2017/01/31	NC		%	40
			Aroclor 1248	2017/01/31	NC		%	40
			Aroclor 1254	2017/01/31	NC		%	40
			Aroclor 1260	2017/01/31	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4841384	GYA	RPD [DUC066-01]	Moisture	2017/01/27	0		%	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

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Maxxam Job #: B712914
Report Date: 2017/01/31

WSP Canada Inc
Client Project #: 161-06960-00/118/003
Site Location: 5426-5584 LAKESHORE RD

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Brad Newman, Scientific Specialist

Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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CHAIN OF CUSTODY RECORD

Page 1 of 1

INVOICE TO:
Company Name: #1089 WSP Canada Inc
Attention: Accounts Payable
Address: 126 Don Hillock Dr Unit 2, Aurora ON L4G 0G9
Tel: (905) 750-3080 x Fax: (905) 727-0463 x
Email: payables.ontario@wspgroup.com

REPORT TO:
Company Name: WSP Canada Inc.
Attention: Daniel Oliveira
Address: 126 Don Hillock Dr.
Tel: (905) 750-3080 x Fax:
Email: Daniel.Oliveira@wspgroup.com

PROJECT INFORMATION:
Quotation #: B62738
P.O. #:
Project: 161-06960-00/118/003
Project Name: 5426-5584 Lakeshore Rd.
Site #:
Sampled By:

Laboratory Use Only:
Maxxam Job #:
Bottle Order #: 566639
COC #: C#566639-04-01
Project Manager: Ashton Gibson

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
☐ Table 1 ☒ Res/Park ☐ Medium/Fine
☒ Table 2 ☐ Ind/Comm ☒ Coarse
☐ Table 3 ☐ Agri/Other ☐ For RSC
☐ Table ___

Other Regulations
☐ CCME ☐ Sanitary Sewer Bylaw
☐ Reg 558 ☐ Storm Sewer Bylaw
☐ MISA Municipality
☐ PWQO
☐ Other

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	* Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O.Reg 153 VOCs & F1-F4 (Soil)	O.Reg 153 Metals & Inorganics Pkg (Soil)	O.Reg 153 PAHs (Soil)	Glycols in Soil by GC-FID	PAH O.Reg 153 ~~& Rs7L~~	O.Reg 153 ~~& Rs7L~~ Restricted	Arsenic				# of Bottles	Comments
1		TP 17-3 SS1	2017/01/19	9:00 AM	SOIL							X	X				1	
2		TP 17-2 SS1		9:10 AM								X	X				1	
3		DUP 1										X	X				1	
4		TP 17-1 SS1		9:30 AM								X	X				1	
5		TP 17-1 SS2		9:35 AM								X	X				1	
6		TP 17-4 SS1		9:45 AM								X	X				1	
7		TP 17-5 SS1.		9:55 AM								X	X				1	
8																		
9																		
10																		

20-Jan-17 09:12
Ashton Gibson
B712914
TSP ENV-1214

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
Daniel Oliveira	2017/01/19	12:00 PM	HARUN MOHIA	2017/01/20	09:12	0		6/6/7	Present	✓	
									Intact	✓	

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

APPENDIX

C-3A JUNE 2017 CERTIFICATES OF ANALYSIS - SOIL

WSP Canada Inc.
ATTN: Daniel Oliveira
126 Hillock Drive
Unit 2
Aurora ON L4G 0G9

Date Received: 08-JUN-17
Report Date: 19-JUN-17 16:06 (MT)
Version: FINAL

Client Phone: 905-750-3080

Certificate of Analysis

Lab Work Order #: L1938870

Project P.O. #:	NOT SUBMITTED
Job Reference:	161-06960-00/118/005
C of C Numbers:	14-465167
Legal Site Desc:	N/A

Emerson Perez, B.S.E
Account Manager

Summary of Guideline Exceedances

ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Guideline						
Ontario Regulation 153/04 - April 15, 2011 Standards - T2-Soil-Res/Park/Inst. Property Use (Coarse)						
L1938870-2	TH AS3	Organochlorine Pesticides	Endosulfan (Total)	<0.054	0.04	ug/g
L1938870-4	TH CS1	Organochlorine Pesticides	Dieldrin	0.067	0.05	ug/g
L1938870-7	TH ES1	Organochlorine Pesticides	Dieldrin	0.056	0.05	ug/g
L1938870-8	TH ES3	Organochlorine Pesticides	Dieldrin	0.300	0.05	ug/g
L1938870-9	TH ES5	Organochlorine Pesticides	Dieldrin	0.094	0.05	ug/g
Ontario Regulation 153/04 - April 15, 2011 Standards - T2-Soil-Res/Park/Inst. Property Use (Fine)						
L1938870-2	TH AS3	Organochlorine Pesticides	Endosulfan (Total)	<0.054	0.04	ug/g
L1938870-4	TH CS1	Organochlorine Pesticides	Dieldrin	0.067	0.05	ug/g
L1938870-7	TH ES1	Organochlorine Pesticides	Dieldrin	0.056	0.05	ug/g
L1938870-8	TH ES3	Organochlorine Pesticides	Dieldrin	0.300	0.05	ug/g
L1938870-9	TH ES5	Organochlorine Pesticides	Dieldrin	0.094	0.05	ug/g

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Physical Tests - SOIL

Analyte	Unit	Guide Limits #1	Guide Limits #2	Lab ID	Sample Date	Sample ID							
				L1938870-1	L1938870-2	L1938870-3	L1938870-4	L1938870-5	L1938870-6	L1938870-7	L1938870-8	L1938870-9
				07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17
				TH AS1	TH AS3	TH AS5	TH CS1	TH CS5	TH CS1N	TH ES1	TH ES3	TH ES5
% Moisture	%	-	-	14.7	15.1	12.0	12.7	8.32	11.0	14.7	13.7	12.2

Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)
Guide Limit #2: T2-Soil-Res/Park/Inst. Property Use (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.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

ANALYTICAL REPORT

Physical Tests - SOIL

Analyte	Unit	Guide Limits #1	Guide Limits #2	Lab ID: L1938870-10 Sample Date: 07-JUN-17 Sample ID: SOIL DUP 1
% Moisture	%	-	-	11.7

Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)
Guide Limit #2: T2-Soil-Res/Park/Inst. Property Use (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.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

ANALYTICAL REPORT

Metals - SOIL

Analyte	Unit	Guide Limits #1	Guide Limits #2	Lab ID	L1938870-1	L1938870-2	L1938870-3	L1938870-4	L1938870-5	L1938870-6	L1938870-7	L1938870-8	L1938870-9
				Sample Date	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17
				Sample ID	TH AS1	TH AS3	TH AS5	TH CS1	TH CS5	TH CS1N	TH ES1	TH ES3	TH ES5
Arsenic (As)	ug/g	18	18		3.45	1.66	2.25	4.81	2.24	1.18	6.42	5.68	4.64

Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)
Guide Limit #2: T2-Soil-Res/Park/Inst. Property Use (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.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

ANALYTICAL REPORT

Metals - SOIL

			Lab ID	L1938870-10
			Sample Date	07-JUN-17
			Sample ID	SOIL DUP 1
		Guide Limits		
Analyte	**Unit**	**#1**	**#2**	
Arsenic (As)	ug/g	18	18	1.13

Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)
Guide Limit #2: T2-Soil-Res/Park/Inst. Property Use (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.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Organochlorine Pesticides - SOIL

	Lab ID			L1938870-1	L1938870-2	L1938870-3	L1938870-4	L1938870-5	L1938870-6	L1938870-7	L1938870-8	L1938870-9
	Sample Date			07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17	07-JUN-17
	Sample ID			TH AS1	TH AS3	TH AS5	TH CS1	TH CS5	TH CS1N	TH ES1	TH ES3	TH ES5
Analyte	**Unit**	**Guide Limits #1**	**#2**									
Aldrin	ug/g	0.05	0.05	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
gamma-hexachlorocyclohexane	ug/g	0.056	0.063	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
a-chlordane	ug/g	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Chlordane (Total)	ug/g	0.05	0.05	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
g-chlordane	ug/g	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
op-DDD	ug/g	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
pp-DDD	ug/g	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Total DDD	ug/g	3.3	3.3	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
o,p-DDE	ug/g	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
pp-DDE	ug/g	-	-	0.098	0.031	0.070	0.080	0.021	<0.020	0.118	0.113	0.077
Total DDE	ug/g	0.26	0.33	0.098	0.031	0.070	0.080	<0.028	<0.028	0.118	0.113	0.077
op-DDT	ug/g	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
pp-DDT	ug/g	-	-	0.055	<0.020	0.057	0.044	<0.020	<0.020	0.045	0.086	0.044
Total DDT	ug/g	1.4	1.4	0.055	<0.028	0.057	0.044	<0.028	<0.028	0.045	0.086	0.044
Dieldrin	ug/g	0.05	0.05	<0.020	<0.020	0.024	0.067	<0.020	<0.020	0.056	0.300	0.094
Endosulfan I	ug/g	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endosulfan II	ug/g	-	-	<0.020	<0.050 DLQ	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endosulfan (Total)	ug/g	0.04	0.04	<0.028	<0.054	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
Endrin	ug/g	0.04	0.04	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Heptachlor	ug/g	0.15	0.15	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Heptachlor Epoxide	ug/g	0.05	0.05	<0.020	<0.040 DLQ	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Hexachlorobenzene	ug/g	0.52	0.52	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Hexachlorobutadiene	ug/g	0.012	0.014	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Hexachloroethane	ug/g	0.089	0.07	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Methoxychlor	ug/g	0.13	0.13	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Surrogate: 2-Fluorobiphenyl	%	-	-	90.3	92.3	90.9	90.7	93.1	96.2	89.9	90.0	90.1
Surrogate: d14-Terphenyl	%	-	-	84.5	91.2	79.5	82.3	89.2	88.0	82.5	77.7	81.3

Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)
Guide Limit #2: T2-Soil-Res/Park/Inst. Property Use (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.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Organochlorine Pesticides - SOIL

			Lab ID	L1938870-10
			Sample Date	07-JUN-17
			Sample ID	SOIL DUP 1
		Guide Limits		
Analyte	**Unit**	**#1**	**#2**	
Aldrin	ug/g	0.05	0.05	<0.020
gamma-hexachlorocyclohexane	ug/g	0.056	0.063	<0.010
a-chlordane	ug/g	-	-	<0.020
Chlordane (Total)	ug/g	0.05	0.05	<0.028
g-chlordane	ug/g	-	-	<0.020
op-DDD	ug/g	-	-	<0.020
pp-DDD	ug/g	-	-	<0.020
Total DDD	ug/g	3.3	3.3	<0.028
o,p-DDE	ug/g	-	-	<0.020
pp-DDE	ug/g	-	-	<0.020
Total DDE	ug/g	0.26	0.33	<0.028
op-DDT	ug/g	-	-	<0.020
pp-DDT	ug/g	-	-	<0.020
Total DDT	ug/g	1.4	1.4	<0.028
Dieldrin	ug/g	0.05	0.05	<0.020
Endosulfan I	ug/g	-	-	<0.020
Endosulfan II	ug/g	-	-	<0.020
Endosulfan (Total)	ug/g	0.04	0.04	<0.028
Endrin	ug/g	0.04	0.04	<0.020
Heptachlor	ug/g	0.15	0.15	<0.020
Heptachlor Epoxide	ug/g	0.05	0.05	<0.020
Hexachlorobenzene	ug/g	0.52	0.52	<0.010
Hexachlorobutadiene	ug/g	0.012	0.014	<0.010
Hexachloroethane	ug/g	0.089	0.07	<0.010
Methoxychlor	ug/g	0.13	0.13	<0.020
Surrogate: 2-Fluorobiphenyl	%	-	-	92.4
Surrogate: d14-Terphenyl	%	-	-	85.0

Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)
Guide Limit #2: T2-Soil-Res/Park/Inst. Property Use (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.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Reference Information

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLQ	Detection Limit raised due to co-eluting interference. GCMS qualifier ion ratio did not meet acceptance criteria.

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
CHLORDANE-T-CALC-WT	Soil	Chlordane Total sums	CALCULATION
Aqueous sample is extracted by liquid/liquid extraction with a solvent mix. After extraction, a number of clean up techniques may be applied, depending on the sample matrix and analyzed by GC/MS.			
DDD-DDE-DDT-CALC-WT	Soil	DDD, DDE, DDT sums	CALCULATION
Aqueous sample is extracted by liquid/liquid extraction with a solvent mix. After extraction, a number of clean up techniques may be applied, depending on the sample matrix and analyzed by GC/MS.			
ENDOSULFAN-T-CALC-WT	Soil	Endosulfan Total sums	CALCULATION
Aqueous sample is extracted by liquid/liquid extraction with a solvent mix. After extraction, a number of clean up techniques may be applied, depending on the sample matrix and analyzed by GC/MS.			
MET-200.2-CCMS-WT	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020A (mod)
This method uses a heated strong acid digestion with HNO3 and HCl and is intended to liberate metals that may be environmentally available. Silicate minerals are not solubilized. Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. Analysis is by Collision/Reaction Cell ICPMS.			
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), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).			
MOISTURE-WT	Soil	% Moisture	Gravimetric: Oven Dried
PEST-OC-511-WT	Soil	OC Pesticides-O.Reg 153/04 (July 2011)	SW846 8270 (511)
Soil sample is extracted in a solvent, after extraction a number of clean up techniques may be applied, depending on the sample matrix and analyzed by GC/MS.			
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), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).			

**ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody Numbers:

14-465167

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

Reference Information

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.

