Phase Two Environmental Site Assessment

1160 Blair Road, Burlington, Ontario

Client
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Project Number
HAM-00801245-G0

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Executive Summary

EXP Services Inc. (EXP) was retained by the Archangel Raphael and Saint Marina Coptic Orthodox Church (client) to complete a Phase Two Environmental Site Assessment (ESA) of the property located at 1160 Blair Road in Burlington, Ontario, hereinafter referred to as the 'Site'. Authorization to proceed with the Phase Two ESA was provided by the Archangel Raphael and Saint Marina Coptic Orthodox Church.

The Site is located on the southwest side of Blair Road at Landmark Road in Burlington, Ontario. The Site measures approximately 1.7 hectares (4.1 acres) in area. The Site is currently occupied by a two-storey industrial/commercial building with approximately 7,205 m² (77,555 ft²) of floor area. The Site building is currently occupied by the client and various commercial tenants. Based on the Phase One ESA historical review and an interview with the Site representative, the building was constructed in the early 1970s.

The need for a Phase Two ESA on the property was identified in the Phase One ESA completed for the Site in July 2018, revised February 14, 2019. The Phase One ESA identified a number of potentially contaminating activities (PCAs) and corresponding Areas of Potential Environmental Concern (APECs):

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1A	Entire Site	40 – Pesticides (including Herbicides, Fungicides and Anti Fouling Agents) manufacturing, processing, bulk storage and large-scale applications	On-Site (1160 Blair Road)	OC Pesticides, Metals, Arsenic, Antimony, Selenium	Soil
APEC 1B	Southeast Industrial Unit	34 – Metal Fabrication		Metals, VOCs and PHCs	Soil and Groundwater
APEC 1C	Northwest Industrial Unit	52 – Storage, maintenance, fuelling and repair of equipment, vehicles and materials used to maintain transportation systems		VOCs and PHCs	Soil and Groundwater
APEC 2	Southeast adjacent to property line	28 – Gasoline and Associate Products in Fixed Tanks, 34 – Metal Fabrication	Off-Site (1150 Blair Road)	VOCs and PHCs, Metals	Soil and Groundwater
APEC 3	Southern corner of property	28- Gasoline and Associate Products Storage in Fixed Tank Not listed – Generator of hazardous wastes	Off-Site (1171 Blair Road)	PHCs, VOCs, BTEX, Metals	Groundwater
APEC 4	Northeast adjacent to property boundary	Not listed – Generator of hazardous wastes	Off-Site (1157 Blair Road)	PHCs, VOCs, BTEX, Metals	Groundwater

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 5	Northern corner of property	Not listed – Generator of hazardous wastes 34 – Metal Fabrication 27- Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Off-Site (3388 Mainway)	PHCs, VOCs, BTEX, Metals	Groundwater
APEC 6	Northern corner of property	Not listed – Generator of hazardous wastes	Off-Site (3390 Mainway)	PHCs, VOCs, BTEX, Metals	Groundwater

PHCs – Petroleum Hydrocarbons Fractions 1 to 4
BTEX – Benzene, Toluene, Ethylbenene and Xylenes
VOCs – Volatile Organic Compounds
OC Pesticides – Organochlorine Pesticides
Metals – ICPMS Metals

This Phase Two ESA was conducted in accordance with the Phase Two ESA standard as defined by O.Reg. 153, as amended, and in accordance with generally accepted professional practices.

For assessment purposes, EXP selected the Ontario Ministry of the Environment, Conservation and Parks (MOECP) Table 3 Site Condition Standards (SCS) of "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act," for Community Property Use in a non-potable groundwater situation with medium to fine-textured soil in accordance with Ontario Regulation 153/04 (made under the Environmental Protection Act), July 2011.

Based on the results of the subsurface investigation conducted at the Site, the following findings are presented:

1) The Phase Two ESA consisted of advancing a total eighteen (18) boreholes and the instrumentation of six (6) of the boreholes with a groundwater monitoring well to investigate the chemical quality of soil and groundwater (where applicable) in the areas of potential environmental concern identified in EXP's Phase One ESA;

2) The general stratigraphy at the Site, as observed in the boreholes, consists of sand and gravel fill material, overlying a native silty clay/clayey silt till transitioning to a shale/till complex. The boreholes were advanced to a maximum depth of 7.6 m. Auger refusal was encountered in two (2) of the boreholes advanced (BH101 and BH102) at depths ranging between 5.2 and 5.5 m below ground surface. It is assumed that the refusal was encountered at the interface of the Queenston shale bedrock, however no samples of the bedrock were recovered as part of the Phase Two ESA.

3) Based on the groundwater data collected from across the Site, the *local* groundwater flow direction is generally to the west/southwest as shown on Figure 9. However, EXP notes that the groundwater is under relatively confined conditions and that the measured depths to water may not be indicative of the top of the groundwater table. Further groundwater levels may be

influenced by the presence of underground utilities in the northern portion of the Site. As such the measured groundwater flow direction may not be representative of the regional area and groundwater flow direction can be estimated with greater certainty using measurements of groundwater elevations at the Site on several occasions over a longer period of time;

4) To assess the quality of soil and groundwater quality in the identified areas of environmental concern, selected soil and groundwater samples were submitted for analysis of PHCs including BTEX, VOCs, OC Pesticides and/or metals. Based on the reported analytical results, soil with elevated values of DDE exceeding the applicable Table 3 SCS was identified in borehole BH101 near the southern corner of the Site. Vertical delineation fo the impacts was achieved at a maximum depth of 1.5 m bgs.

5) A soil remediation program was completed in July 2018 to remove the OC Pesticide impacts identified in the southwestern portion of the Site. The final area of the excavation was approximately 120 m^2 and was excavated to depths ranging between 1.5 m and 2.0 m below grade.

6) A total of 452.5 tonnes (approximately 226 m^3) of impacted soils were transported off-Site by Ground Force Environmental Inc. to the Walker Environmental Landfill in Niagara Falls, Ontario or Walker Environmental Atlas Landfill in Welland, Ontario. The excavations were backfilled with approximately 485 tonnes of imported crushed stone sourced from the Waynco pit in Cambridge.

7) Following removal of the impacted soil, a total of ten (10) confirmatory samples, including two (2) QA/QC field duplicate samples, were collected from the floors and walls of the excavation which comprised of five (5) sidewall samples and three (3) floor samples.

8) Based on the analytical results of the confirmatory soil sampling program, the OC Pesticide impacts in soil located in the previously identified area was successfully removed.

Based on the results of the Phase Two ESA, all known impacted material has been removed from the Site. The soil and groundwater remaining at the Site have concentrations of the contaminants of concern noted in the Phase One ESA that meet the applicable Table 3 SCS. No further remedial action is recommended at this time.

This executive summary is a brief synopsis of the report and should not be read in lieu of reading the report in its entirety. Limitation of liability, scope of report and third party reliance are outlined in Section 7 of this report.

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1. Introduction

EXP Services Inc. (EXP) was retained by the Archangel Raphael and Saint Marina Coptic Orthodox Church (client) to complete a Phase Two Environmental Site Assessment (ESA) of the property located at 1160 Blair Road in Burlington, Ontario, hereinafter referred to as the 'Site'. Authorization to proceed with the Phase Two ESA was provided in stages, by Mr. Hany Khailil and by Father Anthony Wadie of the Archangel Raphael and Saint Marina Coptic Orthodox Church.

The objective of the investigation was to assess the subsurface conditions of the Site to support the potential filing of a Record of Site Condition (RSC) in accordance with Ontario Regulation 153/04, as amended by Ontario Regulations 511/09 and 179/11 (O.Reg.153, as amended).

This Phase Two ESA was conducted in accordance with the Phase Two ESA standard as defined by O.Reg. 153, as amended, and in accordance with generally accepted professional practices. Subject to this standard of care, EXP makes no express or implied warranties regarding its services and no third party beneficiaries are intended. Limitation of Liability, Scope of Report and third party reliance are outlined in Section 7 of this report.

1.1 Site Description

The Site is located on the southwest side of Blair Road at Landmark Road in Burlington, Ontario (Figures 1 and 2). The Site measures approximately 1.7 hectares (4.1 acres) in area. The Site is currently occupied by a two-storey industrial/commercial building with approximately 7,205 m² (77,555 ft²) of floor area. The Site building is currently occupied by various commercial tenants including:

- Creative Edge Dance Studio;
- RDC (Responsible Distribution Canada) (office);
- Ciscon Landscaping (showroom, office and yard);
- Body by PT (exercise gym);
- Burlington Movers (storage and office);
- Eurostar Renos;
- Insatax (office);
- Nuway Software (office);
- KGO Group Ltd. (storage);
- Recording Studio;
- Construction companies (storage and office); and,
- Archangel Raphael and Saint Marina Coptic Orthodox Church

At the time of the Phase One Site visit, three (3) of the units were vacant, two (2) of which were located on the second floor.

Based on the Phase One ESA historical review and an interview with the Site representative, the building was constructed in the early 1970s.

The approximate Universal Transverse Mercator (UTM) coordinates for the Site centroid is Zone 17, 597267E 4802107N.

The property identification number (PIN) for the Site is 07163-0083(LT). Refer to Appendix B for a copy of the Site survey.

1.2 Property Ownership

The owner contact information is provided below:

Company Name	Archangel Raphael and Saint Marina Coptic Orthodox Church
Company Address	1160 Blair Road, Burlington, Ontario, L7M 1K9

1.3 Current and Proposed Future Uses

The Site is currently zoned as Commercial/Industrial Land Use (General Employment), as shown on Figure 2. It is EXP's understanding that the intended use of the Site is Community (a church). No significant modifications to the Site building are planned.

1.4 Applicable Site Condition Standards

The assessment criteria, Site Condition Standards (SCS), applicable to a given site in Ontario are established under subsection 168.4(1) of the Environmental Protection Act. Tabulated generic criteria are provided in "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" ("the SGWS Standards"), Ontario Ministry of the Environment, Conservation and Parks (MOECP), May 2011. These criteria, which came into force on July 1, 2011, are based on site sensitivity (sensitive or non-sensitive), groundwater use (potable or non-potable), property use (residential, parkland, institutional, commercial, industrial, community and agricultural/other), soil type (coarse or medium to fine textured) and restoration depth (full or stratified restoration). In addition, site specific criteria may be established on the basis of the findings of a Risk Assessment carried out in accordance with Part IX and Schedule C of O. Reg. 153/04, as amended.

The SGWS Standards specify SCS for soil, groundwater and sediment that are tabulated as follows:

Table 1 – Full Depth Background Site Condition Standards;
Table 2 – Full Depth Generic Site Condition Standards in a Potable Ground Water Condition;
Table 3 – Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.;
Table 4 – Stratified Site Condition Standards in a Potable Ground Water Condition;
Table 5 – Stratified Site Condition Standards in a Non-Potable Ground Water Condition;
Table 6 – Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition;
Table 7 – Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition
Table 8 – Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition;

Table 9 – Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition.

For assessment purposes, EXP selected the Table 3 SCS for Industrial, Commercial and Community (ICC) property use in a non-potable groundwater situation and medium to fine-textured soil.

The selection of this category was based on the following factors:

Table 1.4 – Site Condition Standards

Descriptor	Site-Specific Condition
Section 41 Site Sensitivity	**Not applicable** ○ The soil at the Site has pH values between 5 and 9 for surficial soil; and, between 5 and 11 for subsurface soil. ○ The Site is not located within, or adjacent to, an area of natural significance, or part of such an area; and, the Site does not include land that is within 30 m of an area of natural significance, or part of such an area.
Section 43.1 Site Sensitivity	**Not applicable** ○ The Site is not considered a shallow soil property, based on the recovered soil cores, which indicated that more than two-thirds of the Site has an overburden thickness in excess of 2 m; and, ○ The Site is not located within 30 m of a surface water body; the nearest surface water body, Tuck Creek, is located approximately 375 m northeast of the RSC property boundary.
Ground Water	**Non-Potable** ○ The Site is supplied by the City of Burlington water distribution system.
Land Use	**Industrial/Commercial/Community** ○ The future use of the Site will be community land use.
Soil Texture	**Medium to Fine** ○ The predominant texture of soils at the Site is considered to be medium to fine, as per grain size analysis results.

2. Background Information

2.1 Physical Setting

The Site and surrounding area is located in the physiographic region described as Till Plains (Drumlinized). The Site and surrounding areas are dominated by Halton Till deposits which predominately consist of clay and silt till. The bedrock in the general area was part of a group belonging to the Queenston Formation, consisting of red shale expected to be at depths ranging between 3 to 7 m below ground surface.

The Site is relatively flat with no discernible slopes. No surface water features are situated within the Phase One Study Area. Tuck Creek is located approximately 375 m northeast of the Site, Roseland is situated approximately 850 m south of the Site, and Lake Ontario is located approximately 3.8 km southeast of the Site. Based on the location and distance from the Site to Lake Ontario, the inferred *regional* groundwater flow direction in the area is considered to be to the southeast.

2.2 Previous Investigations

The need for a Phase Two ESA on the Site was identified in the Phase One ESA completed for the Site by EXP in July 2018, Revised February 14, 2019. The Phase One ESA identified a number of Potentially Contaminating Activities (PCAs) within the Phase One ESA Study Area (Figure 3) and corresponding Areas of Potential Environmental Concern (APECs) as shown on Figure 4 and presented in Table 2.2 below.

Table 2.2: Areas of Potential Environmental Concern

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1A	Entire Site	40 – Pesticides (including Herbicides, Fungicides and Anti Fouling Agents) manufacturing, processing, bulk storage and large-scale applications 34 – Metal Fabrication 52 – Storage, maintenance, fuelling and repair of equipment, vehicles and materials used to maintain transportation systems	On-Site (1160 Blair Road)	Organochlorine Pesticides, Metals, As, Sb, Se	Soil
APEC 1B	Southeast Industrial Unit			Metals, VOCs and PHCs	Soil and Groundwater
APEC 1C	Northwest Industrial Unit			VOCs and PHCs	Soil and Groundwater
APEC 2	Southeast adjacent to property line	28 – Gasoline and Associate Products in Fixed Tanks, 34 – Metal Fabrication	Off-Site (1150 Blair Road)	VOCs and PHCs, Metals	Soil and Groundwater

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 3	Southern corner of property	28- Gasoline and Associate Products Storage in Fixed Tank Not listed – Generator of hazardous wastes	Off-Site (1171 Blair Road)	PHCs, VOCs, BTEX, Metals	Groundwater
APEC 4	Northeast adjacent to property boundary	Not listed – Generator of hazardous wastes	Off-Site (1157 Blair Road)	PHCs, VOCs, BTEX, Metals	Groundwater
APEC 5	Northern corner of property	Not listed – Generator of hazardous wastes 34 – Metal Fabrication 27- Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Off-Site (3388 Mainway)	PHCs, VOCs, BTEX, Metals	Groundwater
APEC 6	Northern corner of property	Not listed – Generator of hazardous wastes	Off-Site (3390 Mainway)	PHCs, VOCs, BTEX, Metals	Groundwater

Based on the findings and conclusions of the Phase One ESA, a Phase Two ESA was recommended to investigate the above PCAs within the APECs.

3. Scope of the Investigation

The purpose of the Phase Two ESA was to investigate the soil and groundwater quality on-Site to address the identified PCAs in the APECs from the Phase One ESA report submitted by EXP in July 2018, revised February 14, 2019.

Prior to the completion of this Phase Two ESA, previous subsurface investigations were completed at the Site, including:

1. "*Phase II Environmental Site Assessment, 1160 Blair Road, Burlington*, Ontario" EXP Services Inc., Revised May 1, 2018.
2. "*Supplemental Environmental Investigation, 1160 Blair Road, Burlington, Ontario*" EXP Services Inc., May 1, 2018.

Relevent information collected during the above investigations have been incorporated into this report, where applicable.

The Phase II ESA included the investigation of the Site soil and groundwater within general accordance with CSA Standard Z769-00 (R2013). A total of six (6) boreholes were advanced with two (2) of the boreholes completed as groundwater monitoring wells.

Based on the findings from the Phase II ESA, a Supplemental Environmental Investigation was also carried out by EXP. The investigation consisted of the advancement of eight (8) boreholes at the Site in an attempt to delineate the extent of soil impacted with Dichlorodiphenyldichloroethylene (DDE), an Organochlorine (OC) Pesticide.

Where potentially contaminating activites may have impacted groundwater, a minimum of three (3) groundwater monitoring wells are required to satisfy the requirements of O. Reg. 153/04. As such, a minimum of one (1) additional monitoring well was needed to satisfy the minimum requirements of O.Reg. 153/04. In 2019, three (3) additoinial boreholes/monitoring wells were also advanced on-site.

The field investigative and sampling program was carried out following the requirements of the Site Sampling and Analysis Plan (Appendix A). No significant deviations from the Sampling and Analysis Plan were reported that could affect the sampling and data quality objectives for the Site.

No physical impediments were encountered during the field investigation; and the entire property was accessible at the time of the investigation.

The fieldwork was supervised by Qualified Persons from EXP.

3.1 General

The scope of work for the Phase Two ESA was as follows:

- Request public utility locating companies (cable, telephone, gas, hydro) to mark any underground utilities present at the Site;

- Retain private utility locating companies to mark any underground utilities present in the vicinity of the borehole locations and to clear the individual borehole locations;
- Advance boreholes within the identified APECs and instrument boreholes with a groundwater monitoring well;
- Collect representative soil samples from the boreholes for laboratory analysis of metals, Volatile Organic Compounds (VOCs), Petroleum Hydrocarbons (PHCs) including Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Organochlorine Pesticides (OCPs), pH and/or 75 micron (um) sieve;
- Collect representative groundwater samples from the groundwater monitoring wells for laboratory analysis of metals, VOCs, PHCs including BTEX, metals and/or OCPs;
- Prepare a report of the findings.

3.2 Borehole Drilling and Soil Sampling

Prior to the commencement of excavation activities, the locations of underground public utilities including telephone, natural gas and electrical lines were determined and marked, where necessary, at the Site by locating companies. The approximate locations of underground utilities are shown on Figure 5.

The boreholes were advanced by Determination Drilling and Soil Investigaitons (DDSI) and Strata Drilling Group (Strata). The boreholes were advanced using a CME 75 truck mounted drilling rig equipped with a split spoon drilling system and solid stem augers or Geoprobe drilling rig equipped with direct push samplers. No petroleum-based greases or solvents were used during drilling activities.

EXP continuously monitored the drilling activities to record the physical characteristics of the soil, depth of soil sample collection and total depth of borehole. Field observations are summarized on the borehole logs provided in Appendix C. Representative soil samples were recovered in the overburden of the boreholes at regular intervals.

Soil sampling activities were conducted in accordance with the Sampling and Analysis Plan presented in Appendix A. Dedicated nitrile gloves were used during sample handling. A portion of the soil core was field preserved using laboratory-supplied vials filled and pre-weighed with methanol. The field preservation reduces the potential for induced volatilization during storage/transport prior to analysis of VOCs, PHC (Fraction 1) and/or BTEX. Soil samples intended for other non-volatile chemical parameters were placed directly into pre-cleaned, laboratory-supplied glass sample jars/vials. The soil samples were placed in clean ice-packed coolers prior to and during transportation to the subcontract laboratory, Maxxam Analytics Inc. (Maxxam) of Mississauga, Ontario and were transported/submitted under Chain of Custody documentation.

Soil samples were subsequently delivered to EXP's laboratory for visual, textural and olfactory classification.

A summary of the boreholes is provided in Table 3.2 below.

Table 3.2 – Summary of Boreholes Advanced

Borehole Identification	Completion Date	APEC Coverate / Rationale	Borehole Termination Depths (m bgs)
BH101	September 6, 2017	APEC 1, APEC 2	5.5
BH102		APEC 1, APEC 3	5.2
BH103		APEC 1,	2.1
BH104		APEC 1	1.4
BH105		APEC 1	1.4
BH106		APEC 1	1.4
BH107	June 20, 2018	APEC 1, APEC 4	7.6
BH201	November 6, 2017	Horitonzontal delineation and vertical delineatin of OC Pesticide impacts in BH101 (APEC 1)	2.1
BH202			2.1
BH203			2.1
BH204			3.0
BH205			2.3
BH206			2.3
BH207			2.3
BH208			2.3
BH301	January 22, 2019	APEC 2	5.95
BH302		APEC 1C	6.1
BH303		APEC 1B	4.73

The approximate locations of the above-mentioned boreholes advanced on the Site are shown on Figures 6A and 6B.

3.3 Field Screening Measurements

A portion of each soil sample collected from the boreholes was placed in a sealed “zip-lock” plastic bag and allowed to reach ambient temperature prior to field screening using a RKI Eagle II calibrated with hexanae and isobutylene. The measurements were made by inserting the instrument’s probe into the plastic bag while manipulating the sample to ensure volatilization of the soil gases. These readings provide a real-time indication of the relative concentration of combustible vapors encountered in the subsurface during drilling and are used to aid in the assessment of the vertical and horizontal extent of contamination and the selection of soil samples for analysis.

3.4 Groundwater Monitoring Well Installation and Elevation Survey

Six (6) monitoring wells were installed at the Site as part of the Phase Two ESAs. Installation details of the monitoring wells are provided in Table 3.4 below. Monitoring well locations are presented Figures 6A and 6B.

The monitoring wells were installed in general accordance with the Ontario Water Resources Act - R.R.O. 1990, Regulation 903 - Amended to O. Reg. 128/03 and were installed by a licensed well contractor (DDSI) using a CME 75 truck mounted drilling rig. Petroleum-based greases or solvents were not used during well installation activities.

The monitoring wells consisted of a 1.5 m or 3.0 m length of 50 mm diameter PVC screen and an appropriate length of PVC riser pipe. The annular space around the wells were backfilled with sand to an average height of 0.3 m above the top of the screen. A bentonite seal was added from the top of the sand pack to approximately 0.3 m below ground surface. The monitoring wells were completed with flushmount protective well casings.

The monitoring well locations were surveyed with respect to a temporary bench mark (TBM) given an arbitrary elevation of 100 meters above sea level (m ASL). The TBM was located on the south corner of the catch basin near BH106.

Table 3.4 – Monitoring Well Installation Details

I.D.	Ground Surface Elevation (m)	Top of Sand Elevation (m)	Top of Screen Elevation (m)	Bottom of Screen Elevation (m)	Screened Interval (mbgs)	Bottom of Borehole Elevation (m)	Depth of Borehole (mbgs)	Geologic Units Intersected By Well Screen
MW101	100.75	97.7	96.8	95.3	4.0 - 5.5	95.3	5.5	Shale till complex
MW102	101.81	100.2	99.7	96.6	2.1 - 5.2	96.6	5.2	Shale till complex
MW107	102.15	97.9	97.6	94.6	4.6 – 7.6	94.6	7.6	Shale till complex
MW301	100.75	97.7	96.8	95.3	4.0 - 5.5	95.3	5.5	Shale till complex
MW302	101.81	100.2	99.7	96.6	2.1 - 5.2	96.6	5.2	Shale till complex
MW303	102.15	97.9	97.6	94.6	4.6 – 7.6	94.6	7.6	Shale till complex

mbgs - metres below ground surface

The current property owner is considered to be the owner of the wells installed at the Site (“well owner”, Section 1.0, Regulation 903). When the monitoring wells are no longer required, they must be decommissioned in accordance with the procedure outlined in the Ontario Water Resources Act - R.R.O. 1990, Regulation 903 - Amended to O. Reg. 128/03.

3.5 Groundwater Sampling

Following the installation of each monitoring well, approximately three (3) to five (5) well volumes of water were removed (or until the monitoring well went dry twice) from each well during the development activities to ensure that any potential residual materials from the drilling had been removed and to ensure that representative groundwater from the surrounding formation was infiltrating the well screen. Monitoring wells were developed using dedicated low-density polyethylene (LDPE) tubing and an inertial foot valve at each monitoring well.

On June 26, 2018 and January 31, 2019, groundwater samples were collected from the monitoring wells.

Prior to sampling, the depths to groundwater in the monitoring wells were measured using a water level meter and groundwater was purged from each monitoring well. Groundwater purging activities were completed using low-flow methodology via dedicated LDPE tubing and a peristaltic pump at each monitoring well. Purging activities continued until various field measured physical and chemical parameters (temperature, pH, conductivity, total dissolved solids, dissolved oxygen and redox potential) had stabilized, indicating that representative groundwater was infiltrating the well screen.

Groundwater sampling activities were completed following the purging using low-flow methodology. Groundwater sampling was completed using the same peristaltic pump and dedicated LDPE tubing that was utilized during the purging process. Groundwater samples were placed directly into the laboratory supplied bottles and/or vials and placed in a cooler containing ice for sample preservation purposes.

The sample vials intended for analysis of volatile parameters were inverted prior to being placed in a cooler to ensure that no head-space was present in the samples. Samples intended for the analysis of dissolved metals were field filtered using a dedicated 0.45 micron filter. Preservatives were provided in the laboratory supplied bottles, where required. Dedicated nitrile gloves were utilized during sample handling.

The groundwater sampling during the completion of this Phase Two ESA was undertaken in accordance with the Sampling and Analysis Plan presented in Appendix A.

3.6 Analytical Testing

The contracted laboratory selected to perform chemical analysis on select soil and water samples was Maxxam Analytics Inc. (Maxxam) of Mississauga, Ontario. Maxxam is an accredited laboratory under the Standards Council of Canada/Canadian Association of Laboratory Accreditation (CALA) (Accredited Laboratory No. 97) in accordance with ISO/IEC 17025:1999- “General Requirements for the Competence of Testing and Calibration Laboratories”.

3.6.1 Soil Analysis

Soil samples, including two QA/QC field duplicate samples, were analyzed from the boreholes during the soil analytical program. The analytical testing conducted on the soil samples and corresponding submission rationale is summarized in Table 3.6.1 below.

Table 3.6.1: Summary of Soil Samples Submitted for Chemical Analyses

Location and Sample ID	Sample Depth (m below ground surface)	Date of Sample Collection	APEC Coverage / Rationale	Analysis
BH101 S2	0.8 – 1.4	September 6, 2017	Shallow soil below pavement structure (APEC 1A)	Metals, OC Pesticides
BH101 S2A	0.8 – 1.4		Confirmation samples within 2.0 m of sample BH101 S2	OC Pesticides
BH101 S2B	0.8 – 1.4			
BH101 S2C	0.8 – 1.4			
BH101 S3	1.5 – 2.1		Vertical delineation of OC Pesticides impacts identified in BH101 S2 (APEC 1A)	OC Pesticides
BH101 S4	2.3 – 2.9		Regulatory sample (>1.5 m), representative sample of native soil	pH and 75 micron sieve
BH101 S5	3.0 – 3.7		Deepest recovered overburden sample to assess off-Site (APEC 2)	VOCs, PHCs, BTEX
BH102 S1	0 – 0.6		Shallow soil below pavement structure (APEC 1A)	Metals, OC Pesticides
BH102 S2	0.8 – 1.4		Regulatory sample (<1.5 m)	pH
BH102 S3	1.5 – 2.1		Deepest recovered overburden sample to assess off-Site (APEC 3)	VOCs, PHCs, BTEX
BH103 S1	0 – 0.6		Shallow soil below pavement structure (APEC 1A)	Metals, OC Pesticides
BH104 S1	0 – 0.6		Shallow soil below pavement structure (APEC 1A)	Metals, OC Pesticides
BH105 S1	0 – 0.6		Shallow soil below pavement structure (APEC 1A)	Metals, OC Pesticides
BH106 S2	0.8 – 1.4		Shallow soil below pavement structure (APEC 1A)	Metals, OC Pesticides
BH107 SS1	0 – 0.6	June 20, 2018	Shallow soil below pavement structure (APEC 1A)	Metals, OC Pesticides
BH701 SS1	0 – 0.6		QA/QC duplicate sample of BH107 SS1	Metals and OC Pesticides
BH107 SS4	2.3 – 2.9		Deepest recovered overburden sample to assess off-Site (APEC 4)	VOCs, PHCs, BTEX
BH701 SS4	2.3 – 2.9		QA/QC duplicate sample of BH107 SS4	VOCs, PHCs, BTEX
BH201 S2	0.8 – 1.4	November 6, 2017	Horizontal and vertical delineation of OC Pesticides impacts in BH101 S2	OC Pesticides
BH201 S3	1.5 – 2.1			OC Pesticides
BH202 S2	0.8 – 1.4			OC Pesticides
BH202 S3	1.5 – 2.1			OC Pesticides

Location and Sample ID	Sample Depth (m below ground surface)	Date of Sample Collection	APEC Coverage / Rationale	Analysis
BH203 S2	0.8 – 1.4			OC Pesticides
BH203 S3	1.5 – 2.1			OC Pesticides
BH204 S2	0.8 – 1.5			OC Pesticides
BH204 S3	1.5 – 2.3			OC Pesticides
BH205 S2	0.8 – 1.5			OC Pesticides
BH205 S3	1.5 – 2.3			OC Pesticides
BH206 S2	0.8 – 1.5			OC Pesticides
BH206 S3	1.5 – 2.3			OC Pesticides
BH207 S2	0.8 – 1.5			OC Pesticides
BH207 S3	1.5 – 2.3			OC Pesticides
BH208 S2	0.8 – 1.5			OC Pesticides
BH208 S3	1.5 – 2.3			OC Pesticides
BH301 - SS1	0 – 0.76	January 22, 2019	Shallow soil below pavement structure (APEC 2)	Metals
BH301 - SS11	0 – 0.76		QA/QC sample of BH301 -SS1	Metals
BH301 - SS4	2.29 – 3.05		Inferred groundwater table (APEC 2)	PHCs, BTEX, VOCs
BH302 - SS1	0 – 0.76		Shallow soil below pavement structure (APEC 1C)	Metals
BH302 - SS4	2.29 – 3.05		Inferred groundwater table (APEC 1C)	PHCs, BTEX, VOCs
BH303 - SS1	0 – 0.76		Shallow soil below pavement structure (APEC 1B)	Metals
BH303 - SS4	2.29 – 3.05		Inferred groundwater table (APEC 1B)	PHCs, BTEX, VOCs
BH303 - SS44	2.29 – 3.05		QA/QC sample of BH303 -SS4	PHCs, BTEX, VOCs

3.6.2 Groundwater Analysis

Groundwater samples, including a QA/QC field duplicate, were analyzed during the groundwater analytical program. In addition, a trip spike was prepared by Maxxam, transported to the Site during sampling activities and re-analyzed by Maxxam to determine if field activities could potentially bias the analytical results. The analytical testing conducted on the representative groundwater samples and corresponding submission rationale is summarized in Table 3.6.2 below.

Table 3.6.2: Summary of Groundwater Samples Submitted for Chemical Analyses

Sample ID	Analysis	APEC Coverage
MW101	VOCs including BTEX, PHCs, Metals, OC Pesticides	Assess on-Site PCA (APEC 1A) and off-Site PCA (APEC 2)
MW102		Assess on-Site PCA (APEC 1A) and off-Site PCA (APEC 3)
MW107		Assess on-Site PCA (APEC 1A) and off-Site PCA (APEC 4)
MW111		QA/QC duplicate sample of MW101
Trip Spike	VOCs including BTEX	Determination of the potential for bias of analytical results
MW301	VOCs including BTEX, PHCs, Metals	Assess off-Site PCA (APEC 2)
MW302		Assess on-Site PCA (APEC 1C)
MW303		Assess on-Site PCA (APEC 1B)
MW3011	PHCs, VOCs	QA/QC duplicate sample of MW301
MW3033	Metals	QA/QC duplicate sample of MW303
Trip Spike	VOCs including BTEX. PHCs	Determination of the potential for bias of analytical results

3.7 Residue Management Procedures

The drill cuttings from the monitoring well installation and purged water from groundwater sampling were stored on-Site in labeled drums.

3.8 Elevation Survey

EXP staff surveyed the borehole and monitoring well locations with respect to a temporary benchmark described as the the south corner of the catch basin near BH106 with an arbitrary elevation of 100.00 m.

The elevations of the boreholes are presented on the borehole logs.

3.9 Confirmatory Soil Sampling

Soil remedial activities were carried out by excavating and disposing of soil that did not meet the Table 3 SCS to a licensed landfill facility. Confirmatory soil samples were collected from the base and walls of the final excavation limits. Details of the remedial activities are presented in Appendix F.

3.10 Quality Assurance and Quality Control Measures

Quality Assurance/Quality Control (QA/QC) measures were integral components of the field sampling and laboratory analytical programs undertaken for this project. The field QA/QC measures consisted of the use of dedicated sampling equipment, the implementation of decontamination procedures, the use of laboratory supplied analytical test group specific sampling containers and preservatives as required, the collection of duplicate samples, Chain of Custody protocols and sample preservation following analytical test group temperature and holding time requirements.

Details regarding quality assurance measures taken in the field, including instrument calibration, decontamination procedures, use of dedicated equipment, sample storage and Chain of Custody documentation are provided in Section 3 above.

Maxxam's QA/QC program involved the systematic analysis of control standards for the purpose of optimizing the measuring system as well as establishing system precision and accuracy and included calibration standards, method blanks, reference standards, spiked samples, surrogates and duplicates.

Field duplicate soil samples, field duplicate groundwater samples, and laboratory trip spikes were analyzed as part of this investigation. Details regarding the results of the QA/QC program are presented in Section 4.10.

4. Review and Evaluation

4.1 Geology

The detailed soil profiles encountered during this investigation are provided on the attached borehole logs (Appendix C). Boundaries of soil indicated on the log sheets are intended to reflect transition zones for the purpose of environmental assessment and should not be interpreted as exact planes of geological change. The general stratigraphy at the Site, as observed in the boreholes, consists of sand and gravel fill material, overlying a native silty clay/clayey silt till transitioning to a shale/till complex.

A brief description of the soil stratigraphy at the Site, in order of depth, is summarized in the following sections.

Surface Materials – A surficial pavement structure was encountered at each exterior borehole location. The pavement structure consisted of asphalt or concrete and a sand and gravel base with maximum thickness of 0.33 m.

Clayey silt/silty clay till – Clayey silt/silty clay till was encountered beneath the surficial materials in the each of the boreholes advanced at the Site. This deposit was generally brown to reddish brown in colour and moist. The till extended to depths generally ranging between approximately 2.3 and 3.96 m below existing ground surface.

Shale-Till Complex – The clayey silt/silty clay layer transitioned into a shale-till complex in the deeper boreholes. This deposit was reddish-brown to grey in colour and damp. The shale-till complex extended to a maximum depth of approximately 7.6 m below ground surface, the maximum depth of investigation.

Shale Bedrock – Auger refusal was encountered in two (2) of the boreholes advanced (BH101 and BH102) at depths ranging between 5.2 and 5.5 m below ground surface. It is assumed that the refusal was encountered at the interface of the Queenston shale bedrock, however no samples of the bedrock were recovered as part of the Phase Two ESA.

The geology of the Site is illustrated on the cross-sections (Figures 10A and 11A).

4.2 Ground Water Elevations and Flow Direction

Groundwater was measured in the monitoring wells at least 24 hours following development and sampling on July 4, 2018 and January 31, 2019 as shown in Table 4.2.

Table 4.2: Groundwater Elevations (January 31, 2019)

Monitoring Well	Ground Elevation (m)	Groundwater Depth (mbgs)	Groundwater Elevation (m)
MW101	100.75	NA	NA
MW102	101.81	2.533	99.277
MW107	102.15	3.339	98.811
MW301	100.08	1.863	98.217

Monitoring Well	Ground Elevation (m)	Groundwater Depth (mbgs)	Groundwater Elevation (m)
MW302	101.503	2.895	98.608
MW303	101.5	3.598	97.902

Note: Elevations were measured in relation to a TBM (southwest corner of manhole near BH106) with an arbitrary elevation 100.00m mbgs - metres below ground surface

Based on the groundwater data collected from across the Site, the local groundwater flow direction is generally to the west/southwest as shown on Figure 9. However, EXP notes that the groundwater is under relatively confined conditions and that the measured depths to water may not be indicative of the top of the groundwater table. Further groundwater levels may be influenced by the presence of underground utilities in the northern portion of the Site. As such the measured groundwater flow direction may not be representative of the regional area and groundwater flow direction can be estimated with greater certainty using measurements of groundwater elevations at the Site on several occasions over a longer period of time.

4.3 Groundwater Hydraulic Conductivity and Gradients

Based on the soil types encountered as part of this investigation, the estimated hydraulic conductivity of groundwater at the Site is 10^{-6} to 10^{-9} m/s.

Based on the measured groundwater elevations, the horizontal hydraulic gradient is between 0.005 to 0.03 m/m.

4.4 Soil Texture

Based on the grain size analysis of the clayey silt/silty clay unit (BH101 S4), from the prvious report completed by EXP, 2018, the soil texture at the Site is interpreted as medium to fine grained (refer to the 75 micron sieve analysis in the Certificates of Analysis - Appendix E).

4.5 Soil Field Screening

The soil vapour measurements in the recovered soil samples ranged from 0 parts per million (ppm) to 3.1 ppm (BH/MW102). The vapour readings are presented on the borehole logs in Appendix C.

4.6 Soil Quality

In accordance with the authorized scope of work, chemical analyses were performed on selected soil samples recovered from the boreholes. The selection of representative “worst case” soil samples from each borehole was based on visual evidence of impacts or depth of sample collection. The summarized analytical data are presented in Appendix D. Copies of the laboratory Certificates of Analysis for the tested soil samples are provided in Appendix E.

The Table 3 SCS criteria are applicable if soil pH is in the range of 5 to 9 for surface soil (less than 1.5 m below soil surface) and 5 to 11 for subsurface soil (greater than 1.5 m below soil surface). The reported pH values for both surface and subsurface soil samples collected during the Phase Two ESA by EXP, 2018 are within the acceptable range to use the Table 3 SCS.

4.6.1 Organochlorine Pesticides

Twenty-five (25) soil samples, including one (1) QA/QC field duplicate, were analyzed as part of this Phase Two ESA. The results of the analysis together with the applicable Table 3 SCS are presented in Table B1 in Appendix D.

As shown in Table B1, the detected concentration of DDE from the soil sample BH101-S2 was marginally above the Table 3 SCS. To confirm this result three (3) aliquot soil samples that were representative of soil collected within a 2.0 m radius of BH101 were also analyzed. The average DDE (total) concentration of the four (4) samples collected within a 2.0 m radius of BH101 was above the Table 3 SCS. The remaining OC pesticide parameters were either detected in concentations below the Table 3 SCS or were not detected above the laboratory Reporting Detection Limits (RDLs). The laboratory RDLs were below the Table 3 SCS.

The distribution of the soil samples analyzed for OC Pesticides is presented in plan view on Figures 7A and 7B and in cross section on Figures 10B and 11B

4.6.2 Metals

Twelve (12) soil samples, including two (2) QA/QC field duplicates, were analyzed for metals as part of this Phase Two ESA. The results of the analysis together with the applicable Table 3 SCS are presented in Table B2 in Appendix D.

Metals were either detected in concentations below the Table 3 SCS or were not detected above the laboratory RDLs in the soil samples analyzed. The laboratory RDLs were below the Table 3 SCS.

The locations of the soil samples analyzed for metals are presented in plan view on Figure 7C.

4.6.2 VOCs

Eight (8) soil samples, including two (2) QA/QC field duplicates, were analyzed for VOCs as part of this Phase Two ESA. The results of the analysis together with the applicable Table 3 SCS are presented in Table B3 in Appendix D.

VOCs were not detected above the laboratory RDLs in the analyzed soil samples. The laboratory RDLs were below the Table 3 SCS.

The locations of the soil samples analyzed for VOCs are presented in plan view on Figure 7D.

4.6.3 PHCs

Eight (8) soil samples, including two (2) QA/QC field duplicates, were analyzed for PHCs as part of this Phase Two ESA. The results of the analysis together with the applicable Table 3 SCS are presented in Table B4 in Appendix D.

PHCs were not detected above the laboratory RDLs in the analyzed soil samples. The laboratory RDLs were below the Table 3 SCS.

The locations of the soil samples analyzed for PHCs are presented in plan view on Figure 7E.

4.7 Ground Water Quality

The summarized analytical data are presented in Appendix D. Copies of the laboratory Certificates of Analysis for the groundwater samples are provided in Appendix E.

No evidence of free product (i.e. visible film or sheen), or odour was observed during well purging and groundwater sampling.

4.7.1 Organachlorine Pesticidies

Three (3) groundwater samples, including one (1) QA/QC field duplicate, were analyzed for organochlorine pesticides as part of this Phase Two ESA. The results of the analysis together with the applicable Table 3 SCS are presented in Table C1 in Appendix D.

Organochlorine pesticides were either detected in concentations below the Table 3 SCS or were not detected above the laboratory RDLs in the groundwater samples analyzed. The laboratory RDLs were below the Table 3 SCS.

The locations of the groundwater samples analyzed for organochlorine pesticides are presented in plan view on Figure 8A.

4.7.2 *Metals*

Five (5) groundwater samples, including two (2) QA/QC field duplicate, were analyzed for metals as part of this Phase Two ESA. The results of the analysis together with the applicable Table 3 SCS are presented in Table C2 in Appendix D.

Metals were either detected in concentations below the Table 3 SCS or were not detected above the laboratory RDLs in the groundwater samples analyzed. The laboratory RDLs were below the Table 3 SCS.

The locations of the groundwater samples analyzed for metals are presented in plan view on Figure 8B.

4.7.3 *VOCs*

Six (6) groundwater samples, including two (2) QA/QC field duplicate, were analyzed for VOCs as part of this Phase Two ESA. The results of the analysis together with the applicable Table 3 SCS are presented in Table C3 in Appendix D.

VOCs were either detected in concentations below the Table 3 SCS or were not detected above the laboratory RDLs in the groundwater samples analyzed. The laboratory RDLs were below the Table 3 SCS.

The locations of the groundwater samples analyzed for VOCs are presented in plan view on Figure 8C.

4.7.4 *PHCs*

Six (6) groundwater samples, including two (2) QA/QC field duplicate, were analyzed for PHCs as part of this Phase Two ESA. The results of the analysis together with the applicable Table 3 SCS are presented in Table C4 in Appendix D.

PHCs were not detected above the laboratory RDLs in the analyzed groundwater samples. The laboratory RDLs were below the Table 3 SCS.

The locations of the groundwater samples analyzed for PHCs are presented in plan view on Figure 8D.

4.8 Soil Quality – Confirmatory Sampling

During the remediation process, a total of thirteen (13) confirmatory soil samples, including two (2) QA/QC field duplicate samples, were collected from the base and walls of the excavation and submitted for laboratory analysis. Details are presented in Appendix F.

The concentrations of OC Pesticides detected in the confirmatory soil samples collected from the final excavation limits met the applicable Table 3 SCS. Details are presented in Appendix F.

4.9 Sediment Quality

As there were no surface water bodies on the Site, sediment sampling was not conducted.

4.10 Quality Assurance and Quality Control Results

As part of this Phase Two ESA, the following field duplicate soil samples were submitted for analysis:

- two (2) for PHCs and VOCs and;
- two (2) for Metals.

The following field duplicate groundwater samples were submitted for analysis:

- two (2) for Metals, VOCs including BTEX and PHCs;

The analytical sample results were quantitatively evaluated by calculating the relative percent difference (RPD) between the samples and their duplicates. Where the concentrations of the analyzed representative soil sample and the duplicate were not both greater than five times the laboratory RDL, RPDs could not be calculated. The results of the analyses where the concentrations were at least five times the laboratory RDL compared to the duplicate sample concentrations were within an acceptable degree of variance.

The laboratory quality assurance program included the analysis of laboratory duplicate (replicate) samples, method blanks, spiked blanks, spiked samples and samples of reference materials in accordance with the Analytical Protocol. These analytical results comprise portions of the Certificates of Analysis in Appendix E.

One (1) laboratory-prepared trip spike was transported in the field during the groundwater sampling program and re-analyzed for VOCs.. The percent recovery for the analytes within the trip spikes were within the statistical control, indicating that field sampling procedures did not contribute to the loss of volatile analytes.

The results of all QA/QC analysis provide confidence in the laboratory results obtained during this investigation.

4.11 Phase Two Conceptual Site Model

The Phase Two Conceptual Site Model is attached as Appendix F.