Quality Control Report

Workorder: L1938870 Report Date: 19-JUN-17

Client: WSP Canada Inc.
126 Hillock Drive Unit 2
Aurora ON L4G 0G9
Contact: Daniel Oliveira

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R3750911								
WG2549897-2 CRM		**WT-SS-1**						
Arsenic (As)			116.7		%		70-130	16-JUN-17
WG2549897-6 DUP		**WG2549897-5**						
Arsenic (As)		4.82	4.75		ug/g	1.6	30	16-JUN-17
WG2549897-4 LCS								
Arsenic (As)			98.2		%		80-120	16-JUN-17
WG2549897-1 MB								
Arsenic (As)			<0.10		mg/kg		0.1	16-JUN-17
MOISTURE-WT	**Soil**							
Batch R3743304								
WG2544287-3 DUP		**L1935779-21**						
% Moisture		5.76	5.89		%	2.3	20	09-JUN-17
WG2544287-2 LCS								
% Moisture			100.2		%		90-110	09-JUN-17
WG2544287-1 MB								
% Moisture			<0.10		%		0.1	09-JUN-17
Batch R3744024								
WG2544821-3 DUP		**L1938870-6**						
% Moisture		11.0	11.1		%	0.7	20	09-JUN-17
WG2544821-2 LCS								
% Moisture			100.0		%		90-110	09-JUN-17
WG2544821-1 MB								
% Moisture			<0.10		%		0.1	09-JUN-17
PEST-OC-511-WT	**Soil**							
Batch R3744323								
WG2544672-4 DUP		**WG2544672-3**						
Aldrin		<0.020	<0.020	RPD-NA	ug/g	N/A	40	11-JUN-17
a-chlordane		<0.020	<0.020	RPD-NA	ug/g	N/A	40	11-JUN-17
g-chlordane		<0.020	<0.020	RPD-NA	ug/g	N/A	40	11-JUN-17
op-DDD		<0.020	<0.020	RPD-NA	ug/g	N/A	40	11-JUN-17
pp-DDD		<0.020	<0.020	RPD-NA	ug/g	N/A	40	11-JUN-17
o,p-DDE		<0.020	<0.020	RPD-NA	ug/g	N/A	40	11-JUN-17
pp-DDE		0.031	0.032		ug/g	3.2	40	11-JUN-17
op-DDT		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
pp-DDT		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
Dieldrin		<0.020	<0.020	RPD-NA	ug/g	N/A	40	11-JUN-17

Quality Control Report

Client: WSP Canada Inc.
126 Hillock Drive Unit 2
Aurora ON L4G 0G9
Contact: Daniel Oliveira

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-OC-511-WT	**Soil**							
Batch R3744323								
WG2544672-4 DUP		**WG2544672-3**						
Endosulfan I		<0.020	<0.020	RPD-NA	ug/g	N/A	40	11-JUN-17
Endosulfan II		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-17
Endrin		<0.020	<0.020	RPD-NA	ug/g	N/A	40	11-JUN-17
gamma-hexachlorocyclohexane		<0.010	<0.010	RPD-NA	ug/g	N/A	40	11-JUN-17
Heptachlor		<0.020	<0.020	RPD-NA	ug/g	N/A	40	11-JUN-17
Heptachlor Epoxide		<0.040	<0.040	RPD-NA	ug/g	N/A	40	11-JUN-17
Hexachlorobenzene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	11-JUN-17
Hexachlorobutadiene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	11-JUN-17
Hexachloroethane		<0.010	<0.010	RPD-NA	ug/g	N/A	40	11-JUN-17
Methoxychlor		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
WG2544672-2 LCS								
Aldrin			102.8		%		50-140	11-JUN-17
a-chlordane			94.0		%		50-140	11-JUN-17
g-chlordane			103.7		%		50-140	11-JUN-17
op-DDD			89.7		%		50-140	11-JUN-17
pp-DDD			83.0		%		50-140	11-JUN-17
o,p-DDE			96.5		%		50-140	11-JUN-17
pp-DDE			99.9		%		50-140	11-JUN-17
op-DDT			82.9		%		50-140	11-JUN-17
pp-DDT			72.5		%		50-140	11-JUN-17
Dieldrin			99.1		%		50-140	11-JUN-17
Endosulfan I			94.5		%		50-140	11-JUN-17
Endosulfan II			87.3		%		50-140	11-JUN-17
Endrin			80.4		%		50-140	11-JUN-17
gamma-hexachlorocyclohexane			99.9		%		50-140	11-JUN-17
Heptachlor			90.6		%		50-140	11-JUN-17
Heptachlor Epoxide			101.0		%		50-140	11-JUN-17
Hexachlorobenzene			104.9		%		50-140	11-JUN-17
Hexachlorobutadiene			105.1		%		50-140	11-JUN-17
Hexachloroethane			131.7		%		50-140	11-JUN-17
Methoxychlor			81.5		%		50-140	11-JUN-17
WG2544672-1 MB								
Aldrin			<0.020		ug/g		0.02	11-JUN-17
a-chlordane			<0.020		ug/g		0.02	11-JUN-17

Quality Control Report

Client: WSP Canada Inc.
126 Hillock Drive Unit 2
Aurora ON L4G 0G9
Contact: Daniel Oliveira

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-OC-511-WT	**Soil**							
Batch R3744323								
WG2544672-1 MB								
g-chlordane			<0.020		ug/g		0.02	11-JUN-17
op-DDD			<0.020		ug/g		0.02	11-JUN-17
pp-DDD			<0.020		ug/g		0.02	11-JUN-17
o,p-DDE			<0.020		ug/g		0.02	11-JUN-17
pp-DDE			<0.020		ug/g		0.02	11-JUN-17
op-DDT			<0.020		ug/g		0.02	11-JUN-17
pp-DDT			<0.020		ug/g		0.02	11-JUN-17
Dieldrin			<0.020		ug/g		0.02	11-JUN-17
Endosulfan I			<0.020		ug/g		0.02	11-JUN-17
Endosulfan II			<0.020		ug/g		0.02	11-JUN-17
Endrin			<0.020		ug/g		0.02	11-JUN-17
gamma-hexachlorocyclohexane			<0.010		ug/g		0.01	11-JUN-17
Heptachlor			<0.020		ug/g		0.02	11-JUN-17
Heptachlor Epoxide			<0.020		ug/g		0.02	11-JUN-17
Hexachlorobenzene			<0.010		ug/g		0.01	11-JUN-17
Hexachlorobutadiene			<0.010		ug/g		0.01	11-JUN-17
Hexachloroethane			<0.010		ug/g		0.01	11-JUN-17
Methoxychlor			<0.020		ug/g		0.02	11-JUN-17
Surrogate: 2-Fluorobiphenyl			99.5		%		50-140	11-JUN-17
Surrogate: d14-Terphenyl			102.8		%		50-140	11-JUN-17
WG2544672-5 MS		**WG2544672-3**						
Aldrin			116.1		%		50-140	11-JUN-17
a-chlordane			99.2		%		50-140	11-JUN-17
g-chlordane			104.4		%		50-140	11-JUN-17
op-DDD			113.1		%		50-140	11-JUN-17
pp-DDD			140.1	MES	%		50-140	11-JUN-17
o,p-DDE			90.5		%		50-140	11-JUN-17
pp-DDE			96.2		%		50-140	11-JUN-17
Dieldrin			104.9		%		50-140	11-JUN-17
Endosulfan I			97.6		%		50-140	11-JUN-17
Endosulfan II			110.8		%		50-140	11-JUN-17
Endrin			153.9	RRQC	%		50-140	11-JUN-17
gamma-hexachlorocyclohexane			94.2		%		50-140	11-JUN-17
Heptachlor			99.7		%		50-140	11-JUN-17

Quality Control Report

Client: WSP Canada Inc.
126 Hillock Drive Unit 2
Aurora ON L4G 0G9
Contact: Daniel Oliveira