5. Summary and Conclusions

Based on the results of the subsurface investigation conducted at the Site, the following findings are presented:

1) The Phase Two ESA consisted of advancing a total eighteen (18) boreholes and the instrumentation of six (6) of the boreholes with a groundwater monitoring well to investigate the chemical quality of soil and groundwater (where applicable) in the areas of potential environmental concern identified in EXP's Phase One ESA;

2) The general stratigraphy at the Site, as observed in the boreholes, consists of sand and gravel fill material, overlying a native silty clay/clayey silt till transitioning to a shale/till complex. The boreholes were advanced to a maximum depth of 7.6 m. Auger refusal was encountered in two (2) of the boreholes advanced (BH101 and BH102) at depths ranging between 5.2 and 5.5 m below ground surface. It is assumed that the refusal was encountered at the interface of the Queenston shale bedrock, however no samples of the bedrock were recovered as part of the Phase Two ESA.

3) Based on the groundwater data collected from across the Site, the *local* groundwater flow direction is generally to the west/southwest as shown on Figure 9. However, EXP notes that the groundwater is under relatively confined conditions and that the measured depths to water may not be indicative of the top of the groundwater table. Further groundwater levels may be influenced by the presence of underground utilities in the northern portion of the Site. As such the measured groundwater flow direction may not be representative of the regional area and groundwater flow direction can be estimated with greater certainty using measurements of groundwater elevations at the Site on several occasions over a longer period of time;

4) To assess the quality of soil and groundwater quality in the identified areas of environmental concern, selected soil and groundwater samples were submitted for analysis of PHCs including BTEX, VOCs, OC Pesticides and/or metals. Based on the reported analytical results, soil with elevated values of DDE exceeding the applicable Table 3 SCS was identified in borehole BH101 near the southern corner of the Site. Vertical delineation fo the impacts was achieved at a maximum depth of 1.5 m bgs.

5) A soil remediation program was completed in July 2018 to remove the OC Pesticide impacts identified in the southwestern portion of the Site. The final area of the excavation was approximately 120 m^2 and was excavated to depths ranging between 1.5 m and 2.0 m below grade.

6) A total of 452.5 tonnes (approximately 226 m^3) of impacted soils were transported off-Site by Ground Force Environmental Inc. to the Walker Environmental Landfill in Niagara Falls, Ontario or Walker Environmental Atlas Landfill in Welland, Ontario. The excavations were backfilled with approximately 485 tonnes of imported crushed stone sourced from the Waynco pit in Cambridge.

7) Following removal of the impacted soil, a total of ten (10) confirmatory samples, including two (2) QA/QC field duplicate samples, were collected from the floors and walls of the excavation which comprised of five (5) sidewall samples and three (3) floor samples.

8) Based on the analytical results of the confirmatory soil sampling program, the OC Pesticide impacts in soil located in the previously identified area was successfully removed.

Based on the results of the Phase Two ESA, all known impacted material has been removed from the Site. The soil and groundwater remaining at the Site have concentrations of the contaminants of concern noted in the Phase One ESA that meet the applicable Table 3 SCS. No further remedial action is recommended at this time.

6. References

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

- "*Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario,*" Ministry of the Environment of Ontario, December 1996;
- *The Ontario Water Resources Act - R.R.O. 1990, Regulation 903 - Amended to O. Reg. 128/03*, August 2003;
- *"Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act,"* 2011;
- *"Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act,"* March 2004 (amended as of July 1, 2011);
- *Ontario Regulation 153/04 (made under the Environmental Protection Act),* May 2004 (as amended by O. Reg. 511/09 and O. Reg. 179/11;
- *Environmental Protection Act, R.S.O. 1990, Chapter E.19, as amended,* September 2004;
- *"Phase II Environmental Site Assessment, 1160 Blair Road, Burlington, Ontario,"* EXP Services Inc., Revised May 1, 2018.
- *"Supplemental Environmental Investigation, 1160 Blair Road, Burlington, Ontario,"* EXP Services Inc., May 1, 2018.; and
- *"Phase One Environmental Site Assessment, 1160 Blair Road, Burlington, Ontario,"* EXP Services Inc., July 20, 2018, Revised February 14, 2019.

7. General Limitations

The information presented in this report is based on a limited investigation designed to provide information to support an assessment of the current environmental conditions within the subject property. The conclusions and recommendations presented in this report reflect Site conditions existing at the time of the investigation.

More specific information with respect to the conditions between samples, or the lateral and vertical extent of materials may become apparent during excavation operations. The interpretation of the borehole information must, therefore, be validated during any such excavation operations. Consequently, during the future development of the property, conditions not observed during this investigation may become apparent. Should this occur, EXP should be contacted to assess the situation, and the need for additional testing and reporting. EXP has qualified personnel to provide assistance in regards to any future geotechnical and environmental issues related to this property.

The environmental investigation was completed to address the intent of applicable provincial Regulations, Guidelines, Policies, Standards, Protocols and Objectives administered by the Ministry of Environment, Conservation and Parks. It should also be noted that current environmental Regulations, Guidelines, Policies, Standards, Protocols and Objectives are subject to change, and such changes, when put into effect, could alter the conclusions and recommendations noted throughout this report. Achieving the study objectives stated in this report has required us to arrive at conclusions based upon the best information presently known to us. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility to an acceptable level. Professional judgment was exercised in gathering and analyzing the information obtained and in the formulation of the conclusions. Like all professional persons rendering advice we do not act as absolute insurers of the conclusions we reach, but we commit ourselves to care and competence in reaching those conclusions.

Our undertaking at EXP, therefore, is to perform our work within limits prescribed by our clients, with the usual thoroughness and competence of the engineering profession. It is intended that the outcome of this investigation assist in reducing the client's risk associated with environmental impairment. Our work should not be considered 'risk mitigation'. No other warranty or representation, either expressed or implied, is included or intended in this report.

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We trust this report is satisfactory for your purposes. Should you have any questions, please do not hesitate to contact this office.

Yours truly,

EXP Services Inc.

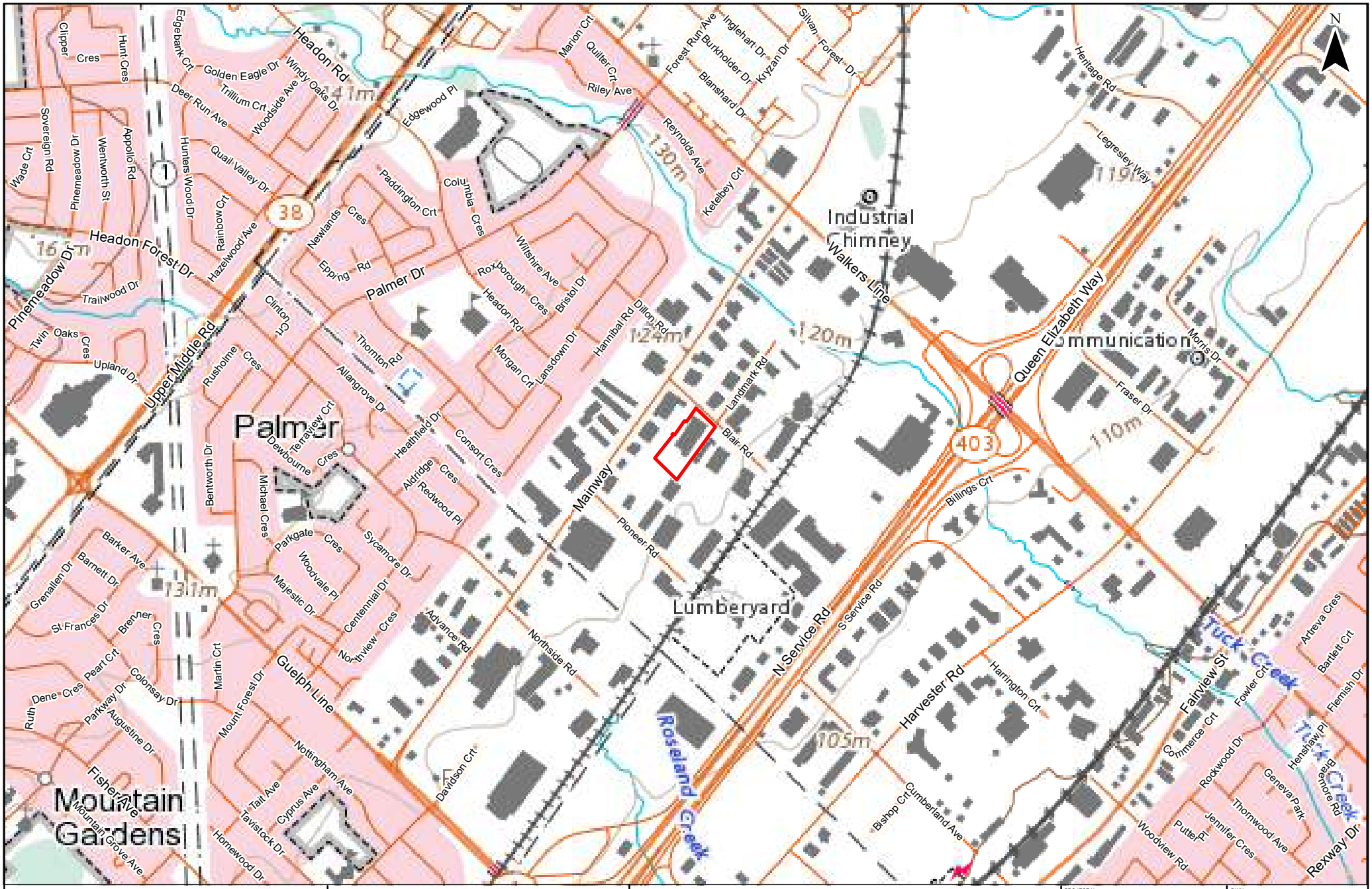


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RSC Property Boundary

0 150 300 450 600 750 m

TITLE AND LOCATION:

SITE LOCATION PLAN
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.:	DWN:
HAM-00801245-G0	AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 1



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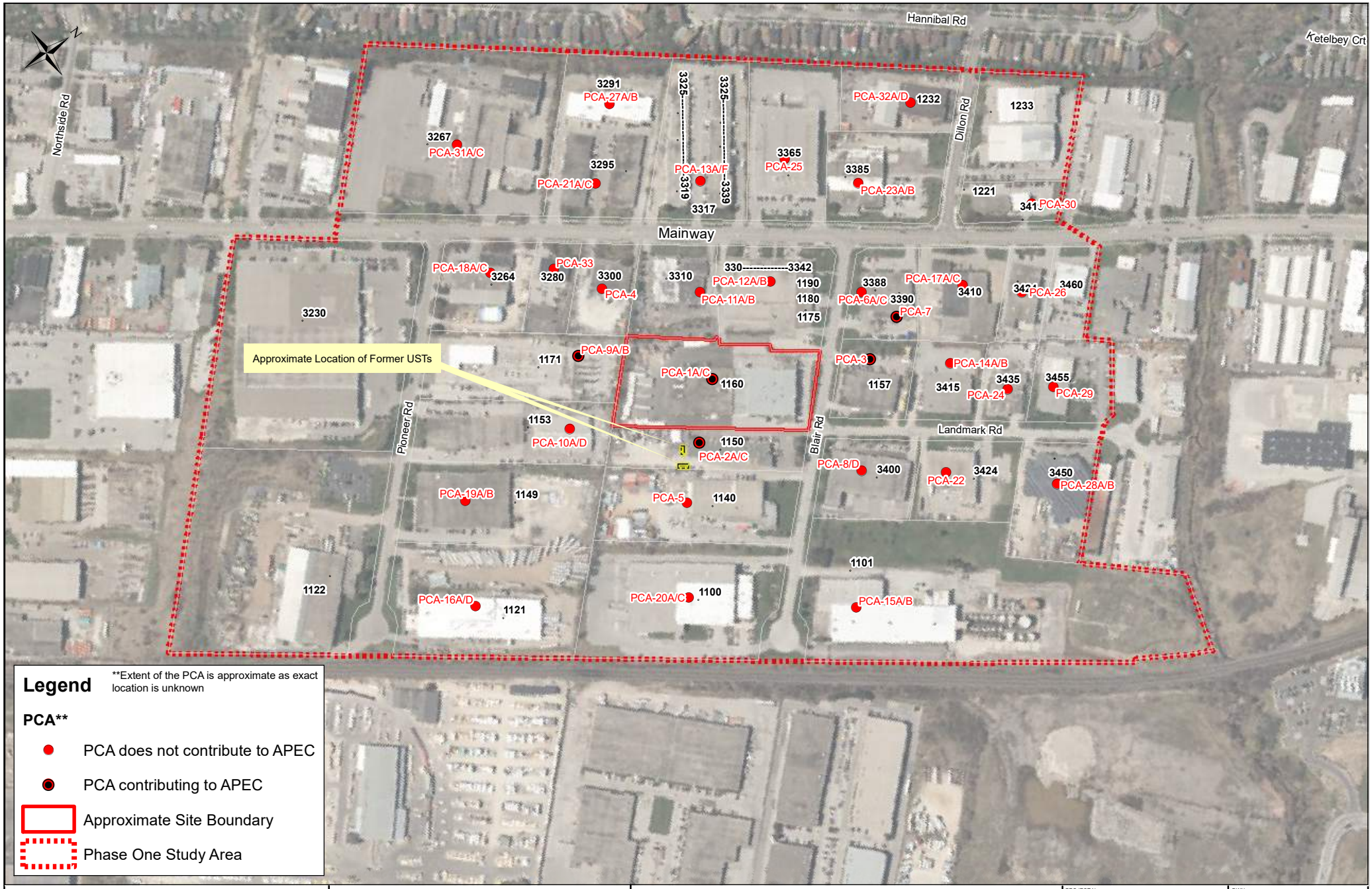
Data Source: Burlington Official Plan - Schedule B. City of Burlington, 2017.

0 50 100 150 200 250 m

TITLE AND LOCATION:

PHASE ONE STUDY AREA AND SURROUNDING LAND USE MAP
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 2



Legend

PCA**

- PCA does not contribute to APEC
- PCA contributing to APEC
- Approximate Site Boundary
- Phase One Study Area

**Extent of the PCA is approximate as exact location is unknown

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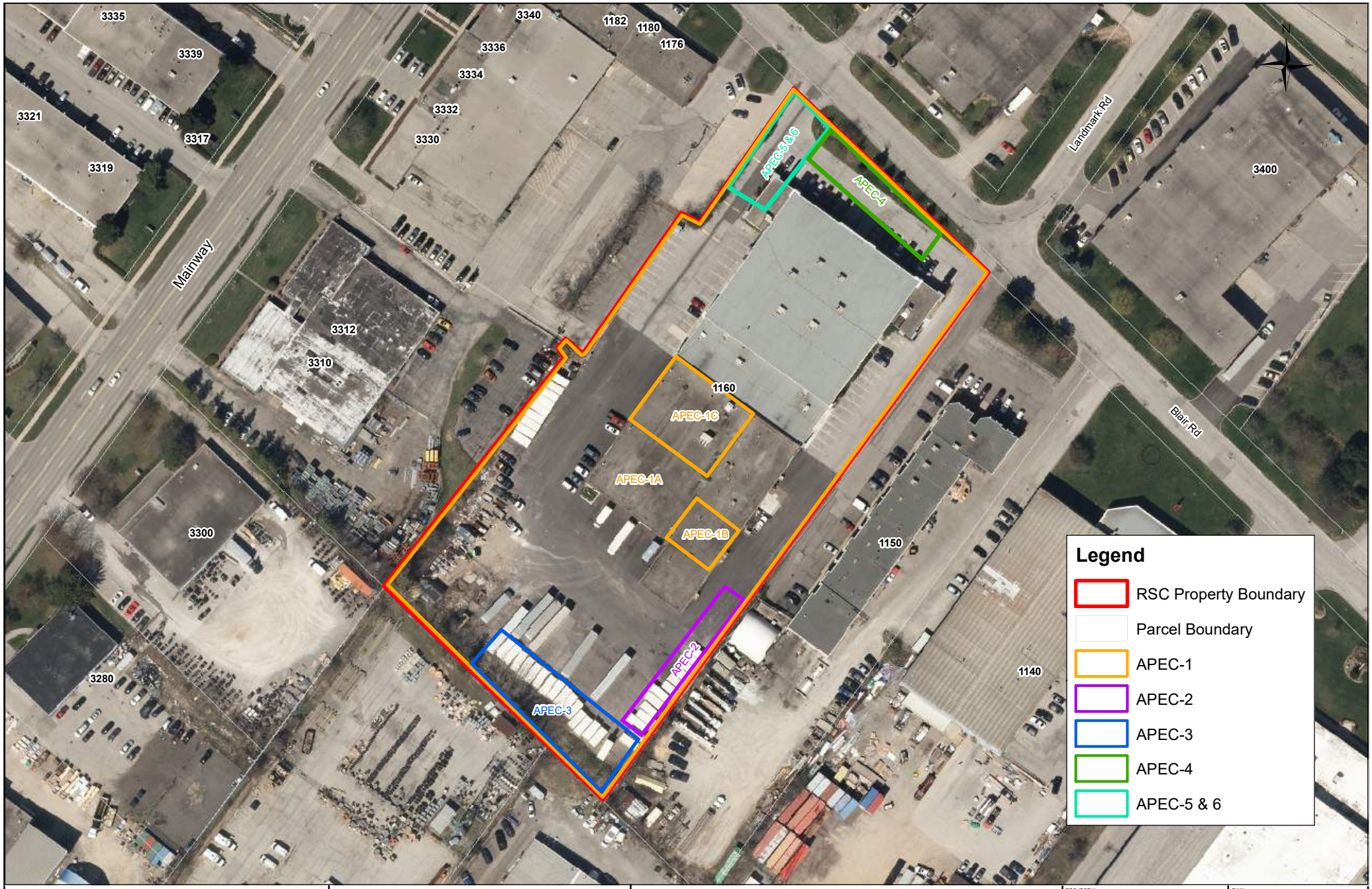
•BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

0 50 100 150 200 250 m

TITLE AND LOCATION:

POTENTIALLY CONTAMINATING ACTIVITIES
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 3



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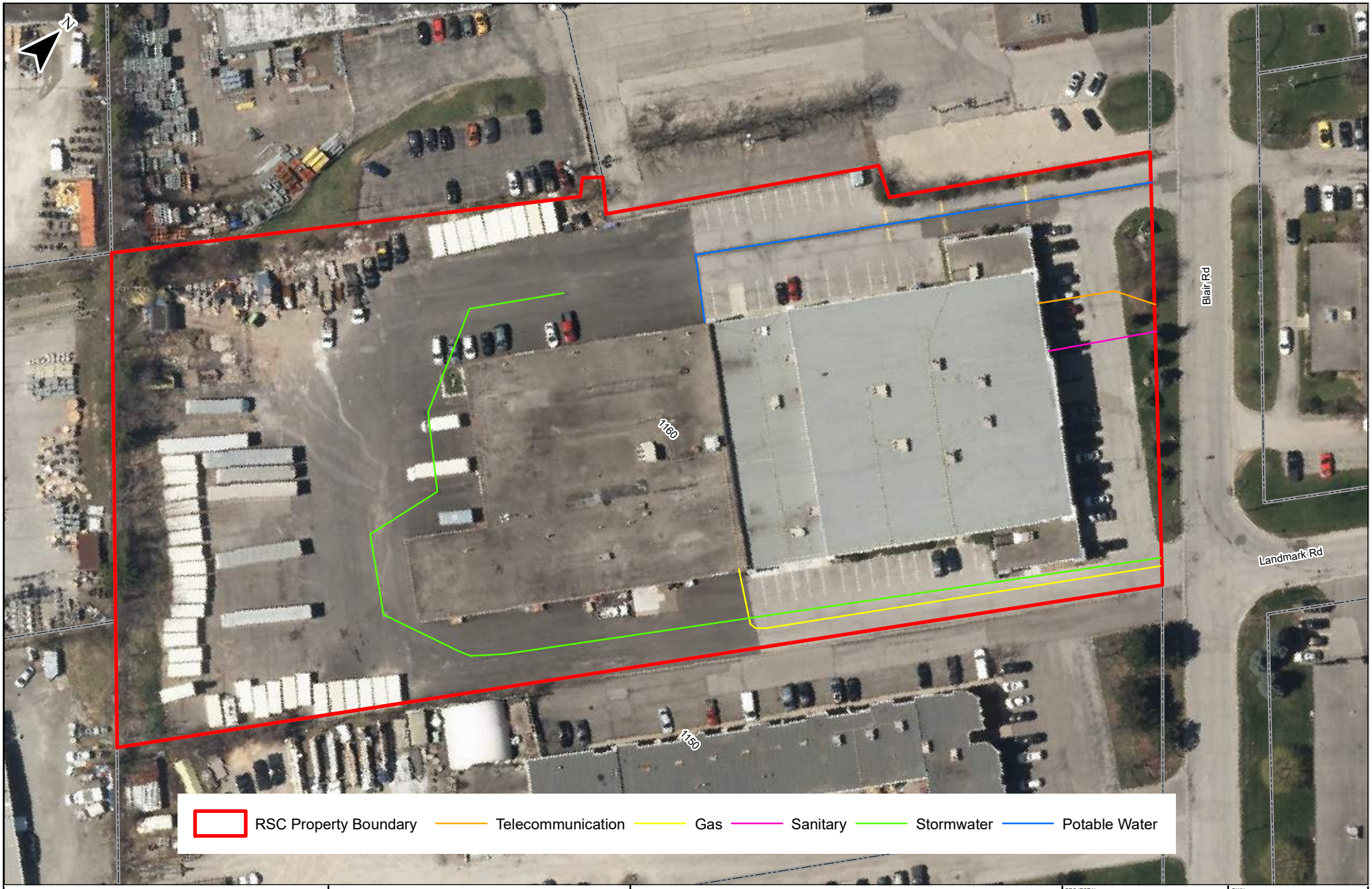
•BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

0 10 20 30 40 50 m

TITLE AND LOCATION:

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 4



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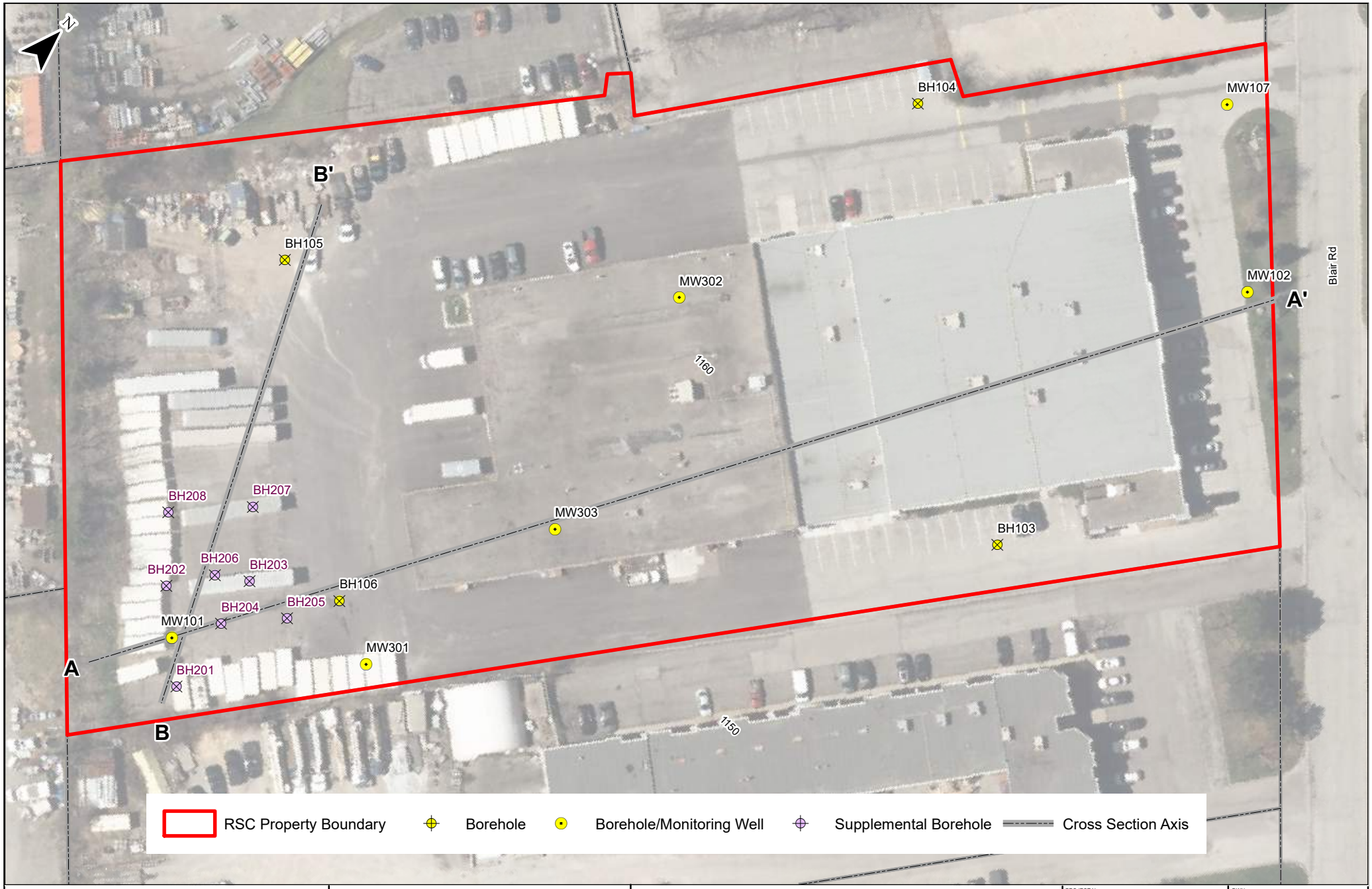
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• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

0 6 12 18 24 30 m

TITLE AND LOCATION:

UNDERGROUND UTILITIES PLAN
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 5



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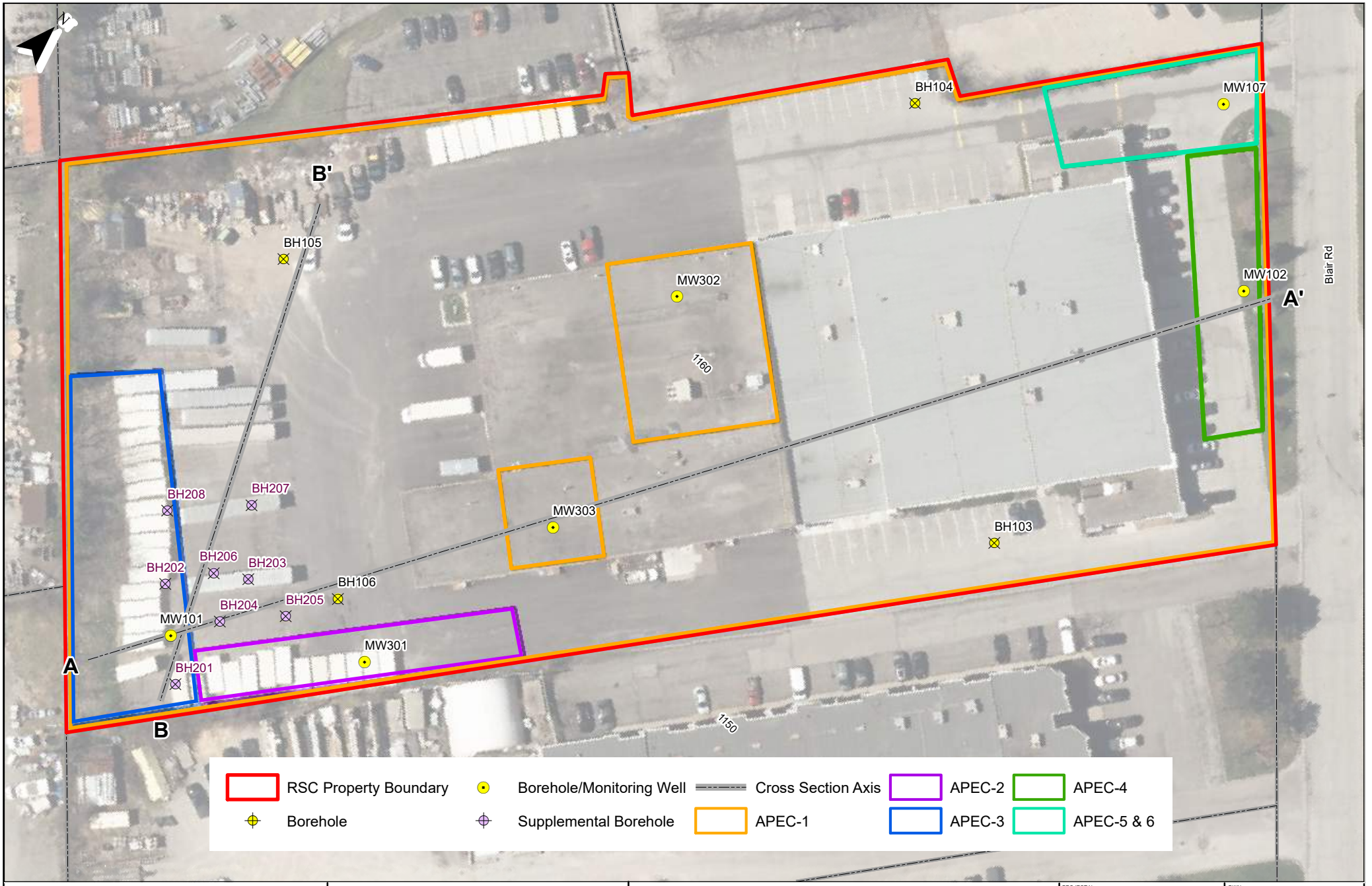
•BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
•INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY•

0 5 10 15 20 25 m

TITLE AND LOCATION:

BOREHOLE LOCATION PLAN
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 6A



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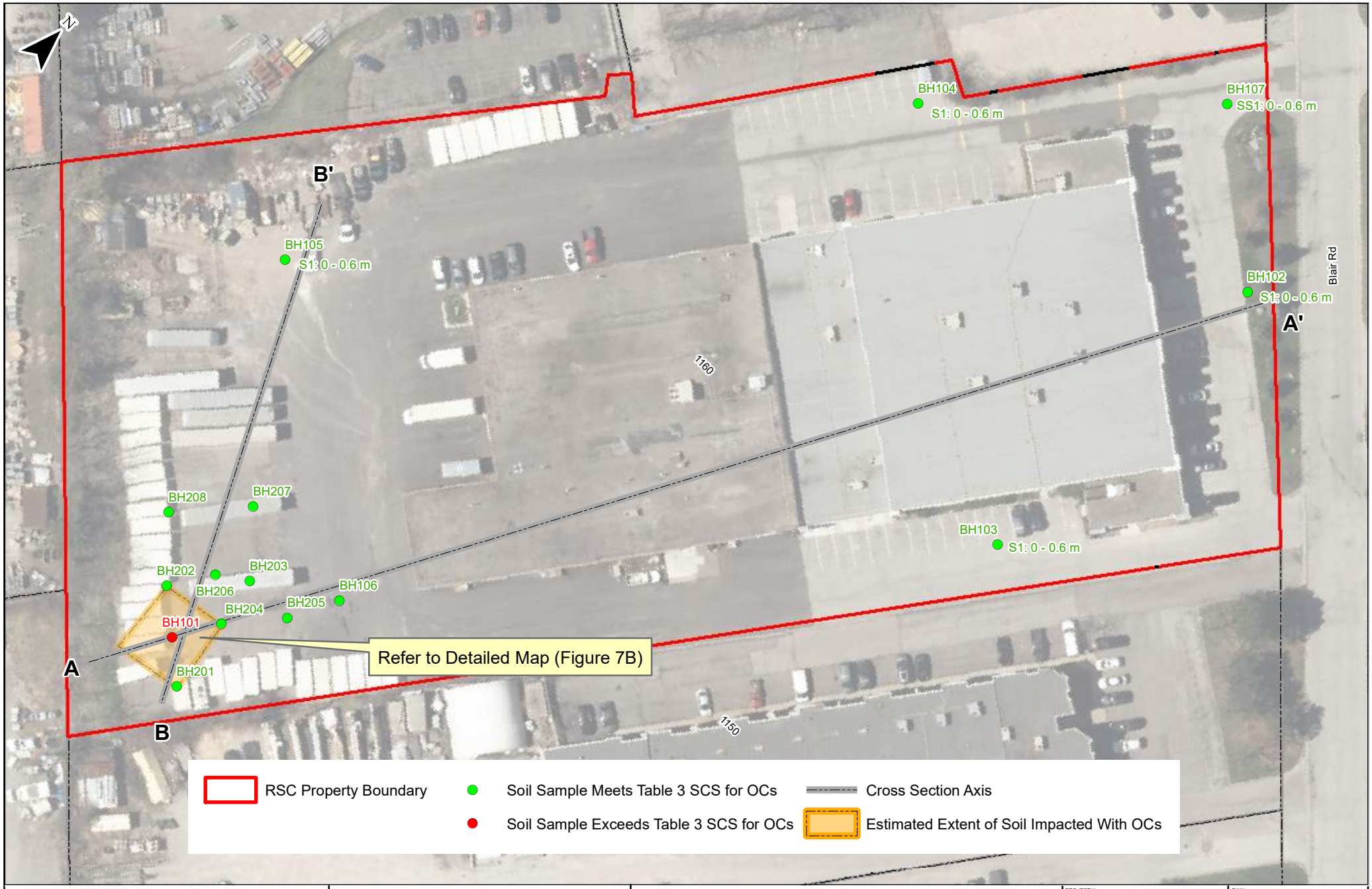
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•INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY•

0 5 10 15 20 25 m

TITLE AND LOCATION:

BOREHOLE LOCATION PLAN WITH APECs
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 6B



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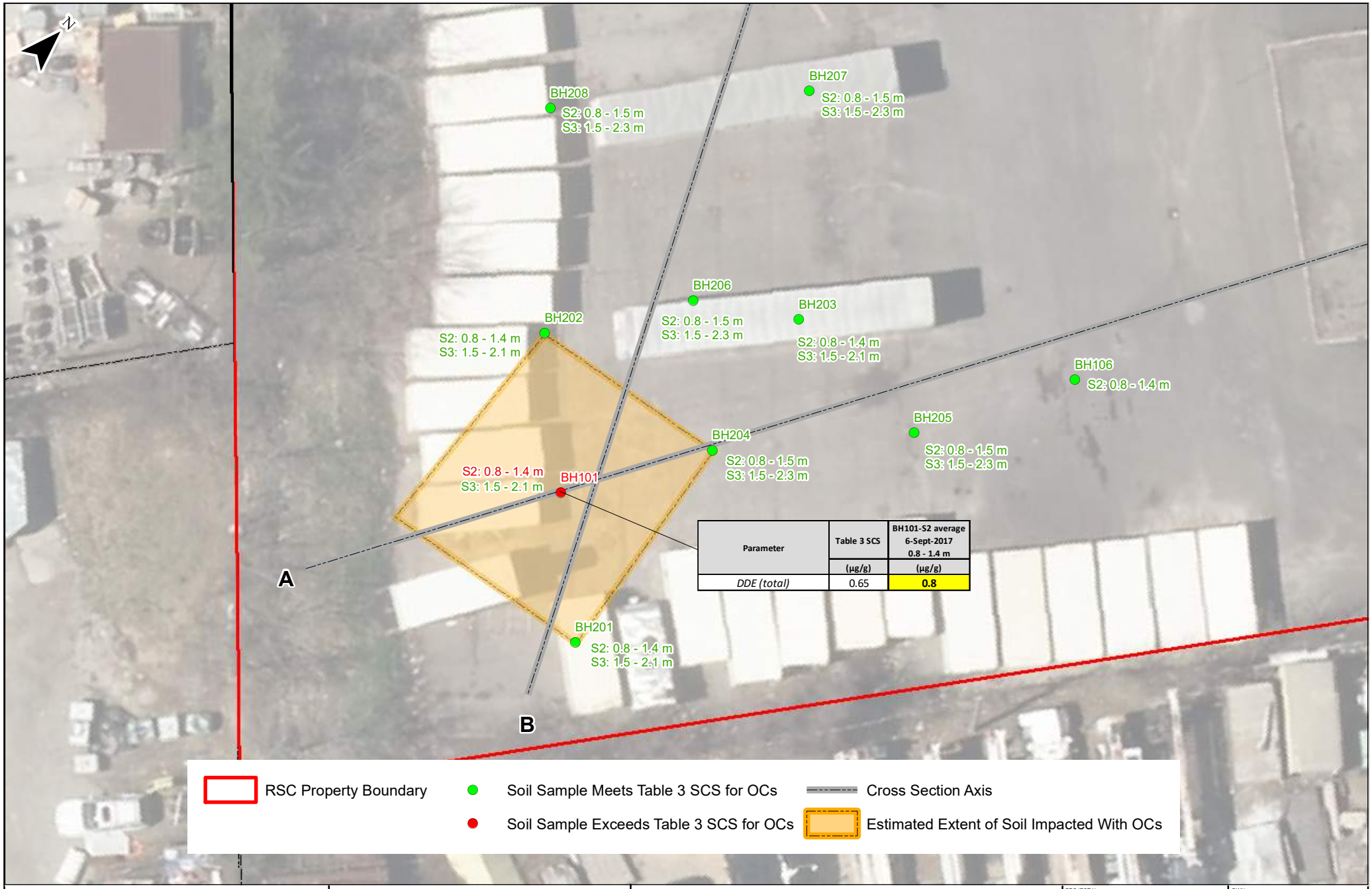
•BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
•INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY•

0 5 10 15 20 25 m

TITLE AND LOCATION:

PRE-REMEDIATION SOIL SAMPLE ANALYSIS
ORGANOCHLORINE PESTICIDES (OCs)
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 7A



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0 2 4 6 8 10 m

TITLE AND LOCATION:

PRE-REMEDIATION SOIL SAMPLE ANALYSIS ORGANOCHLORINE PESTICIDES (OCs) DETAILED MAP

Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 7B



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0 5 10 15 20 25 m

TITLE AND LOCATION:

PRE-REMEDIATION SOIL SAMPLE ANALYSIS METALS
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 7C



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0 5 10 15 20 25 m

TITLE AND LOCATION:

PRE-REMEDIATION SOIL SAMPLE ANALYSIS
VOLATILE ORGANIC COMPOUNDS (VOCs)
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 7D



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0 5 10 15 20 25 m

TITLE AND LOCATION:
PRE-REMEDIATION SOIL SAMPLE ANALYSIS
PETROLEUM HYDROCARBONS (PHCs) and
BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES (BTEX)
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 7E



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0 5 10 15 20 25 m

TITLE AND LOCATION:

PRE-REMEDIATION GROUNDWATER ANALYSIS
ORGANOCHLORINE PESTICIDES (OCs)
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 8A



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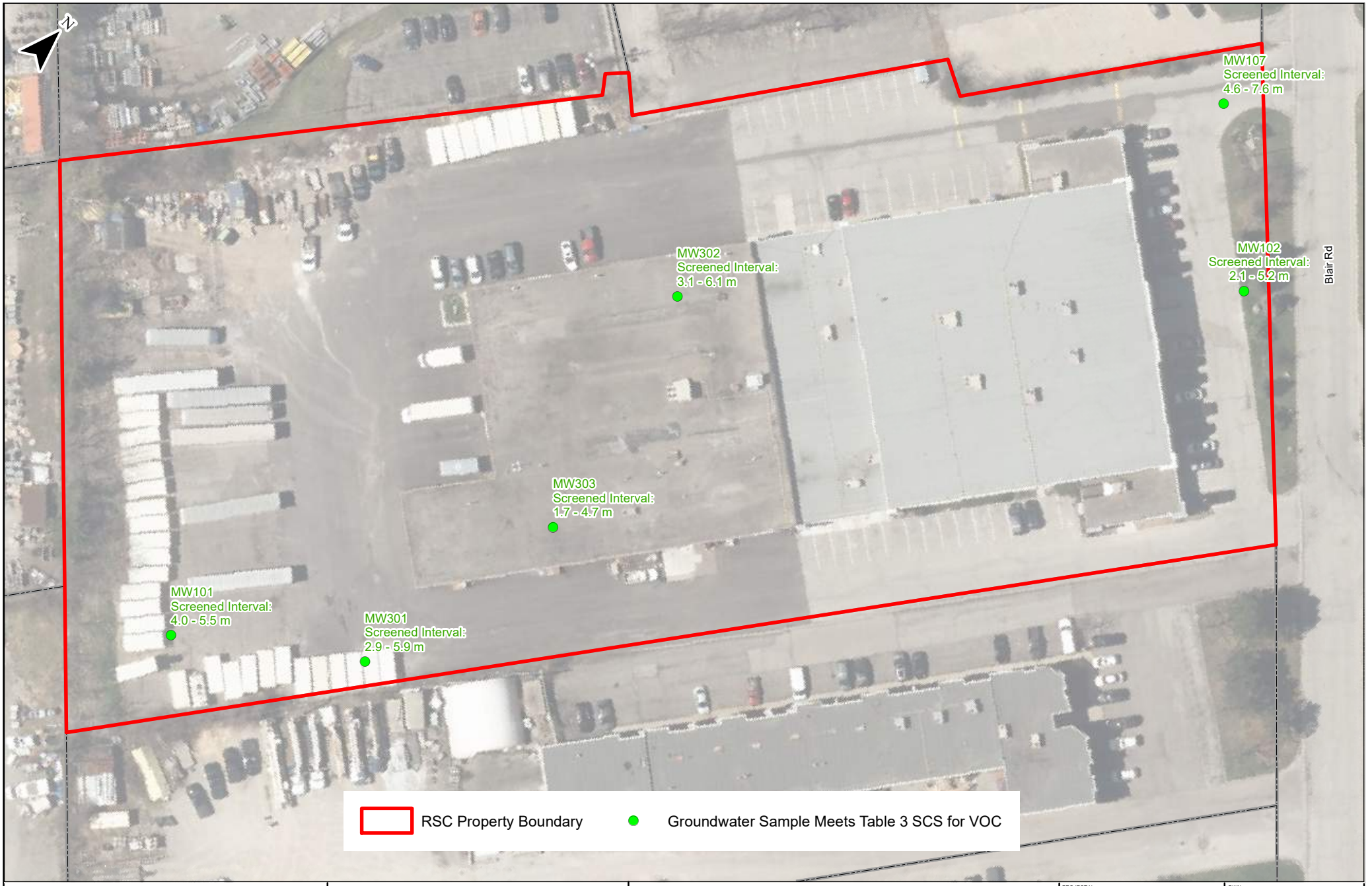
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•INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY•

0 5 10 15 20 25 m

TITLE AND LOCATION:

PRE-REMEDIATION GROUNDWATER ANALYSIS
METALS
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 8B



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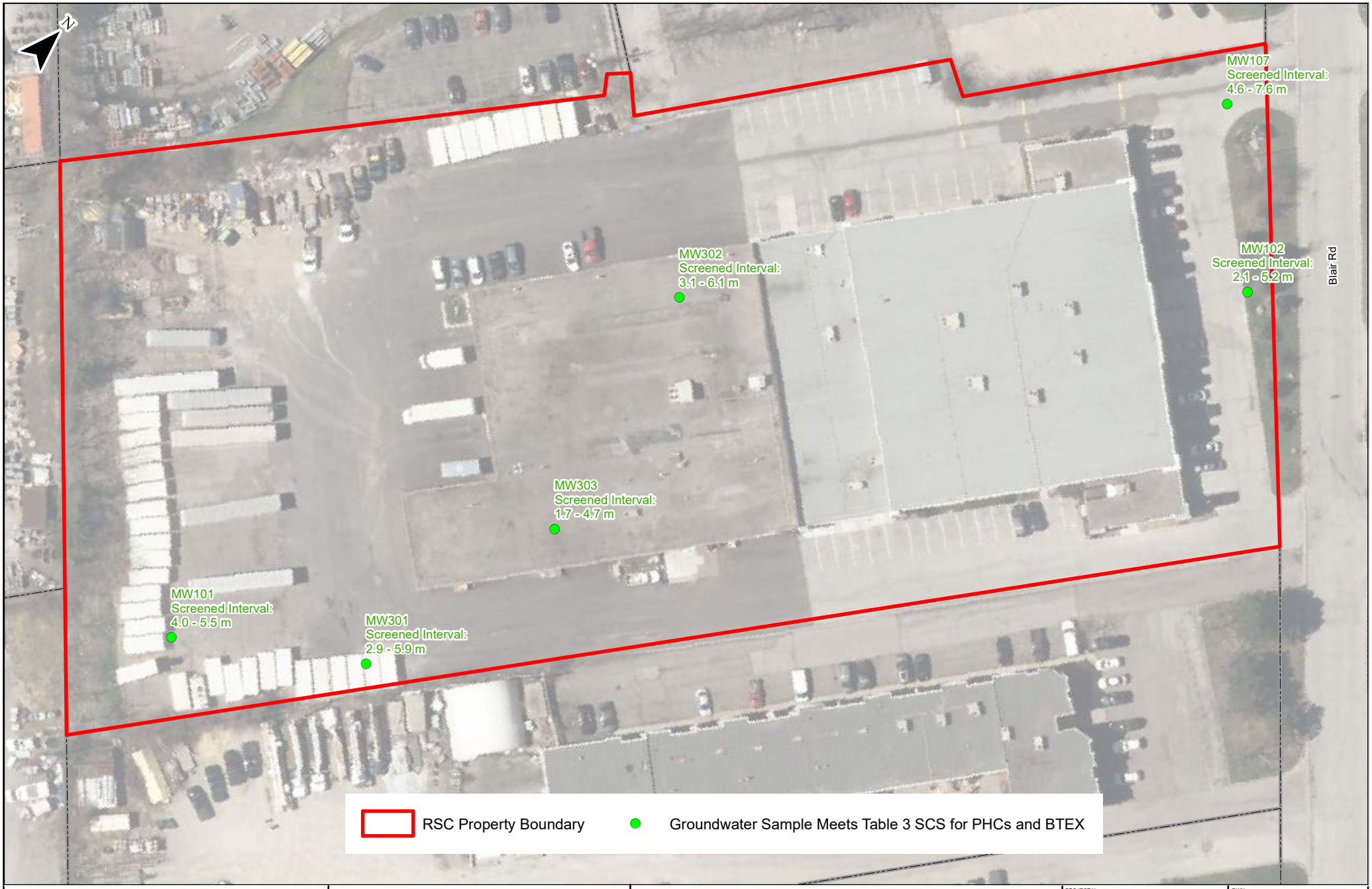
•BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
•INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

0 5 10 15 20 25 m

TITLE AND LOCATION:

PRE-REMEDIATION GROUNDWATER ANALYSIS
VOLATILE ORGANIC COMPOUNDS (VOCs)
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 8C



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•INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

0 5 10 15 20 25 m

TITLE AND LOCATION:
PRE-REMEDIATION GROUNDWATER ANALYSIS
PETROLEUM HYDROCARBONS (PHCs) and
BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES (BTEX)
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 8D



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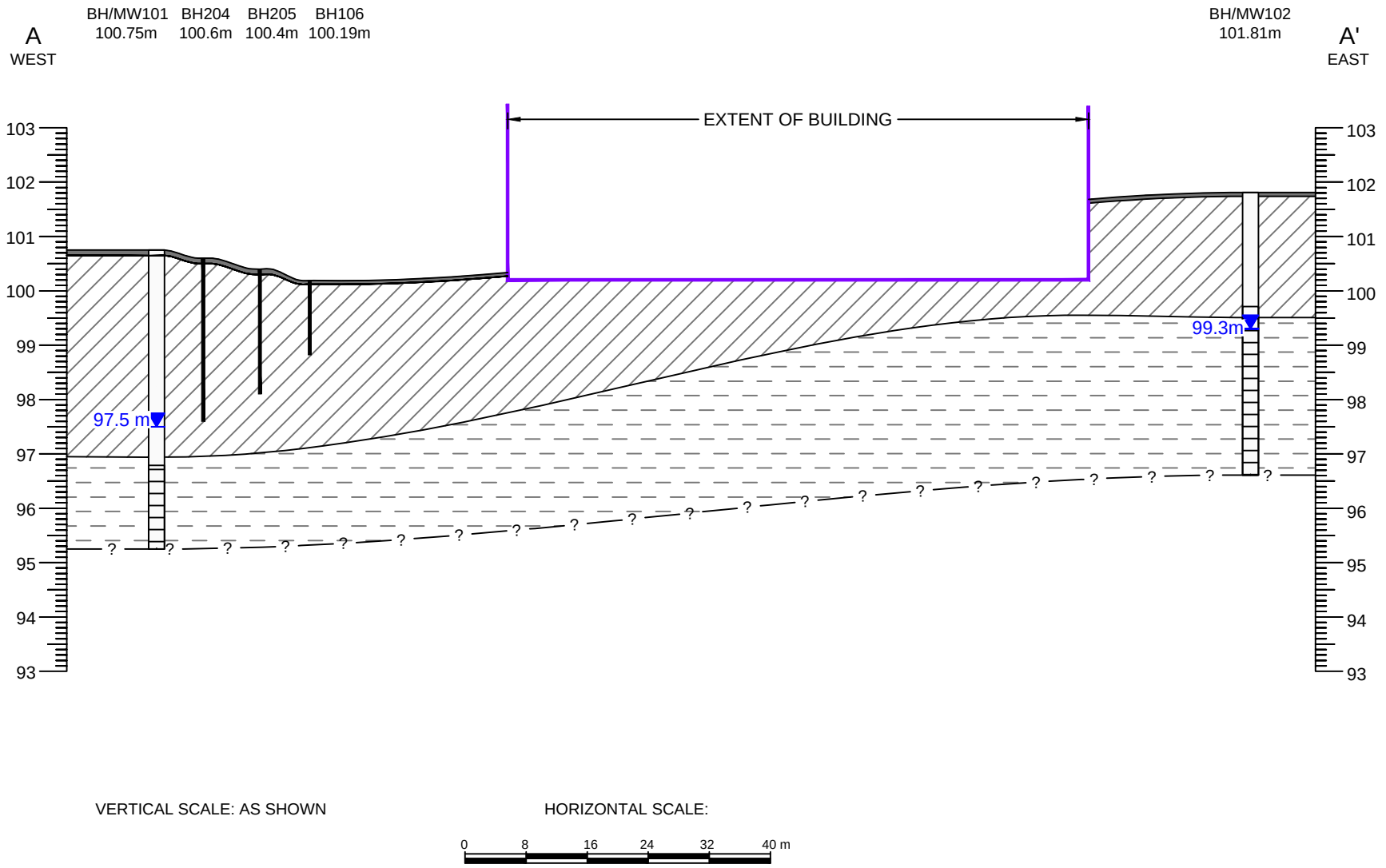
Note: MW101 was unable to be located due to snow cover during monitoring activities.

0 5 10 15 20 25 m

TITLE AND LOCATION:

INTERPRETED GROUNDWATER CONTOUR PLAN
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 9



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LEGEND:

- ASPHALT
- CLAYEY SILT / SILTY CLAY
- SHALE / TILL COMPLEX
- GROUNDWATER LEVEL (JULY 4, 2018)
- MONITORING WELL SCREEN

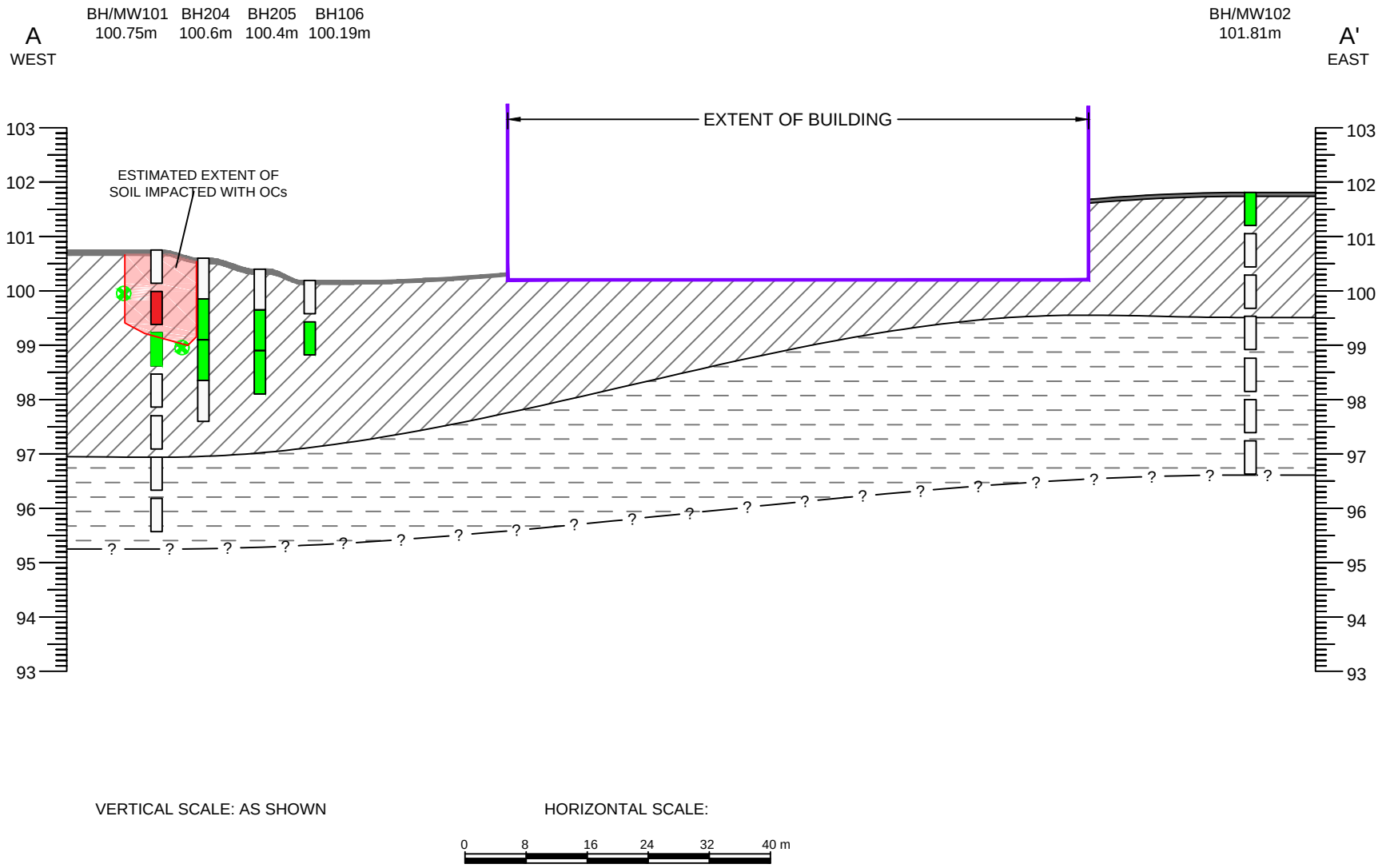
TITLE AND LOCATION:

CROSS SECTION A-A' PRE-REMEDIATION

PHASE TWO ESA
1160 BLAIR ROAD,
BURLINGTON, ONTARIO

PROJECT NO.:	DWN.:
HAM-00801245-G0	AS
SCALE: AS NOTED	CK: EE
DATE: JULY 2018	FIG. NO.: 10A

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LEGEND:

- ASPHALT
- CLAYEY SILT / SILTY CLAY
- SHALE / TILL COMPLEX
- CONFIRMATORY SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE EXCEEDS TABLE 3 SCS FOR OCs
- SOIL SAMPLE NOT ANALYZED FOR OCs

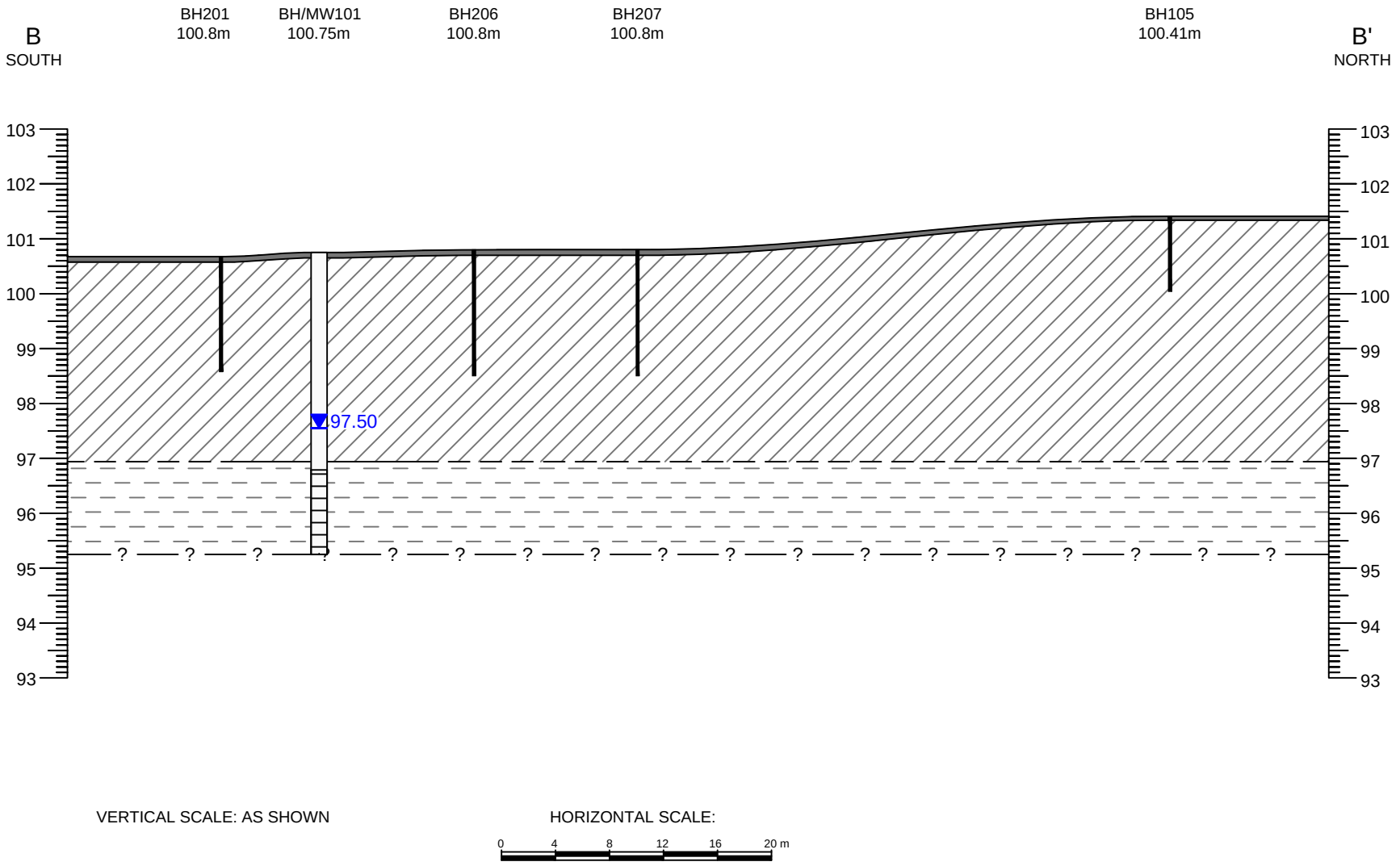
TITLE AND LOCATION:

CROSS SECTION A-A' PRE-REMEDIATION OCs IN SOIL

PHASE TWO ESA
1160 BLAIR ROAD,
BURLINGTON, ONTARIO

PROJECT NO.:	DWN.:
HAM-00801245-G0	AS
SCALE:	CK:
AS NOTED	EE
DATE:	FIG. NO.:
JULY 2018	10B

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LEGEND:

- ASPHALT
- CLAYEY SILT / SILTY CLAY
- SHALE / TILL COMPLEX
- GROUNDWATER LEVEL (JULY 4, 2018)
- MONITORING WELL SCREEN

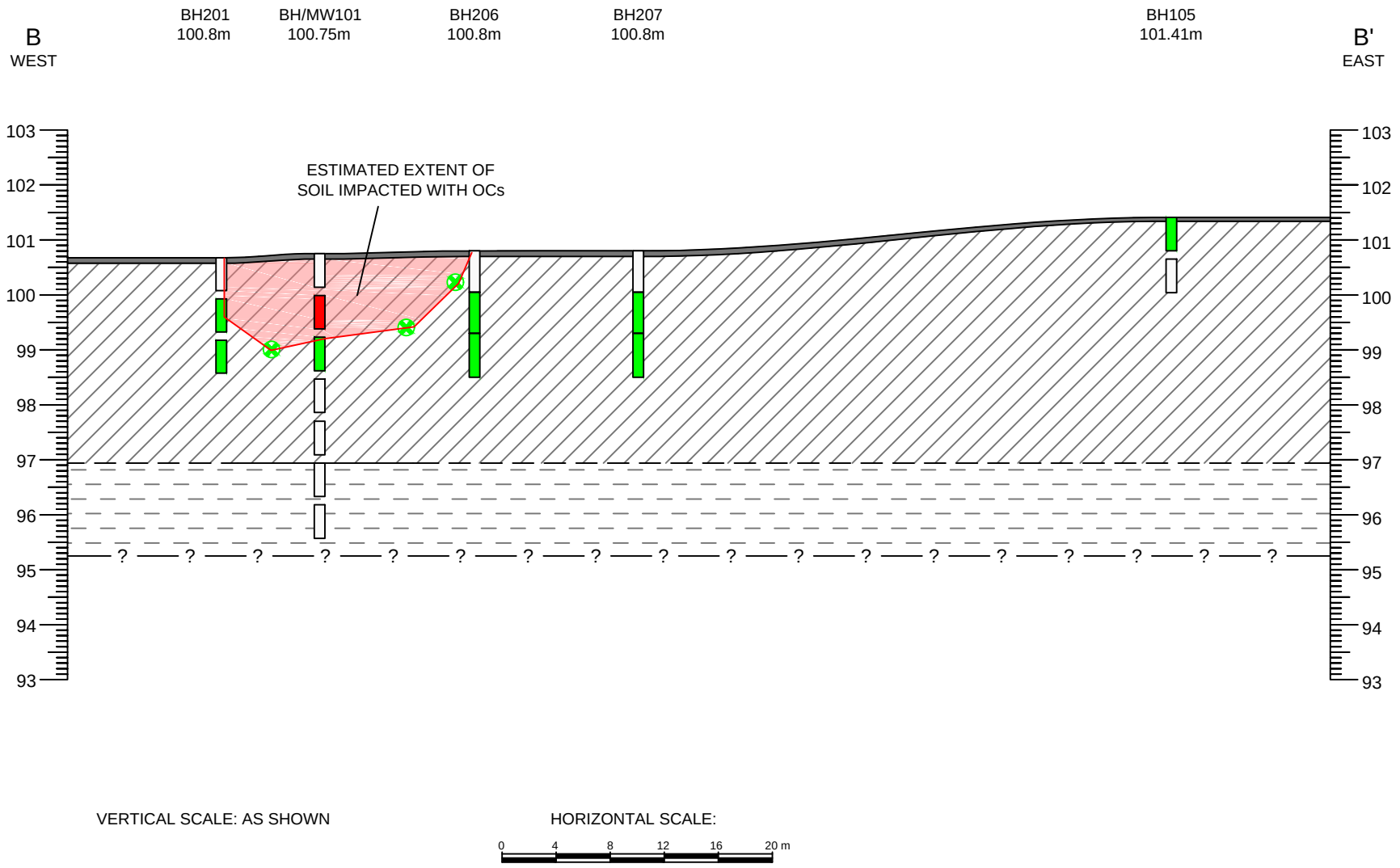
TITLE AND LOCATION:

CROSS SECTION B-B'
PRE-REMEDIATION

PHASE TWO ESA
1160 BLAIR ROAD,
BURLINGTON, ONTARIO

PROJECT NO.:	DWN.:
HAM-00801245-G0	AS
SCALE: AS NOTED	CK: EE
DATE: JULY 2018	FIG. NO.: 11A

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LEGEND:

- ASPHALT
- CLAYEY SILT / SILTY CLAY
- SHALE / TILL COMPLEX
- CONFIRMATORY SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE EXCEEDS TABLE 3 SCS FOR OCs
- SOIL SAMPLE NOT ANALYZED FOR OCs