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-OC-511-WT	**Soil**							
Batch R3744323								
WG2544672-5 MS		**WG2544672-3**						
Heptachlor Epoxide			93.8		%		50-140	11-JUN-17
Hexachlorobenzene			99.4		%		50-140	11-JUN-17
Hexachlorobutadiene			93.9		%		50-140	11-JUN-17
Hexachloroethane			112.5		%		50-140	11-JUN-17
COMMENTS: RRQC: Matrix spike recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.								
WG2544672-5 MS		**WG2544672-3**						
op-DDT			73.2		%		50-140	12-JUN-17
pp-DDT			72.3		%		50-140	12-JUN-17
Methoxychlor			134.3		%		50-140	12-JUN-17
Batch R3745552								
WG2544904-4 DUP		**WG2544904-3**						
Aldrin		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
a-chlordane		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
g-chlordane		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
op-DDD		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
pp-DDD		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
o,p-DDE		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
pp-DDE		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
op-DDT		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
pp-DDT		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
Dieldrin		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
Endosulfan I		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
Endosulfan II		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
Endrin		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
gamma-hexachlorocyclohexane		<0.010	<0.010	RPD-NA	ug/g	N/A	40	12-JUN-17
Heptachlor		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
Heptachlor Epoxide		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
Hexachlorobenzene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	12-JUN-17
Hexachlorobutadiene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	12-JUN-17
Hexachloroethane		<0.010	<0.010	RPD-NA	ug/g	N/A	40	12-JUN-17
Methoxychlor		<0.020	<0.020	RPD-NA	ug/g	N/A	40	12-JUN-17
WG2544904-2 LCS								
Aldrin			121.4		%		50-140	12-JUN-17

Quality Control Report

Client: WSP Canada Inc.
126 Hillock Drive Unit 2
Aurora ON L4G 0G9
Contact: Daniel Oliveira

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-OC-511-WT	**Soil**							
Batch R3745552								
WG2544904-2 LCS								
a-chlordane			85.0		%		50-140	12-JUN-17
g-chlordane			90.5		%		50-140	12-JUN-17
op-DDD			81.7		%		50-140	12-JUN-17
pp-DDD			83.9		%		50-140	12-JUN-17
o,p-DDE			79.8		%		50-140	12-JUN-17
pp-DDE			82.0		%		50-140	12-JUN-17
op-DDT			84.5		%		50-140	12-JUN-17
pp-DDT			78.1		%		50-140	12-JUN-17
Dieldrin			96.5		%		50-140	12-JUN-17
Endosulfan I			82.0		%		50-140	12-JUN-17
Endosulfan II			84.2		%		50-140	12-JUN-17
Endrin			108.5		%		50-140	12-JUN-17
gamma-hexachlorocyclohexane			97.0		%		50-140	12-JUN-17
Heptachlor			124.7		%		50-140	12-JUN-17
Heptachlor Epoxide			95.6		%		50-140	12-JUN-17
Hexachlorobenzene			96.5		%		50-140	12-JUN-17
Hexachlorobutadiene			92.0		%		50-140	12-JUN-17
Hexachloroethane			117.5		%		50-140	12-JUN-17
Methoxychlor			128.6		%		50-140	12-JUN-17
WG2544904-1 MB								
Aldrin			<0.020		ug/g		0.02	12-JUN-17
a-chlordane			<0.020		ug/g		0.02	12-JUN-17
g-chlordane			<0.020		ug/g		0.02	12-JUN-17
op-DDD			<0.020		ug/g		0.02	12-JUN-17
pp-DDD			<0.020		ug/g		0.02	12-JUN-17
o,p-DDE			<0.020		ug/g		0.02	12-JUN-17
pp-DDE			<0.020		ug/g		0.02	12-JUN-17
op-DDT			<0.020		ug/g		0.02	12-JUN-17
pp-DDT			<0.020		ug/g		0.02	12-JUN-17
Dieldrin			<0.020		ug/g		0.02	12-JUN-17
Endosulfan I			<0.020		ug/g		0.02	12-JUN-17
Endosulfan II			<0.020		ug/g		0.02	12-JUN-17
Endrin			<0.020		ug/g		0.02	12-JUN-17
gamma-hexachlorocyclohexane			<0.010		ug/g		0.01	12-JUN-17

Quality Control Report

Client: WSP Canada Inc.
126 Hillock Drive Unit 2
Aurora ON L4G 0G9
Contact: Daniel Oliveira

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-OC-511-WT	**Soil**							
Batch R3745552								
WG2544904-1 MB								
Heptachlor			<0.020		ug/g		0.02	12-JUN-17
Heptachlor Epoxide			<0.020		ug/g		0.02	12-JUN-17
Hexachlorobenzene			<0.010		ug/g		0.01	12-JUN-17
Hexachlorobutadiene			<0.010		ug/g		0.01	12-JUN-17
Hexachloroethane			<0.010		ug/g		0.01	12-JUN-17
Methoxychlor			<0.020		ug/g		0.02	12-JUN-17
Surrogate: 2-Fluorobiphenyl			94.2		%		50-140	12-JUN-17
Surrogate: d14-Terphenyl			100.4		%		50-140	12-JUN-17
WG2544904-5 MS		**WG2544904-3**						
Aldrin			120.9		%		50-140	12-JUN-17
a-chlordane			83.9		%		50-140	12-JUN-17
g-chlordane			88.8		%		50-140	12-JUN-17
op-DDD			84.5		%		50-140	12-JUN-17
pp-DDD			90.7		%		50-140	12-JUN-17
o,p-DDE			77.3		%		50-140	12-JUN-17
pp-DDE			79.5		%		50-140	12-JUN-17
op-DDT			75.0		%		50-140	12-JUN-17
pp-DDT			73.5		%		50-140	12-JUN-17
Dieldrin			93.9		%		50-140	12-JUN-17
Endosulfan I			80.3		%		50-140	12-JUN-17
Endosulfan II			83.8		%		50-140	12-JUN-17
Endrin			113.2		%		50-140	12-JUN-17
gamma-hexachlorocyclohexane			95.2		%		50-140	12-JUN-17
Heptachlor			123.6		%		50-140	12-JUN-17
Heptachlor Epoxide			96.2		%		50-140	12-JUN-17
Hexachlorobenzene			96.0		%		50-140	12-JUN-17
Hexachlorobutadiene			93.2		%		50-140	12-JUN-17
Hexachloroethane			118.3		%		50-140	12-JUN-17
Methoxychlor			134.1		%		50-140	12-JUN-17

Quality Control Report

Workorder: L1938870 Report Date: 19-JUN-17

Client: WSP Canada Inc.
126 Hillock Drive Unit 2
Aurora ON L4G 0G9
Contact: Daniel Oliveira

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
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.
RRQC	Refer to report remarks for information regarding this QC result.