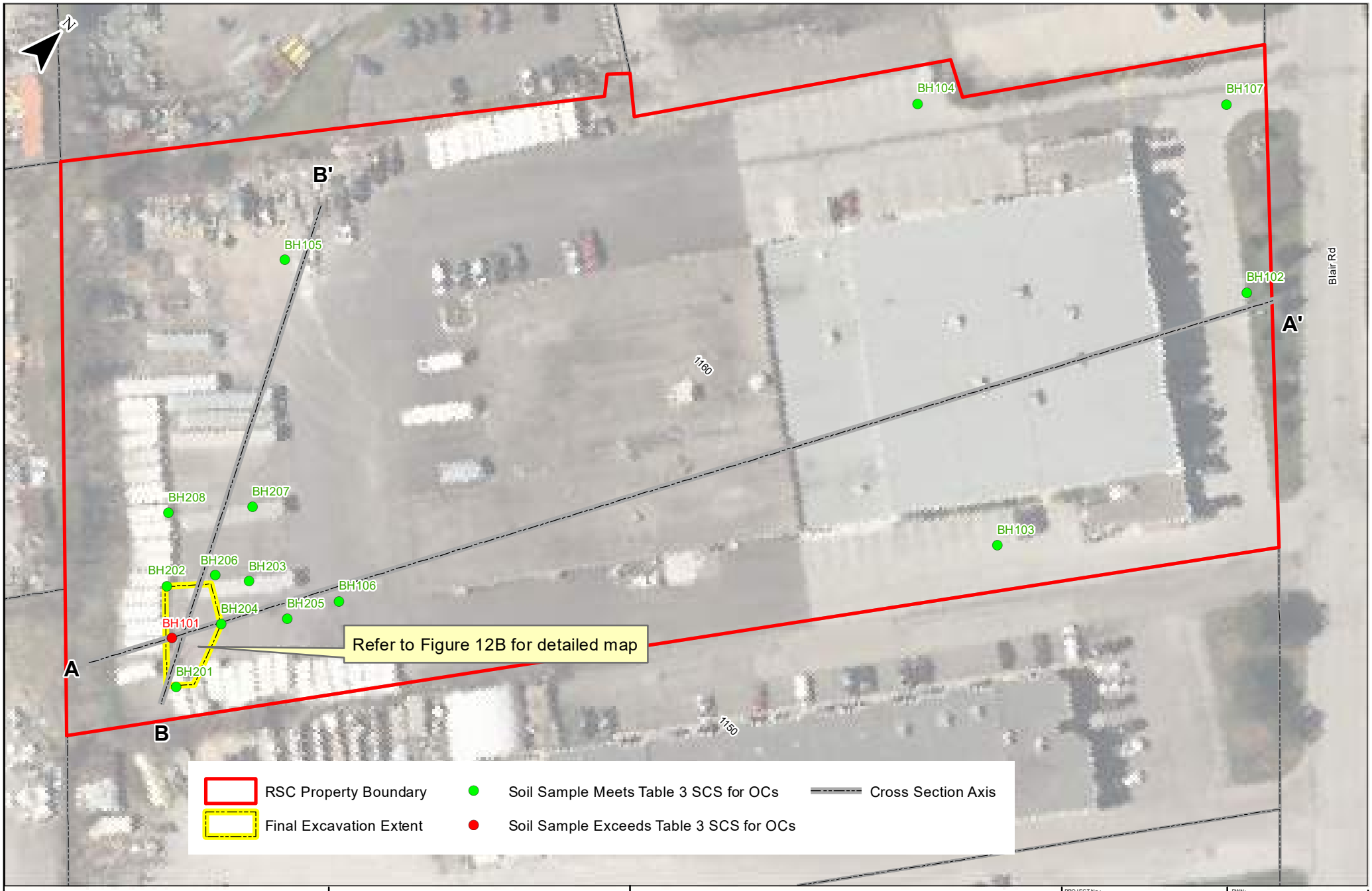
TITLE AND LOCATION:

CROSS SECTION B-B' PRE-REMEDIATION OCs IN SOIL

PHASE TWO ESA
1160 BLAIR ROAD,
BURLINGTON, ONTARIO

PROJECT NO.:	DWN.:
HAM-00801245-G0	AS
SCALE: AS NOTED	CK: EE
DATE: JULY 2018	FIG. NO.: 11B

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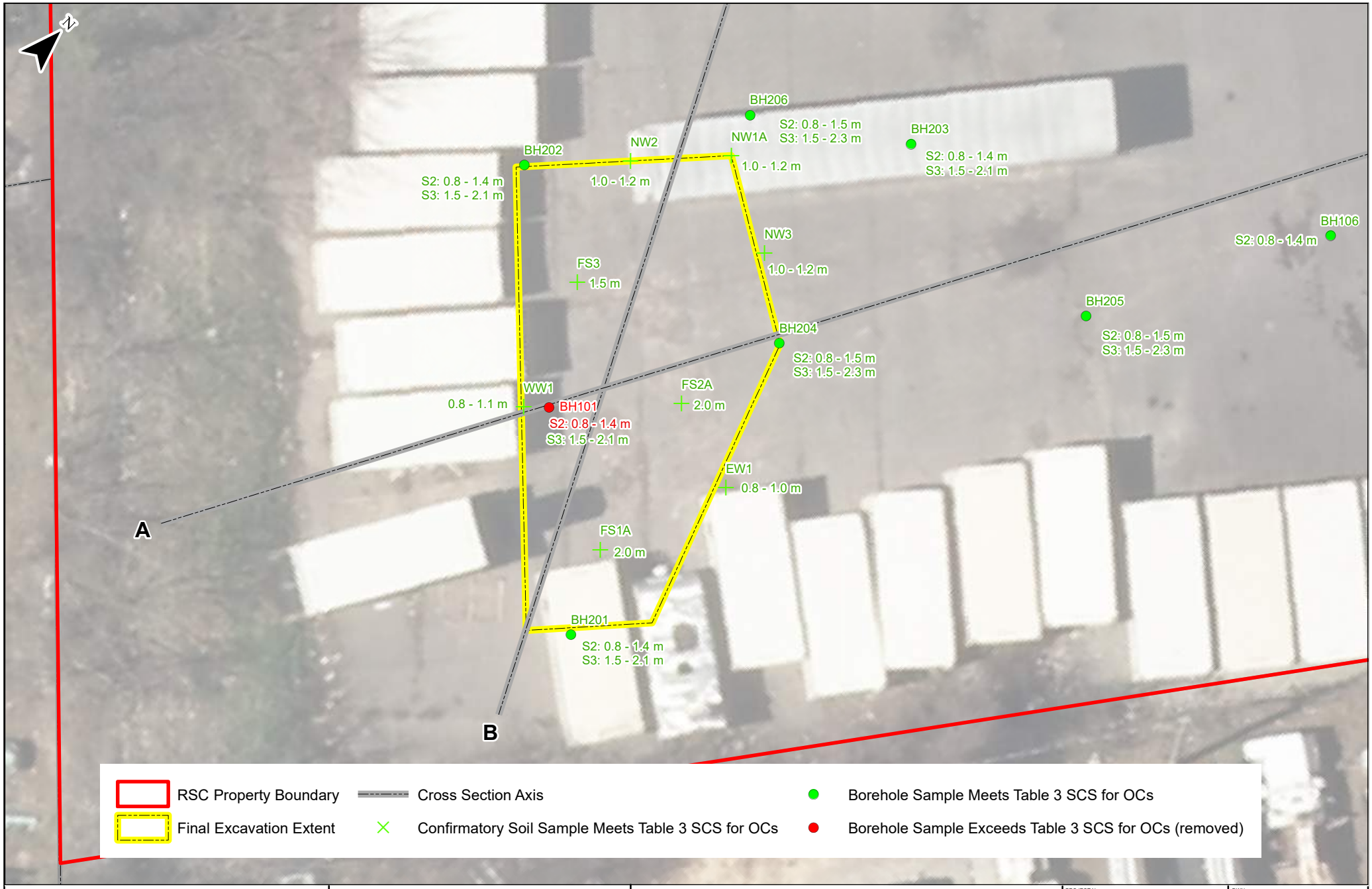
•BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

0 5 10 15 20 25 m

TITLE AND LOCATION:

POST-REMEDIATION SOIL SAMPLE ANALYSIS
ORGANOCHLORINE PESTICIDES (OCs)
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: EE
DATE: JULY 2018	FIG. No.: 12A



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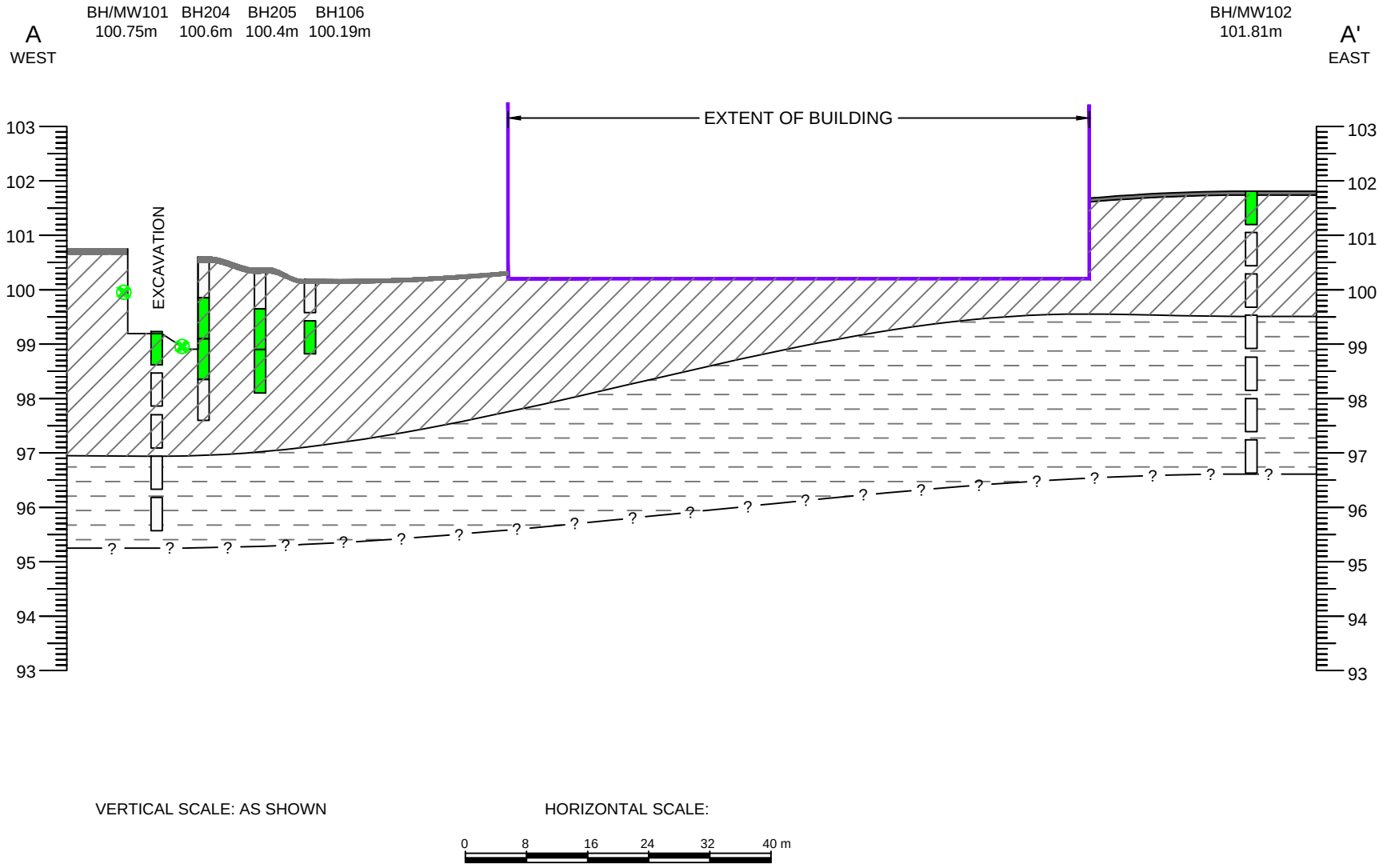
0 1 2 3 4 5 m

TITLE AND LOCATION:

POST-REMEDIATION SOIL SAMPLE ANALYSIS ORGANOCHLORINE PESTICIDES (OCs) DETAILED MAP

Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: EE
DATE: JULY 2018	FIG. No.: 12B



VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 8 16 24 32 40 m

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LEGEND:

- ASPHALT
- CLAYEY SILT / SILTY CLAY
- SHALE / TILL COMPLEX
- CONFIRMATORY SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE EXCEEDS TABLE 3 SCS FOR OCs
- SOIL SAMPLE NOT ANALYZED FOR OCs

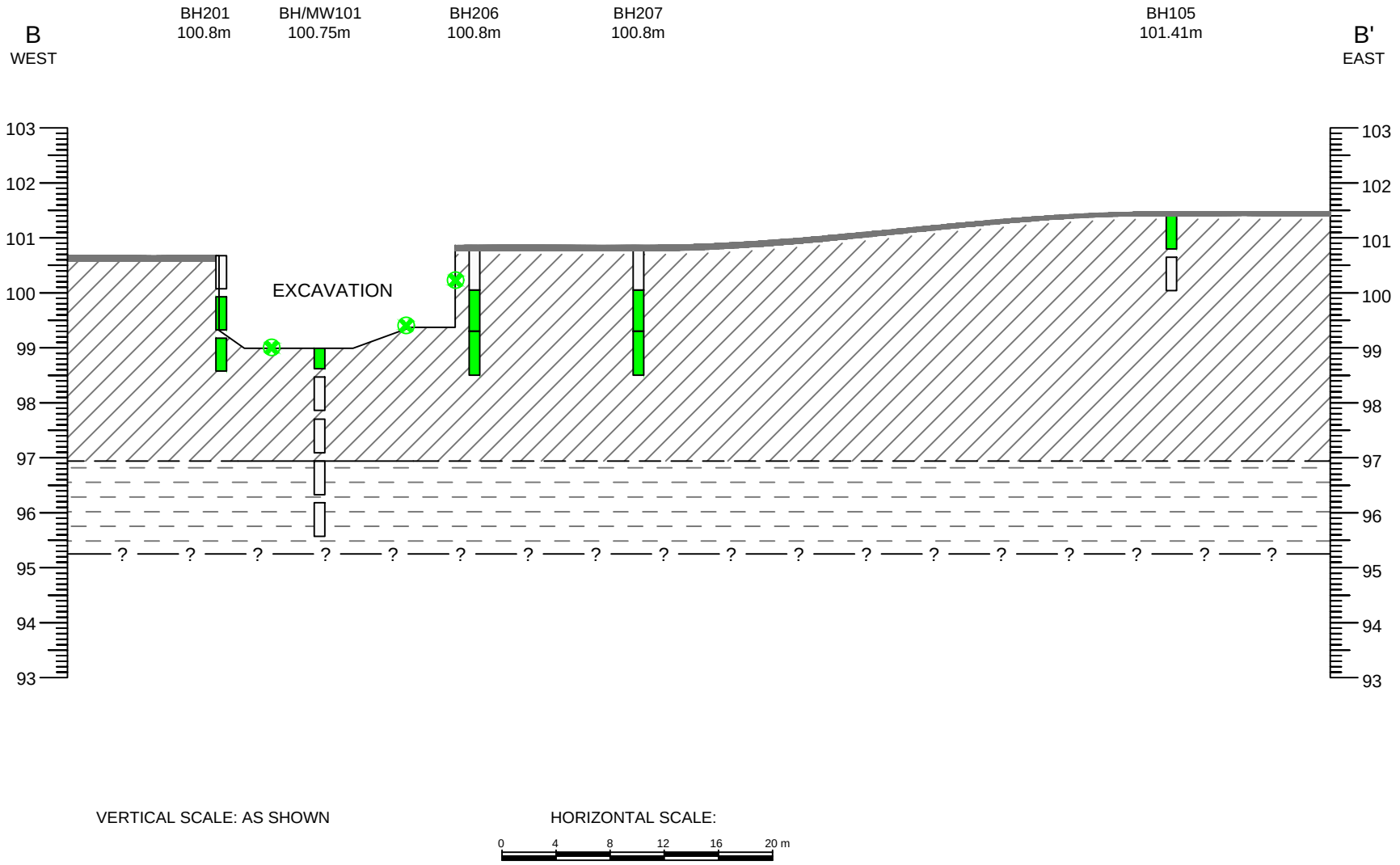
TITLE AND LOCATION:

CROSS SECTION A-A' POST-REMEDIATION OCs IN SOIL

PHASE TWO ESA
1160 BLAIR ROAD,
BURLINGTON, ONTARIO

PROJECT NO.: HAM-00801245-G0	DWN.: AS
SCALE: AS NOTED	CK: EE
DATE: JULY 2018	FIG. NO.: 13

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VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 4 8 12 16 20 m

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LEGEND:

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- CLAYEY SILT / SILTY CLAY
- SHALE / TILL COMPLEX
- CONFIRMATORY SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE EXCEEDS TABLE 3 SCS FOR OCs
- SOIL SAMPLE NOT ANALYZED FOR OCs

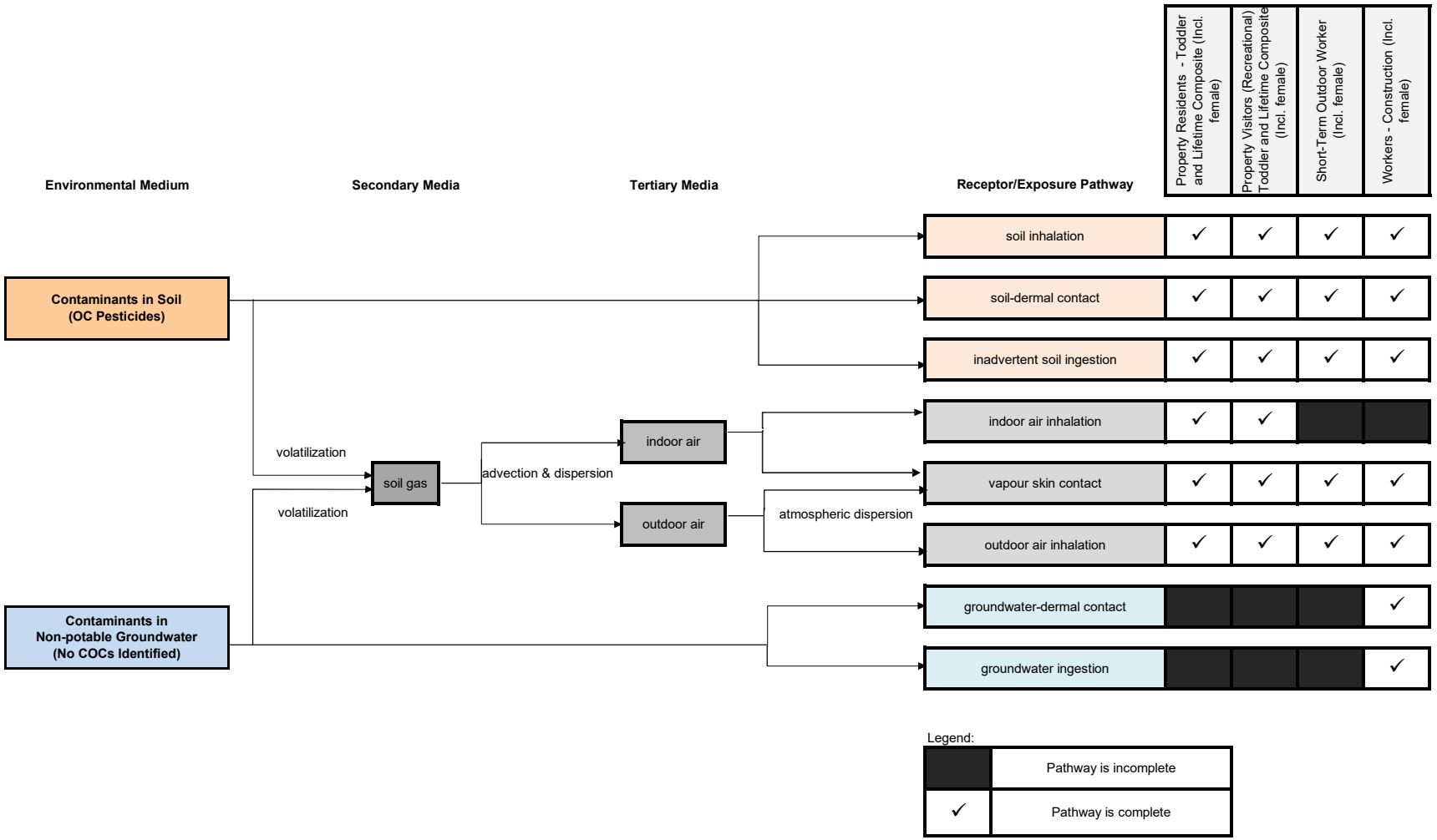
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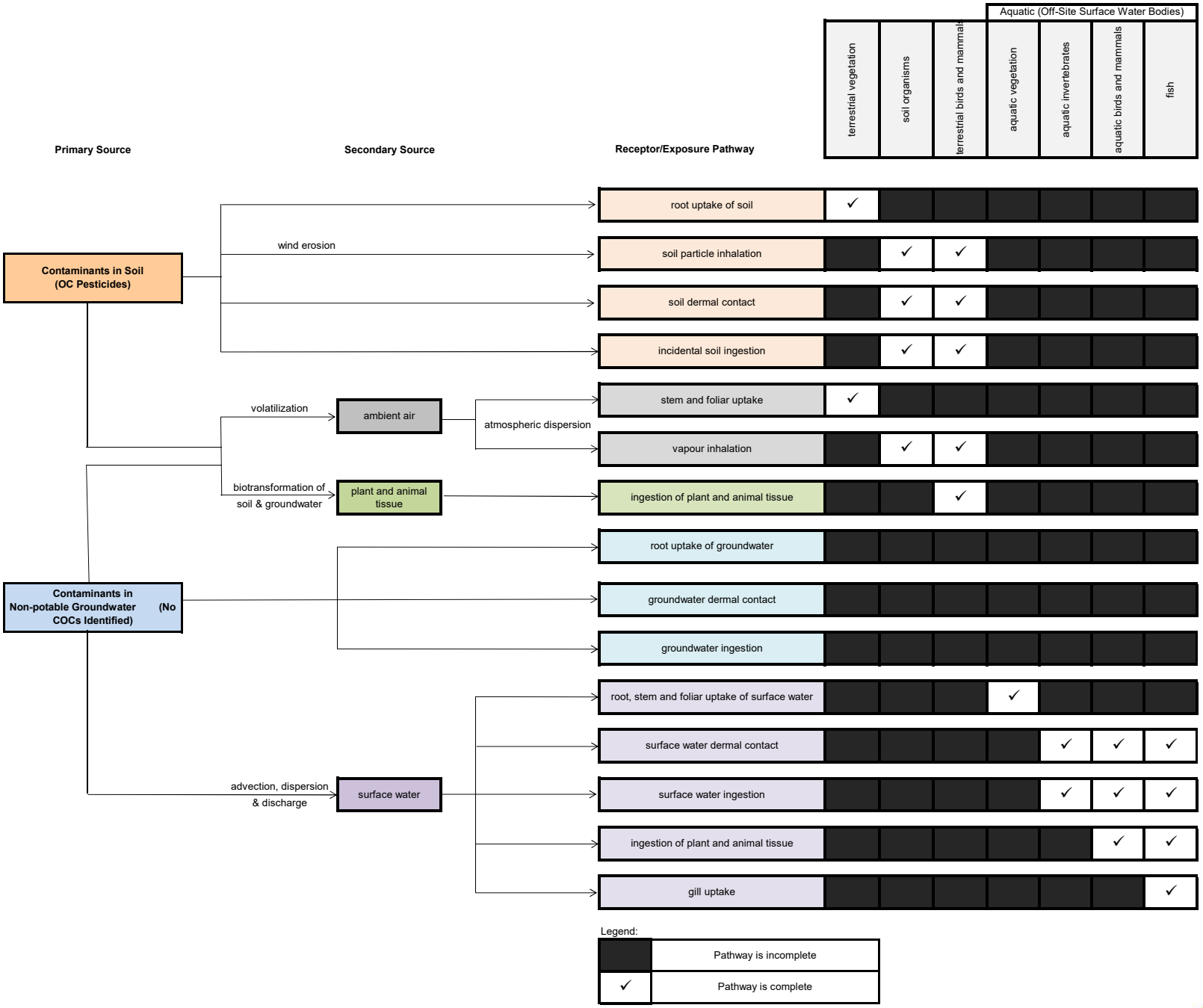
CROSS SECTION B-B' POST-REMEDIATION OCs IN SOIL