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

COC Number: 14 - 465167

Page 1 of 1

Affix ALS barcode label here (lab use only)

ALS Environmental

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

Report To
Company: WSP Canada Inc.
Contact: Daniel Oliveira
Address: 126 Don Hilbeck Drive, Unit 2 Aurora ON
Phone: 905-750-3080 x16314

Report Format / Distribution
Select Report Format: [X] PDF [X] EXCEL [ ] EDD (DIGITAL)
Quality Control (QC) Report with Report [X] Yes [ ] No
[ ] Criteria on Report - provide details below if box checked
Select Distribution: [X] EMAIL [ ] MAIL [ ] FAX
Email 1 or Fax: daniel.oliveira@wspgroup.com
Email 2:

Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
R [X] Regular (Standard TAT if received by 3pm)
P [ ] Priority (2-4 business days if received by 3pm)
E [ ] Emergency (1-2 business days if received by 3pm)
E2 [ ] Same day or weekend emergency if received by 10am – contact ALS for surcharge.
Specify Date Required for E2,E or P:

Invoice To Same as Report To [X] Yes [ ] No
Copy of Invoice with Report [ ] Yes [ ] No
Company:
Contact:

Invoice Distribution
Select Invoice Distribution: [X] EMAIL [ ] MAIL [ ] FAX
Email 1 or Fax: daniel.oliveira@wspgroup.com
Email 2:

Project Information
ALS Quote #: Q61477
Job #: 161-06960-00/118/005
PO / AFE:
LSD:

Oil and Gas Required Fields (client use)
Approver ID: Cost Center:
GL Account: Routing Code:
Activity Code:
Location:

ALS Lab Work Order # (lab use only): L1938870
ALS Contact: Emerson P Sampler: Dan Oliveira

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	O. Reg 153 OC Pesticides	O. Reg 153 Arsenic	Number of Containers
-1	TH AS1	07-06-17	10:00 AM	Soil	X	X	1
-2	TH AS3		10:15 AM		X	X	1
-3	TH AS5		10:30 AM		X	X	1
-4	TH CS1		11:00 AM		X	X	1
-5	TH CS5		11:10 AM		X	X	1
-6	TH CSIN		11:15 AM		X	X	1
-7	TH ES1		11:30 AM		X	X	1
-8	TH ES3		11:45 AM		X	X	1
-9	TH ES5		12:00 AM		X	X	1
-10	Soil Dup 1		—		X	X	1

Drinking Water (DW) Samples[1] (client use)
Are samples taken from a Regulated DW System? [ ] Yes [X] No
Are samples for human drinking water use? [ ] Yes [X] No

Special Instructions / Specify Criteria to add on report (client Use)
Table 2 RPI (O. Reg 153/04) standards

SAMPLE CONDITION AS RECEIVED (lab use only)
Frozen [ ] SIF Observations Yes [ ] No [ ]
Ice packs Yes [ ] No [ ] Custody seal intact Yes [ ] No [ ]
Cooling Initiated [ ]

INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C	
3.7			

SHIPMENT RELEASE (client use)
Released by: Dan Oliveira Date: 2017/06/07 Time: 16:00 PM

INITIAL SHIPMENT RECEPTION (lab use only)
Received by: JB Date: 2017/06/08 Time: 9:00

FINAL SHIPMENT RECEPTION (lab use only)
Received by: Date: Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

ALS-FM-0326e v09 Front/04 January 2014

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.

APPENDIX

C3-B JUNE 2017 CERTIFICATES OF ANALYSIS – SOIL (JULY SUBMITTAL)

WSP Canada Inc.
ATTN: DANIEL OLIVEIRA
126 Hillock Drive
Unit 2
Aurora ON L4G 0G9

Date Received: 11-JUL-17
Report Date: 18-JUL-17 09:55 (MT)
Version: FINAL

Client Phone: 905-750-3080

Certificate of Analysis

Lab Work Order #: L1956637

Project P.O. #: NOT SUBMITTED
Job Reference: 161-06960-00/118
C of C Numbers: 15-575340, 15-575341
Legal Site Desc:

Emerson Perez, B.S.E
Account Manager

Summary of Guideline Exceedances

ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Guideline						
Ontario Regulation 153/04 - April 15, 2011 Standards - T2-Soil-Res/Park/Inst. Property Use (Coarse)						
L1956637-2	TH BS2	Organochlorine Pesticides	Dieldrin	0.126	0.05	ug/g
L1956637-3	TH BS3	Organochlorine Pesticides	Dieldrin	0.145	0.05	ug/g
L1956637-5	TH CS2	Organochlorine Pesticides	Dieldrin	0.061	0.05	ug/g
L1956637-6	TH CS3	Organochlorine Pesticides	Dieldrin	0.133	0.05	ug/g
L1956637-7	TH CS4	Organochlorine Pesticides	Dieldrin	0.099	0.05	ug/g
L1956637-8	TH DS2	Organochlorine Pesticides	Dieldrin	0.569	0.05	ug/g
L1956637-9	TH DS3	Organochlorine Pesticides	Dieldrin	0.370	0.05	ug/g
L1956637-10	TH DS4	Organochlorine Pesticides	Dieldrin	0.251	0.05	ug/g
L1956637-12	TH ES6	Organochlorine Pesticides	Dieldrin	0.058	0.05	ug/g
L1956637-13	TH FS1	Organochlorine Pesticides	Dieldrin	0.057	0.05	ug/g
L1956637-14	TH FS3	Organochlorine Pesticides	Dieldrin	0.137	0.05	ug/g
L1956637-15	TH FS5	Organochlorine Pesticides	Dieldrin	0.120	0.05	ug/g
L1956637-16	SOIL DUP2	Organochlorine Pesticides	Dieldrin	0.070	0.05	ug/g
L1956637-17	SOIL DUP3	Organochlorine Pesticides	Dieldrin	0.092	0.05	ug/g
Ontario Regulation 153/04 - April 15, 2011 Standards - T2-Soil-Res/Park/Inst. Property Use (Fine)						
L1956637-2	TH BS2	Organochlorine Pesticides	Dieldrin	0.126	0.05	ug/g
L1956637-3	TH BS3	Organochlorine Pesticides	Dieldrin	0.145	0.05	ug/g
L1956637-5	TH CS2	Organochlorine Pesticides	Dieldrin	0.061	0.05	ug/g
L1956637-6	TH CS3	Organochlorine Pesticides	Dieldrin	0.133	0.05	ug/g
L1956637-7	TH CS4	Organochlorine Pesticides	Dieldrin	0.099	0.05	ug/g
L1956637-8	TH DS2	Organochlorine Pesticides	Dieldrin	0.569	0.05	ug/g
L1956637-9	TH DS3	Organochlorine Pesticides	Dieldrin	0.370	0.05	ug/g
L1956637-10	TH DS4	Organochlorine Pesticides	Dieldrin	0.251	0.05	ug/g
L1956637-12	TH ES6	Organochlorine Pesticides	Dieldrin	0.058	0.05	ug/g
L1956637-13	TH FS1	Organochlorine Pesticides	Dieldrin	0.057	0.05	ug/g
L1956637-14	TH FS3	Organochlorine Pesticides	Dieldrin	0.137	0.05	ug/g
L1956637-15	TH FS5	Organochlorine Pesticides	Dieldrin	0.120	0.05	ug/g
L1956637-16	SOIL DUP2	Organochlorine Pesticides	Dieldrin	0.070	0.05	ug/g
L1956637-17	SOIL DUP3	Organochlorine Pesticides	Dieldrin	0.092	0.05	ug/g

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Physical Tests - SOIL

Analyte	Unit	Guide Limits #1	Guide Limits #2	Lab ID	Sample Date	Sample ID						
				L1956637-1	L1956637-2	L1956637-3	L1956637-4	L1956637-5	L1956637-6	L1956637-7	L1956637-8	L1956637-9
				06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17
				TH BS1	TH BS2	TH BS3	TH AS2	TH CS2	TH CS3	TH CS4	TH DS2	TH DS3
% Moisture	%	-	-	15.8	12.1	10.3	13.8	11.3	12.9	10.8	12.4	11.1

Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)
Guide Limit #2: T2-Soil-Res/Park/Inst. Property Use (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.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

ANALYTICAL REPORT

Physical Tests - SOIL

Analyte	Unit	Guide Limits #1	Guide Limits #2	Lab ID	L1956637-10	L1956637-11	L1956637-12	L1956637-13	L1956637-14	L1956637-15	L1956637-16	L1956637-17
				Sample Date	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17
				Sample ID	TH DS4	TH DS5	TH ES6	TH FS1	TH FS3	TH FS5	SOIL DUP2	SOIL DUP3
% Moisture	%	-	-		9.65	7.10	9.16	17.2	15.7	13.6	17.8	8.94

Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)
Guide Limit #2: T2-Soil-Res/Park/Inst. Property Use (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.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Metals - SOIL

Analyte	Unit	Guide Limits #1	Guide Limits #2	Lab ID	L1956637-1	L1956637-2	L1956637-3	L1956637-4	L1956637-5	L1956637-6	L1956637-7	L1956637-8	L1956637-9
				Sample Date	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17
				Sample ID	TH BS1	TH BS2	TH BS3	TH AS2	TH CS2	TH CS3	TH CS4	TH DS2	TH DS3
Arsenic (As)	ug/g	18	18		3.12	2.67	2.58	1.19	3.92	4.80	4.92	5.95	5.76

Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)
Guide Limit #2: T2-Soil-Res/Park/Inst. Property Use (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.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Metals - SOIL

Analyte	Unit	Guide Limits #1	Guide Limits #2	Lab ID	Sample Date	Sample ID						
				L1956637-10	L1956637-11	L1956637-12	L1956637-13	L1956637-14	L1956637-15	L1956637-16	L1956637-17
				06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17
				TH DS4	TH DS5	TH ES6	TH FS1	TH FS3	TH FS5	SOIL DUP2	SOIL DUP3
Arsenic (As)	ug/g	18	18	5.03	2.73	4.78	6.26	6.98	6.82	6.73	4.04

Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)
Guide Limit #2: T2-Soil-Res/Park/Inst. Property Use (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.

ANALYTICAL REPORT

Organochlorine Pesticides - SOIL

Analyte	Unit	Guide Limits #1	Guide Limits #2	Lab ID	L1956637-1	L1956637-2	L1956637-3	L1956637-4	L1956637-5	L1956637-6	L1956637-7	L1956637-8	L1956637-9
				Sample Date	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17
				Sample ID	TH BS1	TH BS2	TH BS3	TH AS2	TH CS2	TH CS3	TH CS4	TH DS2	TH DS3
Aldrin	ug/g	0.05	0.05		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
gamma-hexachlorocyclohexane	ug/g	0.056	0.063		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
a-chlordane	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Chlordane (Total)	ug/g	0.05	0.05		<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
g-chlordane	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
op-DDD	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.030 DLQ	<0.020
pp-DDD	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	0.035	0.023	0.033	0.031
Total DDD	ug/g	3.3	3.3		<0.028	<0.028	<0.028	<0.028	<0.028	0.035	<0.028	<0.036	0.031
o,p-DDE	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
pp-DDE	ug/g	-	-		0.092	0.072	0.103	0.031	0.046	0.157	0.098	0.130	0.149
Total DDE	ug/g	0.26	0.33		0.092	0.072	0.103	0.031	0.046	0.157	0.098	0.130	0.149
op-DDT	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
pp-DDT	ug/g	-	-		0.035	0.028	0.040	<0.020	<0.020	0.034	<0.020	0.036	0.038
Total DDT	ug/g	1.4	1.4		0.035	<0.028	0.040	<0.028	<0.028	0.034	<0.028	0.036	0.038
Dieldrin	ug/g	0.05	0.05		0.034	0.126	0.145	<0.020	0.061	0.133	0.099	0.569	0.370
Endosulfan I	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endosulfan II	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endosulfan (Total)	ug/g	0.04	0.04		<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
Endrin	ug/g	0.04	0.04		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Heptachlor	ug/g	0.15	0.15		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Heptachlor Epoxide	ug/g	0.05	0.05		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Hexachlorobenzene	ug/g	0.52	0.52		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Hexachlorobutadiene	ug/g	0.012	0.014		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Hexachloroethane	ug/g	0.089	0.07		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Methoxychlor	ug/g	0.13	0.13		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Surrogate: 2-Fluorobiphenyl	%	-	-		88.2	93.8	93.5	86.0	88.4	92.1	91.9	89.9	89.2
Surrogate: d14-Terphenyl	%	-	-		86.9	89.0	86.3	86.6	85.5	86.5	85.8	84.2	86.4

Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)
Guide Limit #2: T2-Soil-Res/Park/Inst. Property Use (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.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

ANALYTICAL REPORT

Organochlorine Pesticides - SOIL

Analyte	Unit	Guide Limits #1	Guide Limits #2	Lab ID	L1956637-10	L1956637-11	L1956637-12	L1956637-13	L1956637-14	L1956637-15	L1956637-16	L1956637-17
				Sample Date	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17	06-JUL-17
				Sample ID	TH DS4	TH DS5	TH ES6	TH FS1	TH FS3	TH FS5	SOIL DUP2	SOIL DUP3
Aldrin	ug/g	0.05	0.05		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
gamma-hexachlorocyclohexane	ug/g	0.056	0.063		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
a-chlordane	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Chlordane (Total)	ug/g	0.05	0.05		<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
g-chlordane	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
op-DDD	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
pp-DDD	ug/g	-	-		<0.020	<0.020	<0.020	0.031	0.042	0.032	0.032	<0.020
Total DDD	ug/g	3.3	3.3		<0.028	<0.028	<0.028	0.031	0.042	0.032	0.032	<0.028
o,p-DDE	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
pp-DDE	ug/g	-	-		0.119	0.038	0.054	0.167	0.172	0.125	0.159	0.054
Total DDE	ug/g	0.26	0.33		0.119	0.038	0.054	0.167	0.172	0.125	0.159	0.054
op-DDT	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
pp-DDT	ug/g	-	-		<0.020	<0.020	<0.020	0.031	<0.020	<0.020	0.030	<0.020
Total DDT	ug/g	1.4	1.4		<0.028	<0.028	<0.028	0.031	<0.028	<0.028	0.030	<0.028
Dieldrin	ug/g	0.05	0.05		0.251	0.050	0.058	0.057	0.137	0.120	0.070	0.092
Endosulfan I	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endosulfan II	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endosulfan (Total)	ug/g	0.04	0.04		<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028	<0.028
Endrin	ug/g	0.04	0.04		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Heptachlor	ug/g	0.15	0.15		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Heptachlor Epoxide	ug/g	0.05	0.05		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Hexachlorobenzene	ug/g	0.52	0.52		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Hexachlorobutadiene	ug/g	0.012	0.014		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Hexachloroethane	ug/g	0.089	0.07		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Methoxychlor	ug/g	0.13	0.13		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Surrogate: 2-Fluorobiphenyl	%	-	-		90.7	88.5	90.9	87.7	87.2	88.8	85.3	88.4
Surrogate: d14-Terphenyl	%	-	-		85.7	83.9	88.4	90.0	83.1	85.3	87.6	87.4

Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)
Guide Limit #2: T2-Soil-Res/Park/Inst. Property Use (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.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Reference Information

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLQ	Detection Limit raised due to co-eluting interference. GCMS qualifier ion ratio did not meet acceptance criteria.