PHASE TWO ESA
1160 BLAIR ROAD,
BURLINGTON, ONTARIO

PROJECT NO.:	DWN.:
HAM-00801245-G0	AS
SCALE: AS NOTED	CK: EE
DATE: JULY 2018	FIG. NO.: 14

Y:\WORD REPORTS-VISION\00801200\00801245 1160 Blair Road, BurlingtonG0 - Phase One, Two Upgrades, RSC\Phase Two ESA\CAD\HAM-00801245-G0.dwg


Environmental Medium
Secondary Media
Tertiary Media
Receptor/Exposure Pathway
Property Residents - Toddler and Lifetime Composite (Incl. female)
Property Visitors (Recreational) Toddler and Lifetime Composite (Incl. female)
Short-Term Outdoor Worker (Incl. female)
Workers - Construction (Incl. female)
Contaminants in Soil (OC Pesticides)
Contaminants in Non-potable Groundwater (No COCs Identified)
volatilization
volatilization
soil gas
advection & dispersion
indoor air
outdoor air
atmospheric dispersion
soil inhalation
soil-dermal contact
inadvertent soil ingestion
indoor air inhalation
vapour skin contact
outdoor air inhalation
groundwater-dermal contact
groundwater ingestion
Legend:
Pathway is incomplete
Pathway is complete


Aquatic (Off-Site Surface Water Bodies)
terrestrial vegetation
soil organisms
terrestrial birds and mammals
aquatic vegetation
aquatic invertebrates
aquatic birds and mammals
fish
Primary Source
Secondary Source
Receptor/Exposure Pathway
Contaminants in Soil (OC Pesticides)
wind erosion
root uptake of soil
soil particle inhalation
soil dermal contact
incidental soil ingestion
volatilization
ambient air
atmospheric dispersion
stem and foliar uptake
vapour inhalation
biotransformation of soil & groundwater
plant and animal tissue
ingestion of plant and animal tissue
Contaminants in Non-potable Groundwater (No COCs Identified)
root uptake of groundwater
groundwater dermal contact
groundwater ingestion
root, stem and foliar uptake of surface water
surface water dermal contact
advection, dispersion & discharge
surface water
surface water ingestion
ingestion of plant and animal tissue
gill uptake
Legend:
Pathway is incomplete
Pathway is complete

Appendix A:
Sampling and Analysis Plan

Sampling and Analysis Plan – 1160 Blair Road, Burlington, Ontario

This Appendix presents the Sampling and Analysis Plan (SAAP) that was developed in support of the Phase Two Environmental Assessment Work (ESA) for the property located at 1160 Blair Road in Burlington, Ontario (hereinafter referred to as the 'Site'). The Phase Two ESA will be conducted to provide further characterization of the Site subsurface conditions and address the Areas of Potential Environmental Concerns (APECs) outlined in EXP Phase One ESA to the subsequent filing of a Record of Site Condition (RSC) on the Ontario Ministry of the Environment (MOE) Brownfields Environmental Site Registry. The SAAP presents the procedures and measures that will be undertaken during field investigative activities to characterize the Site conditions and meet the data quality objectives of the Phase Two ESA.

The SAAP presents the sampling program proposed for the Site, the recommended procedures and protocols for sampling and related field activities, the data quality objectives, and the quality assurance/ quality control measures that will be undertaken to provide for the collection of accurate, reproducible and representative data.

1. Field Sampling Program

The field sampling program was developed to provide for the collection of samples of the surficial and subsurface soil materials for chemical analysis of OC pesticides, petroleum hydrocarbons (PHCs), benzene, toluene, ethylbenzene and xylenes (collectively known as 'BTEX'), volatile organic compounds (VOCs), and metals and for the analysis of OC Pesticides, PHCs, BTEX, VOCs, and metals in groundwater. The soil sampling media is to consist of the surface soils and upper overburden materials (depths up to 6.1 m below grade). The soil sampling will be location-specific to assess for the potential presence of contaminants based on the identification of areas of potential environmental concern (APECs). Vapour readings will also be collected in the field to determine samples to be submitted for BTEX and PHC F1-F2 analysis. The soil sample intervals will extend from the surface up to a maximum depth of approximately 6.1 meters (m) below grade surface (bgs).

The groundwater sampling will be location-specific to assess for the potential presence of contaminants based on the identification of APECs. The monitoring well network will comprise of at least three (3) wells.

Vertical control of the boreholes and monitoring wells will be obtained through the completion of an elevation survey with reference to a local structure with a known geodetic elevation. Groundwater flow and direction in the water table aquifer will also be determined through groundwater level measurements and the elevations established from the Site elevation survey.

2. Field Methods

To meet the requirements of the field sampling program, the following field investigative methods will be undertaken:

- Borehole Drilling;
- Soil Sampling;
- Monitoring Well Installation;
- Monitoring Well Development;
- Groundwater Level Measurements;
- Elevation Survey; and,
- Groundwater Sampling.

The field investigative methods will be performed following the procedures and protocols set out in EXP's standard operating procedures and are outlined below:

2.1 Borehole Drilling

Boreholes will be advanced at the Site to facilitate the collection of soil samples for chemical analysis and geologic characterization; and, for the installation of groundwater monitoring wells. Boreholes will provide for collection of samples of the surficial and overburden materials beneath the Site. The borehole locations will be selected to determine the presence or absence of impacts in the soils and the upper overburden groundwater and to address the APECs outlined in EXP Phase One ESA Report.

Prior to borehole drilling, utility clearances will be obtained from public and private locators, as required. If any uncertainty regarding the location of a buried utility at a borehole location is encountered, hand augering or digging will be performed beforehand to confirm the location of the utility.

Where there is overlying asphalt or concrete, the overlying material will be mechanically cored to provide access to the underlying soil materials. The borehole drilling program will be conducted by a licensed driller under the oversight of EXP field staff. Auger flights will be cleaned prior to the commencement of drilling at each borehole location.

2.2 Soil Sampling

Soil samples will be collected for chemical analysis and geologic property characterization. The soil samples will be collected using 5 cm diameter, 61 cm long, split spoons and hollow stem augers or a 5 cm diameter, 1.5 m long, duel tube sampling system with interior dedicated vinyl sampling tubes. Upon retrieval from the boreholes, the split spoons or vinyl sampling tubes will be placed on a flat surface and disassembled by drilling personnel to provide access of the recovered cores. Geologic and sampling details of the recovered cores will be logged and the samples will be assessed for the potential presence of non-aqueous phase liquids. Soil stratigraphy encountered in the boreholes will be texturally, visually and olfactory classified in the field and in the laboratory. Soil samples will be logged for colour, grain size, moisture content, density, structures, texture, staining, and field vapour readings. A Photo-ionization Detector (PID) or Gastechtor^{TM} will be utilized to screen the soil samples for Total Organic Vapour (TOV). Representative worst-case soil samples from each borehole will be collected and submitted to a certified laboratory for analysis based on TOV readings, sample depth, visual and/or olfactory field observations.

Recommended volumes of soil samples selected for chemical analysis will be collected into pre-cleaned laboratory-supplied glass sample jars/vials identified for the specified analytical test group. Samples intended for PHC/BTEX and VOCs will be collected using a laboratory-supplied soil core sampler, placed into the vials containing methanol for preservation purposes and sealed using Teflon lined septa lids. The samples will be placed into clean insulated coolers chilled with ice for storage and transport. The samples will be assigned unique identification numbers, and the date, time, location, and requested analyses for each sample will be documented in a bound field note book. The samples will be submitted to the contractual laboratory within analytical test group holding times under Chain of Custody protocols. New disposable chemical resistant gloves will be used for each soil core to prevent sample cross-contamination.

2.3 Monitoring Well Installation

Select boreholes will be instrumented as groundwater monitoring wells installed with 1.5 to 3 m long screens intercepting the native overburden material, where the shallow water table aquifer is expected, extending to depths of approximately 6.1 m below grade. The monitoring wells will be constructed using 51 mm diameter, Schedule 40, PVC riser pipe and number 10 slot size (0.25 mm) well screens. The base of the well screen will be sealed with threaded flush PVC end caps. All well pipe connections will be factory machined threaded flush couplings. The annular space around the well screen will be backfilled with silica sand, to an average height of 0.6 m above the top of the screen. Granular bentonite will be placed in the

borehole annulus from the top of the sand pack to approximately 0.3 m below grade. The monitoring well will be completed with flush-mounted protective steel casings cemented into place.

2.4 Monitoring Well Development

The newly installed monitoring wells will be developed to remove fine sediment particles potentially lodged in the sand pack and well screen to enhance hydraulic communication with the surrounding formation waters. The monitoring wells will be developed using a dedicated low-density polyethylene (LDPE) tubing, equipped with an inertial foot valve to disturb the water column. The wells will be developed until approximately 3 to 5 well volumes of water will be removed and/or until purged dry. Well development details will be documented on a well development log sheet or in a bound hard cover notebook. All development waters will be collected and stored in labeled, sealed containers.

2.5 Groundwater Level Measurements

Groundwater level measurement will be recorded for the newly installed monitoring well to determine the depth of the water table aquifer beneath the Site. The water level will be measured with respect to the top of the PVC riser pipe by means of an electronic water level meter. The water levels will be recorded on water level log sheets or in a bound field notebook. The water level meter probe will be decontaminated between monitoring well locations.

2.6 Elevation Survey

An elevation survey will be conducted to obtain vertical control of the newly installed monitoring well location and boreholes. The top of the PVC riser pipe of the monitoring well and ground surface elevation of the monitoring well and borehole locations will be surveyed against an geodetic benchmark, or if unavailable, against a suitable arbitrary benchmark. Elevations measured against a geodetic/arbitrary benchmark will be recorded as meters above mean sea level (m AMSL). The elevation survey will be accurate to within ± 0.3 cm.

2.7 Field Measurements of Water Quality Parameters

Prior to collecting the groundwater sample, field measurements of water quality parameters will be recorded from the monitoring wells utilizing low-flow purging and sampling methodologies. Groundwater will be purged from the monitoring wells using a peristaltic pump and dedicated LDPE tubing. Field measurements of dissolved oxygen concentration, electrical conductivity, oxidation-reduction potential, pH, temperature, turbidity and water levels will be recorded in three (3) minute intervals during the purging activities using a pre-calibrated multi probe water quality meter, a turbidity meter and a water level meter. Generally well purging will continued until the purged water has chemically stabilized as indicated by field parameter measurements and the well head drawdown is maintained within 10 cm for 3 consecutive readings. In the event that the parameters do not stabilize or the well head drawdown is too significant, the groundwater is to recover to approximately 75% of static levels before sampling.

The multi-meter electrodes will be calibrated prior to receipt of the meter by the supplier using in-house pH and conductivity reference standards. All collected purged water will be stored on-Site in labeled, sealed containers. Equipment used during groundwater monitoring will be thoroughly cleaned and decontaminated between wells.

2.8 Groundwater Sampling

Upon completion the field measurements of water quality parameters, groundwater samples will be collected for chemical analysis using the peristaltic pump and dedicated LDPE tubing. Recommended groundwater sample volumes will be collected into pre-clean laboratory-supplied vials or bottles provided with analytical test group specific preservatives, as required. The samples will be placed in an insulated cooler chilled with ice for storage and transport. Samples for BTEX and VOC analysis will be collected in

triplicate vials prepared with concentrated hydrochloric acid or an acceptable substitute as a preservative. Each vial will be inverted and inspected for gas bubbles prior to being placed in the cooler to ensure that no head-space is present.

The groundwater sample will be assigned a unique identification number, and the date, time, project number, company name, location and requested analyses will be documented in a bound hard cover notebook. The sample will be submitted to the contractual laboratory within analytical test group holding times under chain of custody protocols. New disposable chemical resistant gloves will be used for each sampling location to prevent sample cross-contamination.

3. Field Quality Assurance/Quality Control Program

The objective of the field quality assurance/quality control (QA/QC) program is to obtain soil and groundwater samples and other field measurements that provide data of acceptable quality that meets the objectives of the Phase Two ESA. The objectives of the QA/QC program will be achieved through the implementation of procedures for the collection of unbiased (i.e. non-contaminated) samples, sample documentation and the collection of appropriate QC samples to provide a measure of sample reproducibility and accuracy. The field QA/QC measures will comprise:

- Decontamination Protocols;
- Equipment Calibration;
- Sample Preservation;
- Sample Documentation; and,
- Field Quality Control Samples.

Details on the field QA/QC measures are provided below.

3.1 Decontamination Protocols

Decontamination protocols will be followed during field sampling where non-dedicated sampling equipment is used to prevent sample cross contamination. For the borehole drilling and soil sampling, soil sampling devices will be cleaned/decontaminated between sampling intervals and auger flights between borehole locations in according with SOP requirements. For the monitoring well installation, well components are not to come into contact with the ground surface prior to insertion into boreholes. Electronic water level meters will be decontaminated between monitoring well locations during well development, and purging activities. For hydraulic conductivity tests, the electronic water level meters will be decontaminated between sampling locations. All decontamination fluids will be collected and stored in sealed, labeled containers.

3.2 Equipment Calibration

All equipment requiring calibration will be calibrated in the field according to manufacturer's requirements using analytical grade reagents, or by the supplier prior to conducting field activities, and subsequently checked in the field. The calibration of all pre-calibrated instruments will be checked in the field using analytical grade reagents and re-calibrated as required. For multiple day sampling events, equipment calibration will be checked prior to the beginning of sampling activities. All calibration data will be documented in a bound hard cover notebook.

3.3 Sample Preservation

All samples will be preserved using appropriate analytical test group specific reagents, as required, and upon collection placed in pre-chilled insulated coolers packed with ice for storage and transport.

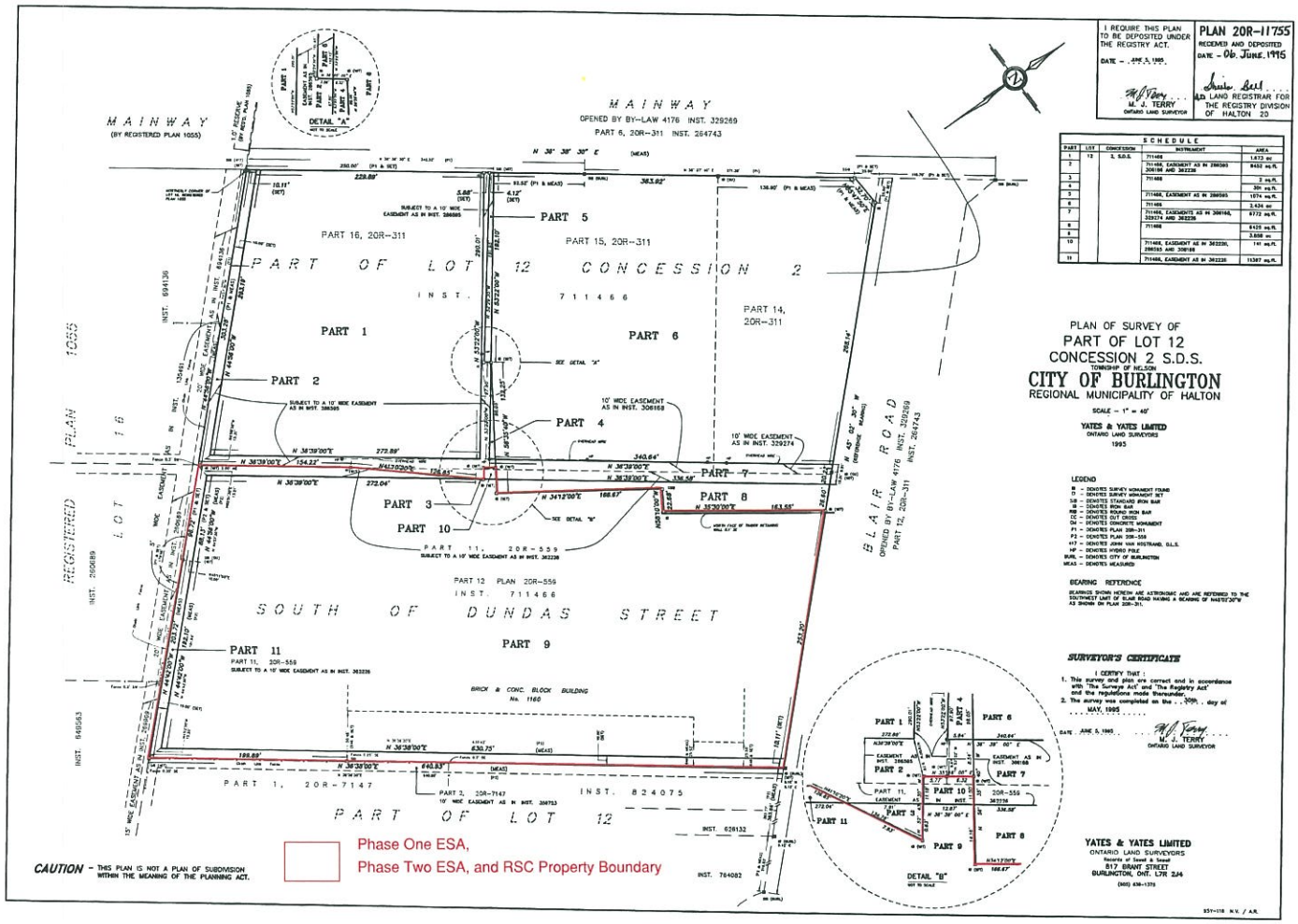
3.4 Sample Documentation

All samples will be assigned a unique identification number, which is to be recorded along with the date, time, project number, company name, location and requested analysis in a bound field notebook. All samples will be handled and transported following COC protocols.

3.5 Field Quality Control

Field quality control samples will be collected to evaluate the accuracy and reproducibility of the field sampling procedures. For groundwater sampling, one (1) field duplicate is to be collected for every ten (10) samples submitted for chemical analysis. For multiple day sampling events, at least one (1) field duplicate soil and groundwater sample will be submitted for chemical analysis. The field duplicate samples will be assessed by calculating the relative percent difference and comparing to the analytical test group specific acceptance criteria.

Appendix B: Survey Plan


I REQUIRE THIS PLAN TO BE DEPOSITED UNDER THE REGISTRY ACT.
DATE – JUNE 5, 1995
M. J. TERRY
ONTARIO LAND SURVEYOR
PLAN 20R-11755
RECORDED AND DEPOSITED
DATE – 06 JUNE, 1995
LAND REGISTRAR FOR THE REGISTRY DIVISION OF HALTON 20
MAINWAY
(BY REGISTERED PLAN 1055)
MAINWAY
OPENED BY BY-LAW 4176 INST. 329269
PART 6, 20R-311 INST. 264743
DETAIL "A"
PART 16, 20R-311
PART 15, 20R-311
PART OF LOT 12 CONCESSION 2
INST. 711466
PART 14, 20R-311
PART 1
PART 2
PART 3
PART 4
PART 5
PART 6
PART 7
PART 8
PART 9
PART 10
PART 11, 20R-559
SUBJECT TO A 10' WIDE EASEMENT AS IN INST. 382238
PART 12 PLAN 20R-559
INST. 711466
SOUTH OF DUNDAS STREET
BRICK & CONC. BLOCK BUILDING
No. 1160
PART 1, 20R-7147
PART 2, 20R-7147
10' WIDE EASEMENT AS IN INST. 306753
INST. 824075
PART OF LOT 12
BLAIR ROAD
OPENED BY BY-LAW 4176 INST. 329269
PART 12, 20R-311 INST. 264743
REGISTERED PLAN 1055
LOT 16
INST. 694136
INST. 260689
INST. 646563
INST. 628132
INST. 764082
10' WIDE EASEMENT AS IN INST. 306168
SUBJECT TO A 10' WIDE EASEMENT AS IN INST. 386369
10' WIDE EASEMENT AS IN INST. 329274
DETAIL "B"
SCHEDULE
PART | LOT | CONCESSION | INSTRUMENT | AREA
1 | 12 | S. D.S. | 711466 | 1.672 ac
2 | | | 711466, EASEMENT AS IN 286565 AND 306168 AND 382238 | 9452 sq.ft.
3 | | | 711466 | 0 sq.ft.
4 | | | | 301 sq.ft.
5 | | | 711466, EASEMENT AS IN 286565 | 1074 sq.ft.
6 | | | 711466 | 2.434 ac
7 | | | 711466, EASEMENTS AS IN 306168, 329274 AND 382238 | 6722 sq.ft.
8 | | | 711466 | 8420 sq.ft.
9 | | | | 3.656 ac
10 | | | 711466, EASEMENT AS IN 382238, 286565 AND 306168 | 141 sq.ft.
11 | | | 711466, EASEMENT AS IN 382238 | 11367 sq.ft.
PLAN OF SURVEY OF
PART OF LOT 12
CONCESSION 2 S.D.S.
TOWNSHIP OF NELSON
CITY OF BURLINGTON
REGIONAL MUNICIPALITY OF HALTON
SCALE – 1" = 40'
YATES & YATES LIMITED
ONTARIO LAND SURVEYORS
1995
LEGEND
B – DENOTES SURVEY MONUMENT FOUND
D – DENOTES SURVEY MONUMENT SET
SIB – DENOTES STANDARD IRON BAR
IB – DENOTES IRON BAR
ICB – DENOTES CUT IRON BAR
CC – DENOTES CUT CROSS
CM – DENOTES CONCRETE MONUMENT
P1 – DENOTES PLAN 20R-311
P2 – DENOTES PLAN 20R-559
H17 – DENOTES JOHN VAN WESTRAND, O.L.S.
HP – DENOTES HYDRO POLE
BURL. – DENOTES CITY OF BURLINGTON
MEAS – DENOTES MEASURED
BEARING REFERENCE
BEARINGS SHOWN HEREON ARE ASTRONOMIC AND ARE REFERRED TO THE SOUTHWEST LIMIT OF BLAIR ROAD HAVING A BEARING OF N43°02'30"W AS SHOWN ON PLAN 20R-311.
SURVEYOR'S CERTIFICATE
I CERTIFY THAT :
1. This survey and plan are correct and in accordance with The Surveys Act and The Registry Act and the regulations made thereunder.
2. The survey was completed on the 5th day of MAY, 1995
DATE – JUNE 5, 1995
M. J. TERRY
ONTARIO LAND SURVEYOR
DETAIL "B"
YATES & YATES LIMITED
ONTARIO LAND SURVEYORS
Patents of Sewell & Sewell
817 BRANT STREET
BURLINGTON, ONT. L7R 2J4
(905) 634-1370
CAUTION – THIS PLAN IS NOT A PLAN OF SUBDIVISION WITHIN THE MEANING OF THE PLANNING ACT.
Phase One ESA,
Phase Two ESA, and RSC Property Boundary