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
CHLORDANE-T-CALC-WT	Soil	Chlordane Total sums	CALCULATION
Aqueous sample is extracted by liquid/liquid extraction with a solvent mix. After extraction, a number of clean up techniques may be applied, depending on the sample matrix and analyzed by GC/MS.			
DDD-DDE-DDT-CALC-WT	Soil	DDD, DDE, DDT sums	CALCULATION
Aqueous sample is extracted by liquid/liquid extraction with a solvent mix. After extraction, a number of clean up techniques may be applied, depending on the sample matrix and analyzed by GC/MS.			
ENDOSULFAN-T-CALC-WT	Soil	Endosulfan Total sums	CALCULATION
Aqueous sample is extracted by liquid/liquid extraction with a solvent mix. After extraction, a number of clean up techniques may be applied, depending on the sample matrix and analyzed by GC/MS.			
MET-200.2-CCMS-WT	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020A (mod)
This method uses a heated strong acid digestion with HNO3 and HCl and is intended to liberate metals that may be environmentally available. Silicate minerals are not solubilized. Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. Analysis is by Collision/Reaction Cell ICPMS.			
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), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).			
MOISTURE-WT	Soil	% Moisture	Gravimetric: Oven Dried
PEST-OC-511-WT	Soil	OC Pesticides-O.Reg 153/04 (July 2011)	SW846 8270 (511)
Soil sample is extracted in a solvent, after extraction a number of clean up techniques may be applied, depending on the sample matrix and analyzed by GC/MS.			
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), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).			

**ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody Numbers:

15-575340 15-575341

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

Reference Information

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.

Quality Control Report

Workorder: L1956637 Report Date: 18-JUL-17

Client: WSP Canada Inc.
126 Hillock Drive Unit 2
Aurora ON L4G 0G9

Contact: DANIEL OLIVEIRA

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R3771843								
WG2568900-2 CRM		**WT-CANMET-TILL1**						
Arsenic (As)			110.5		%		70-130	13-JUL-17
WG2568900-6 DUP		**WG2568900-5**						
Arsenic (As)		7.86	7.01		ug/g	11	30	13-JUL-17
WG2568900-4 LCS								
Arsenic (As)			97.9		%		80-120	13-JUL-17
WG2568900-1 MB								
Arsenic (As)			<0.10		mg/kg		0.1	13-JUL-17
Batch R3773423								
WG2569776-2 CRM		**WT-CANMET-TILL1**						
Arsenic (As)			111.1		%		70-130	14-JUL-17
WG2569776-6 DUP		**WG2569776-5**						
Arsenic (As)		1.92	1.88		ug/g	2.1	30	14-JUL-17
WG2569776-4 LCS								
Arsenic (As)			104.5		%		80-120	14-JUL-17
WG2569776-1 MB								
Arsenic (As)			<0.10		mg/kg		0.1	14-JUL-17
MOISTURE-WT	**Soil**							
Batch R3770610								
WG2568298-3 DUP		**L1956442-1**						
% Moisture		6.21	6.71		%	7.8	20	13-JUL-17
WG2568298-2 LCS								
% Moisture			99.3		%		90-110	13-JUL-17
WG2568298-1 MB								
% Moisture			<0.10		%		0.1	13-JUL-17
Batch R3770612								
WG2568102-3 DUP		**L1955781-1**						
% Moisture		15.1	15.3		%	1.5	20	12-JUL-17
WG2568102-2 LCS								
% Moisture			100.4		%		90-110	12-JUL-17
WG2568102-1 MB								
% Moisture			<0.10		%		0.1	12-JUL-17
PEST-OC-511-WT	**Soil**							
Batch R3771830								
WG2568103-4 DUP		**WG2568103-3**						
Aldrin		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-JUL-17
a-chlordane		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-JUL-17

Quality Control Report

Client: WSP Canada Inc.
126 Hillock Drive Unit 2
Aurora ON L4G 0G9
Contact: DANIEL OLIVEIRA

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-OC-511-WT	**Soil**							
Batch R3771830								
WG2568103-4 DUP		**WG2568103-3**						
g-chlordane		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-JUL-17
op-DDD		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-JUL-17
pp-DDD		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-JUL-17
o,p-DDE		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-JUL-17
pp-DDE		0.092	0.096		ug/g	4.6	40	14-JUL-17
op-DDT		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-JUL-17
pp-DDT		0.035	0.047		ug/g	29	40	14-JUL-17
Dieldrin		0.034	0.048		ug/g	34	40	14-JUL-17
Endosulfan I		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-JUL-17
Endosulfan II		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-JUL-17
Endrin		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-JUL-17
gamma-hexachlorocyclohexane		<0.010	<0.010	RPD-NA	ug/g	N/A	40	14-JUL-17
Heptachlor		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-JUL-17
Heptachlor Epoxide		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-JUL-17
Hexachlorobenzene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	14-JUL-17
Hexachlorobutadiene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	14-JUL-17
Hexachloroethane		<0.010	<0.010	RPD-NA	ug/g	N/A	40	14-JUL-17
Methoxychlor		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-JUL-17
WG2568103-2 LCS								
Aldrin			97.0		%		50-140	14-JUL-17
a-chlordane			105.2		%		50-140	14-JUL-17
g-chlordane			112.1		%		50-140	14-JUL-17
op-DDD			111.6		%		50-140	14-JUL-17
pp-DDD			102.3		%		50-140	14-JUL-17
o,p-DDE			108.0		%		50-140	14-JUL-17
pp-DDE			106.4		%		50-140	14-JUL-17
op-DDT			74.0		%		50-140	14-JUL-17
pp-DDT			61.8		%		50-140	14-JUL-17
Dieldrin			113.5		%		50-140	14-JUL-17
Endosulfan I			110.6		%		50-140	14-JUL-17
Endosulfan II			105.0		%		50-140	14-JUL-17
Endrin			83.0		%		50-140	14-JUL-17
gamma-hexachlorocyclohexane			94.3		%		50-140	14-JUL-17

Quality Control Report

Client: WSP Canada Inc.
126 Hillock Drive Unit 2
Aurora ON L4G 0G9
Contact: DANIEL OLIVEIRA

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-OC-511-WT	**Soil**							
Batch R3771830								
WG2568103-2 LCS								
Heptachlor			79.7		%		50-140	14-JUL-17
Heptachlor Epoxide			116.8		%		50-140	14-JUL-17
Hexachlorobenzene			99.0		%		50-140	14-JUL-17
Hexachlorobutadiene			104.5		%		50-140	14-JUL-17
Hexachloroethane			124.4		%		50-140	14-JUL-17
Methoxychlor			69.6		%		50-140	14-JUL-17
WG2568103-1 MB								
Aldrin			<0.020		ug/g		0.02	14-JUL-17
a-chlordane			<0.020		ug/g		0.02	14-JUL-17
g-chlordane			<0.020		ug/g		0.02	14-JUL-17
op-DDD			<0.020		ug/g		0.02	14-JUL-17
pp-DDD			<0.020		ug/g		0.02	14-JUL-17
o,p-DDE			<0.020		ug/g		0.02	14-JUL-17
pp-DDE			<0.020		ug/g		0.02	14-JUL-17
op-DDT			<0.020		ug/g		0.02	14-JUL-17
pp-DDT			<0.020		ug/g		0.02	14-JUL-17
Dieldrin			<0.020		ug/g		0.02	14-JUL-17
Endosulfan I			<0.020		ug/g		0.02	14-JUL-17
Endosulfan II			<0.020		ug/g		0.02	14-JUL-17
Endrin			<0.020		ug/g		0.02	14-JUL-17
gamma-hexachlorocyclohexane			<0.010		ug/g		0.01	14-JUL-17
Heptachlor			<0.020		ug/g		0.02	14-JUL-17
Heptachlor Epoxide			<0.020		ug/g		0.02	14-JUL-17
Hexachlorobenzene			<0.010		ug/g		0.01	14-JUL-17
Hexachlorobutadiene			<0.010		ug/g		0.01	14-JUL-17
Hexachloroethane			<0.010		ug/g		0.01	14-JUL-17
Methoxychlor			<0.020		ug/g		0.02	14-JUL-17
Surrogate: 2-Fluorobiphenyl			102.5		%		50-140	14-JUL-17
Surrogate: d14-Terphenyl			103.8		%		50-140	14-JUL-17
WG2568103-5 MS		**WG2568103-3**						
Aldrin			123.4		%		50-140	14-JUL-17
a-chlordane			98.2		%		50-140	14-JUL-17
g-chlordane			110.5		%		50-140	14-JUL-17
op-DDD			96.8		%		50-140	14-JUL-17

Quality Control Report

Client: WSP Canada Inc.
126 Hillock Drive Unit 2
Aurora ON L4G 0G9
Contact: DANIEL OLIVEIRA

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-OC-511-WT	**Soil**							
Batch R3771830								
WG2568103-5 MS		**WG2568103-3**						
pp-DDD			99.6		%		50-140	14-JUL-17
o,p-DDE			100.3		%		50-140	14-JUL-17
pp-DDE			103.4		%		50-140	14-JUL-17
op-DDT			87.7		%		50-140	14-JUL-17
pp-DDT			88.9		%		50-140	14-JUL-17
Dieldrin			99.6		%		50-140	14-JUL-17
Endosulfan I			99.7		%		50-140	14-JUL-17
Endosulfan II			98.2		%		50-140	14-JUL-17
Endrin			109.3		%		50-140	14-JUL-17
gamma-hexachlorocyclohexane			97.8		%		50-140	14-JUL-17
Heptachlor			111.0		%		50-140	14-JUL-17
Heptachlor Epoxide			121.3		%		50-140	14-JUL-17
Hexachlorobenzene			96.4		%		50-140	14-JUL-17
Hexachlorobutadiene			94.6		%		50-140	14-JUL-17
Hexachloroethane			120.5		%		50-140	14-JUL-17
Methoxychlor			120.1		%		50-140	14-JUL-17

Quality Control Report

Workorder: L1956637 Report Date: 18-JUL-17

Client: WSP Canada Inc.
126 Hillock Drive Unit 2
Aurora ON L4G 0G9
Contact: DANIEL OLIVEIRA

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.

ALS Environmental
www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

L1956637-COFC

COC Number: 15 - 575340

Page 1 of 2

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:	WSP Canada Inc.	Select Report Format: ☒ PDF ☒ EXCEL ☐ EDD (DIGITAL)	Regular [R] ☒ Standard TAT if received by 3 pm - business days - no surcharges apply
Contact:	Daniel Oliveira	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:	905-750-3660 x16314	☐ 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	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm
Street:	126 Don Hillock Drive	Email 1 or Fax daniel.oliveira@wspgroup.com	For tests that can not be performed according to the service level selected, you will be contacted.
City/Province:	Aurora/ON	Email 2	
Postal Code:	L4G 0G9	Email 3	

Invoice To		Invoice Distribution	
	Same as Report To ☒ YES ☐ NO	Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX	
	Copy of Invoice with Report ☐ YES ☐ NO	Email 1 or Fax daniel.oliveira@wspgroup.com	
Company:		Email 2	
Contact:			

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	Q61477	AFE/Cost Center:	PO#
Job #:	161-06960-00/118	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	
ALS Lab Work Order # (lab use only)	L1956637 AK 11C	ALS Contact: Emerson P	Sampler: Dan Oliveira

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	O. Reg 153 or Pesticides	Arsenic	Number of Containers
1	TH BS1	07-06-17	10:10 AM	Soil	X	X	1
2	TH BS2		10:20 AM		X	X	1
3	TH BS3		10:30 AM		X	X	1
4	TH AS2		10:00 AM		X	X	1
5	TH CS2		10:40 AM		X	X	1
6	TH CS3		10:50 AM		X	X	1
7	TH CS4		11:00 AM		X	X	1
8	TH DS2		11:10 AM		X	X	1
9	TH DS3		11:20 AM		X	X	1
10	TH DS4		11:30 AM		X	X	1
11	TH DS5		11:40 AM		X	X	1
12	TH ES6		11:50 AM		X	X	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 2 RPI O. Reg 153/04 Standards
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		
17.7			8.4		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: Dan Oliveira	Date: 2017/07/10	Time: 2:30	Received by:	Date: July 10/17	Time: 16.10	Received by:	Date: July 11/17	Time: 17:30

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2016 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.

ALS Environmental
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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

L1956637-COFC

COC Number: 15 - 575341

Page 2 of 2

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:	WSP Canada Inc.	Select Report Format: PDF, EXCEL, EDD (DIGITAL)	Regular [R]: Standard TAT if received by 3 pm - business days - no surcharges apply
Contact:	Daniel Oliveira	Quality Control (QC) Report with Report: YES, NO	PRIORITY (Business Days): 4 day [P4]; 3 day [P3]; 2 day [P2]
Phone:	905-750-3080 x16314	Compare Results to Criteria on Report - provide details below if box checked	EMERGENCY: 1 Business day [E1]; Same Day, Weekend or Statutory holiday [E0]
	Company address below will appear on the final report	Select Distribution: EMAIL, MAIL, FAX	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm
Street:	26 Don Hillock Drive	Email 1 or Fax: daniel.oliveira@wspgroup.com	For tests that can not be performed according to the service level selected, you will be contacted.
City/Province:	Aurora ON	Email 2	
Postal Code:	L4G 0G9	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: daniel.oliveira@wspgroup.com	O.Reg 153 as Restricted; Arsenic
Contact:		Email 2	

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	Q61477	AFE/Cost Center:	PO#:
Job #:	161-06960-00/110	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	

ALS Lab Work Order # (lab use only): L1956637

ALS Contact: Emerson P

Sampler: Dan Oliveira

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	Number of Containers
13	TH FS1	07-Oct-17	12:00 AM	Soil	1
14	TH FS3		12:10 AM		1
15	TH FS5		12:20 AM		1
16	Soil DUP 2		—		1
17	Soil DUP 3		—		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? NO	Table 2 RPI (O.Reg 153/04) Standards
Are samples for human drinking water use? NO	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen; Ice Packs; Ice Cubes; Cooling Initiated; SIF Observations: Yes, No; Custody seal intact: Yes, No

INITIAL COOLER TEMPERATURES °C	FINAL COOLER TEMPERATURES °C
17.7	8.4

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: Daniel Oliveira	Date: 2017/07/10	Time: 2:30	Received by:	Date: July 10 17	Time: 16:10	Received by:	Date: July 11 17	Time: 12:30

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.