30

Appendix C:
Borehole Logs

Log of Borehole BH/MW101

Project No. HAM-00801245-G0 Drawing No. 1

Project: Phase Two ESA Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

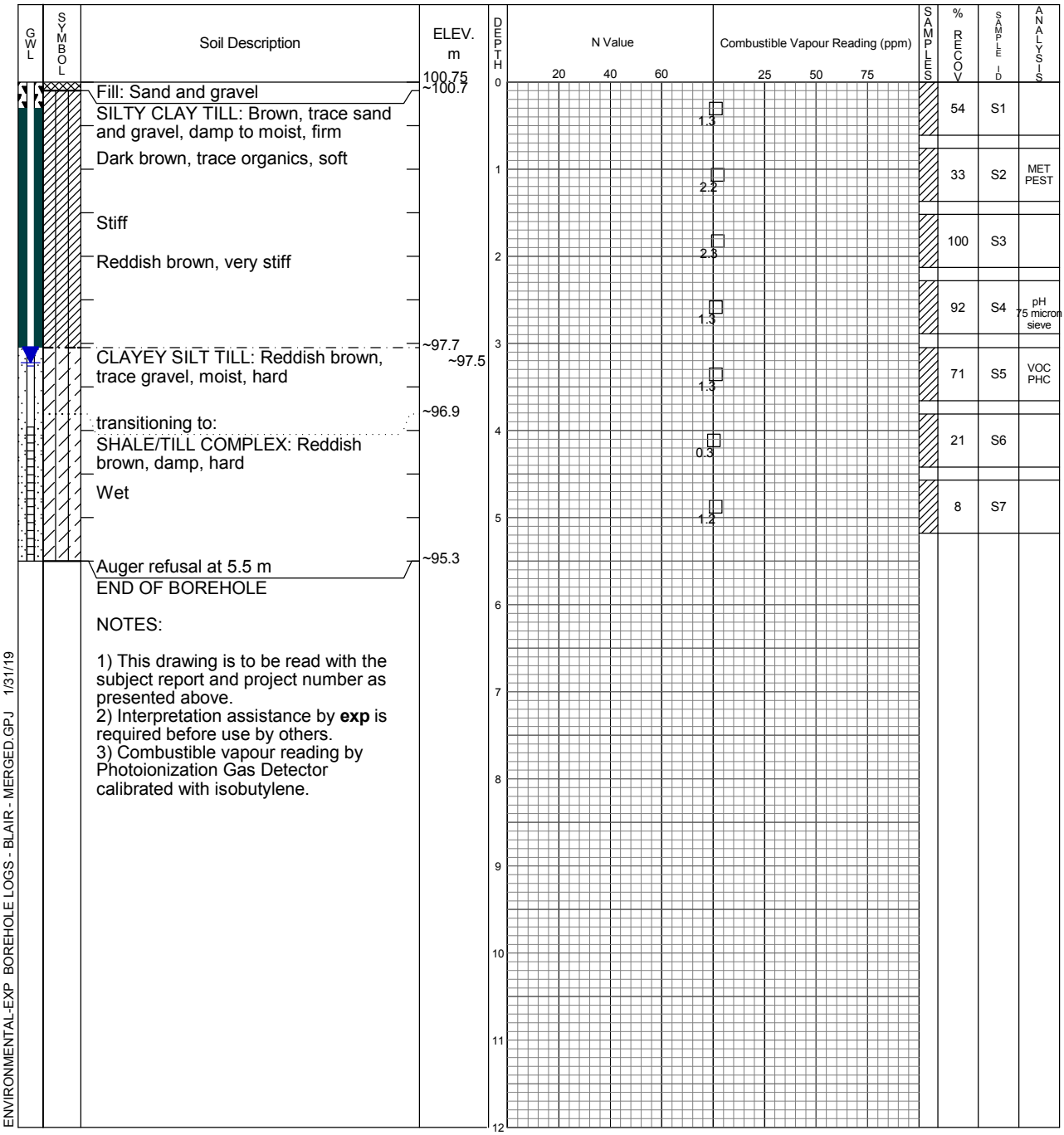
Date Drilled: Sept 6, 2017

Drill Type: CME 75-Truck Mount

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		



ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Time	Water Level (m)	Depth to Cave (m)
June 21, 2018	3.26	
July 4, 2018	3.26	
Dec 13, 2018	2.631	

Log of Borehole BH/MW102

Project No. HAM-00801245-G0 | Drawing No. 2

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

Date Drilled: Sept 6, 2017

Drill Type: CME 75-Truck Mount

Datum: Relative

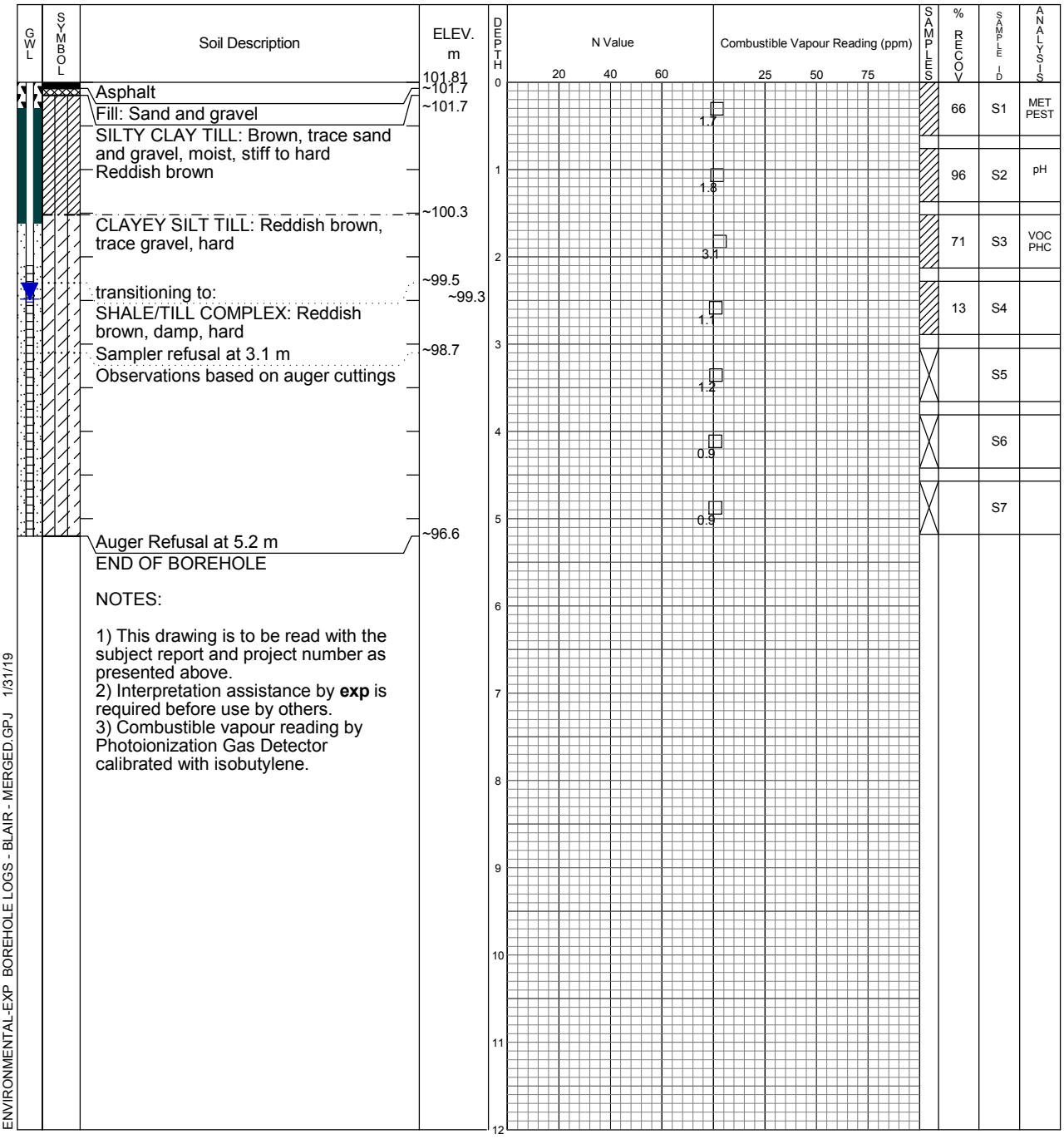
Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value	Combustible Vapour Reading (ppm)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			101.81		20 40 60	25 50 75				
		Asphalt	~101.7	0				66	S1	MET PEST
		Fill: Sand and gravel	~101.7							
		SILTY CLAY TILL: Brown, trace sand and gravel, moist, stiff to hard Reddish brown		1				96	S2	pH
		CLAYEY SILT TILL: Reddish brown, trace gravel, hard	~100.3	2				71	S3	VOC PHC
		transitioning to:	~99.5							
		SHALE/TILL COMPLEX: Reddish brown, damp, hard	~99.3	3				13	S4	
		Sampler refusal at 3.1 m	~98.7							
		Observations based on auger cuttings		4					S5	
				5					S6	
		Auger Refusal at 5.2 m	~96.6						S7	
		END OF BOREHOLE		6						
				7						
				8						
				9						
				10						
				11						
				12						

NOTES:

1) This drawing is to be read with the subject report and project number as presented above.
2) Interpretation assistance by **exp** is required before use by others.
3) Combustible vapour reading by Photoionization Gas Detector calibrated with isobutylene.



ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

Time	Water Level (m)	Depth to Cave (m)
June 21, 2018	2.33	
July 4, 2018	2.52	
Dec 13, 2018	2.214	
Jan 31, 2019	2.533	

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Log of Borehole BH103

Project No. HAM-00801245-G0 | Drawing No. 3

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

Date Drilled: Sept 6, 2017

Drill Type: CME 75-Truck Mount

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value	Combustible Vapour Reading (ppm)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			101.85	0	20 40 60	25 50 75				
		Asphalt	~101.8							
		Fill: Brown sand and gravel	~101.7							
		SILTY CLAY TILL: Brown, trace sand and gravel, moist, stiff to very stiff		1		1.4		50	S1	MET PEST
						1.9		100	S2	
				2		1.6		92	S3	
			~99.8							
		CLAYEY SILT TILL: Reddish brown, trace gravel, moist	~99.7	3						
		END OF BOREHOLE		4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

NOTES:

1) This drawing is to be read with the subject report and project number as presented above.
2) Interpretation assistance by **exp** is required before use by others.
3) Combustible vapour reading by Photoionization Gas Detector calibrated with isobutylene.
4) Borehole backfilled with bentonite upon completion.

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

Time	Water Level (m)	Depth to Cave (m)

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Log of Borehole BH104

Project No. HAM-00801245-G0 | Drawing No. 4

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

Date Drilled: Sept 6, 2017

Drill Type: CME 75-Truck Mount

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value	Combustible Vapour Reading (ppm)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			101.86	0	20 40 60	25 50 75				
		Asphalt	~101.8							
		Fill: Grey sand and gravel	~101.7							
		SILTY CLAY TILL: Brown, trace sand and gravel, moist, stiff	~101.1			0.9		54	S1	MET PEST
		CLAYEY SILT TILL: Reddish brown, trace gravel, moist, stiff	~100.5	1		1.1		71	S2	
		END OF BOREHOLE		2						
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

NOTES:

1) This drawing is to be read with the subject report and project number as presented above.
2) Interpretation assistance by **exp** is required before use by others.
3) Combustible vapour reading by Photoionization Gas Detector calibrated with isobutylene.
4) Borehole backfilled with bentonite upon completion.

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

Time	Water Level (m)	Depth to Cave (m)

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Log of Borehole BH105

Project No. HAM-00801245-G0 Drawing No. 5

Project: Phase Two ESA Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

Date Drilled: Sept 6, 2017

Drill Type: CME 75-Truck Mount

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH
			101.41	0
		Asphalt	~101.3	
		Fill: Brown sand and gravel	~101.2	
		SILTY CLAY TILL: Brown, trace sand and gravel, damp to moist, stiff to very stiff		1
			~100.0	
		END OF BOREHOLE		2
		NOTES:		3
		1) This drawing is to be read with the subject report and project number as presented above.		4
		2) Interpretation assistance by **exp** is required before use by others.		5
		3) Combustible vapour reading by Photoionization Gas Detector calibrated with isobutylene.		6
		4) Borehole backfilled with bentonite upon completion.		7
				8
				9
				10
				11
				12

N Value: 20, 40, 60

Combustible Vapour Reading (ppm): 25, 50, 75

0.9

1.1

SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
	54	S1	MET PEST
	71	S2	

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Time	Water Level (m)	Depth to Cave (m)

Log of Borehole BH106

Project No. HAM-00801245-G0 | Drawing No. 6

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

Date Drilled: Sept 6, 2017

Drill Type: CME 75-Truck Mount

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			100.19							
		Asphalt	~100.1	0						
		Fill: Brown sand and gravel	~100.1							
		SILTY CLAY TILL: Brown, trace sand and gravel, moist, stiff				1.3		50	S1	
		Dark brown, trace organics		1		1.9		50	S2	MET PEST
			~98.8							
		END OF BOREHOLE		2						
		NOTES:		3						
		1) This drawing is to be read with the subject report and project number as presented above.		4						
		2) Interpretation assistance by **exp** is required before use by others.		5						
		3) Combustible vapour reading by Photoionization Gas Detector calibrated with isobutylene.		6						
		4) Borehole backfilled with bentonite upon completion.		7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

Time	Water Level (m)	Depth to Cave (m)

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Log of Borehole BH/MW107

Project No. HAM-00801245-G0 Drawing No. 7

Project: Phase Two ESA Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

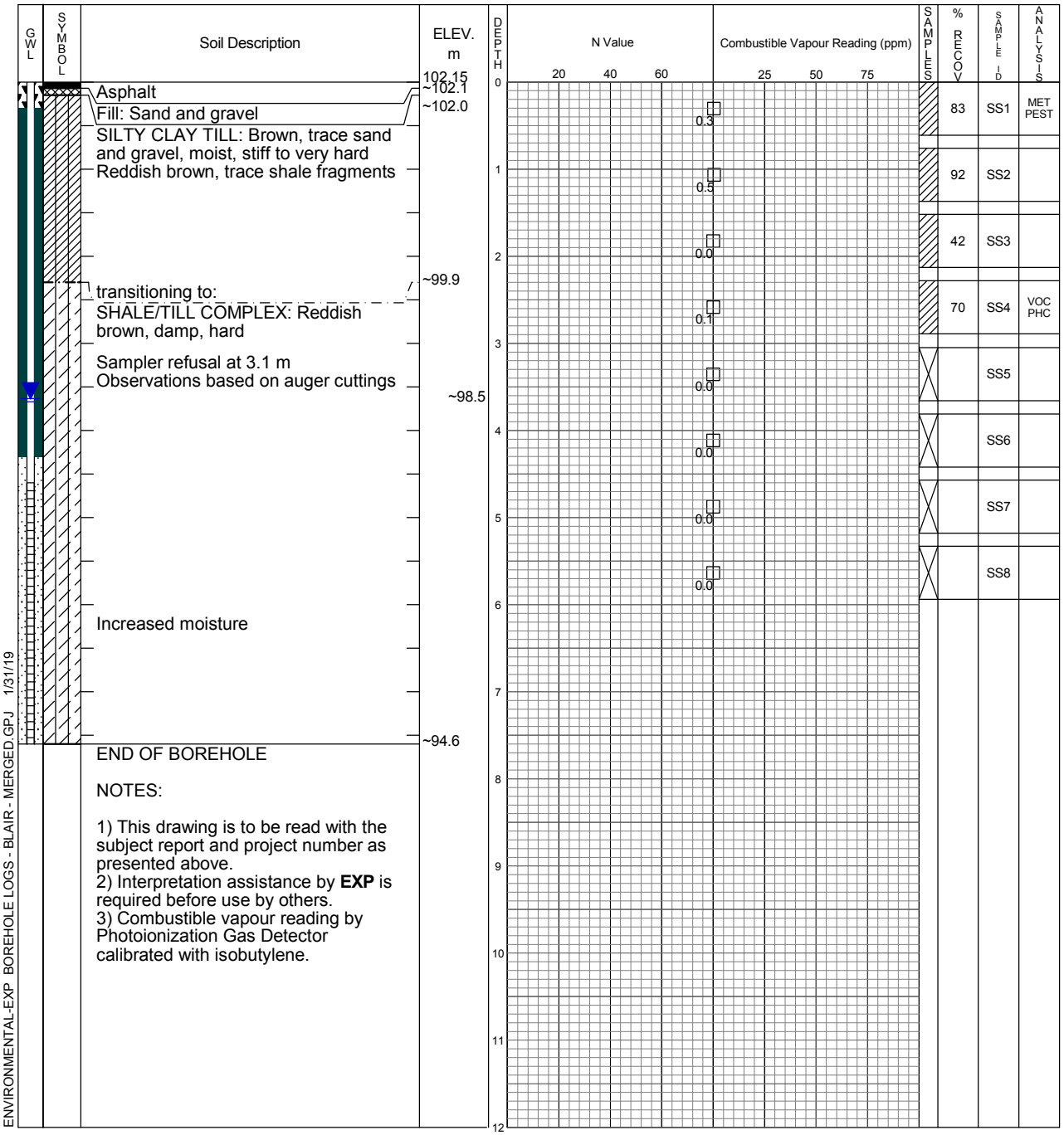
Date Drilled: June 20, 2018

Drill Type: CME 75-Truck Mount

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		



Time	Water Level (m)	Depth to Cave (m)
June 25, 2018	6.60	
July 4, 2018	3.67	
Dec 13, 2018	3.334	
Jan 31, 2019	3.339	

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Log of Borehole BH201

Project No. HAM-00801245-G0 | Drawing No. 8

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

Date Drilled: November 6, 2017

Drill Type: Geoprobe 7822

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			100.80	0						
		Asphalt	~100.7							
		Fill: brown, sand and gravel, moist	~100.5							
		SILTY CLAY TILL: brown, moist, trace gravel						42	S1	
				1				13	S2	PEST
								83	S3	PEST
		red	~98.7	2						
		END OF BOREHOLE								
		NOTES:								
		1) This drawing is to be read with the subject report and project number as presented above.								
		2) Interpretation assistance by EXP is required before use by others.								
		3) Borehole backfilled with bentoni		3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

Time	Water Level (m)	Depth to Cave (m)

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Log of Borehole BH202

Project No. HAM-00801245-G0 | Drawing No. 9

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

Date Drilled: November 6, 2017

Drill Type: Geoprobe 7822

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			100.80	0						
		Asphalt	~100.7							
		Fill: brown, sand and gravel, moist	~100.6							
		SILTY CLAY TILL: dark brown, moist, trace gravel								
		grey		1				25	S1	
		brown						75	S2	PEST
		red	~98.7	2				63	S3	PEST
		END OF BOREHOLE								
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

NOTES:

1) This drawing is to be read with the subject report and project number as presented above.
2) Interpretation assistance by EXP is required before use by others.
3) Borehole backfilled with bentoni

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

Time	Water Level (m)	Depth to Cave (m)

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Log of Borehole BH203

Project No. HAM-00801245-G0 | Drawing No. 10

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

Date Drilled: November 6, 2017

Drill Type: Geoprobe 7822

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Asphalt	100.80 ~100.7	0						
		Fill: brown, sand and gravel, moist	~100.6							
		SILTY CLAY TILL: mixtures of brown, grey and red, moist, trace gravel								
		grey		1				50	S1	
		red		2				63	S2	PEST
			~98.7					92	S3	PEST
		END OF BOREHOLE		3						
		NOTES:		4						
		1) This drawing is to be read with the subject report and project number as presented above.		5						
		2) Interpretation assistance by EXP is required before use by others.		6						
		3) Borehole backfilled with bentoni		7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

Time	Water Level (m)	Depth to Cave (m)

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Log of Borehole BH204

Project No. HAM-00801245-G0 | Drawing No. 11

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

Date Drilled: November 6, 2017

Drill Type: Geoprobe 7822

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			100.60	0						
		Asphalt	~100.5							
		Fill: brown, sand and gravel, moist	~100.4							
		SILTY CLAY TILL: brown to grey, moist, trace gravel		1				67	S1	
								67	S2	PEST
		brown to red		2				100	S3	PEST
		red						100	S4	
			~97.6	3						
		END OF BOREHOLE		4						
		NOTES:		5						
		1) This drawing is to be read with the subject report and project number as presented above.		6						
		2) Interpretation assistance by EXP is required before use by others.		7						
		3) Borehole backfilled with bentoni		8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

Time	Water Level (m)	Depth to Cave (m)

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Log of Borehole BH205

Project No. HAM-00801245-G0 | Drawing No. 12

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

Date Drilled: November 6, 2017

Drill Type: Geoprobe 7822

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			100.40							
		Asphalt	~100.3	0						
		Fill: brown, sand and gravel, moist	~100.2							
		SILTY CLAY TILL: brown to grey, moist, trace gravel		1				67	S1	
								67	S2	PEST
		red		2				37	S3	PEST
			~98.1							
		END OF BOREHOLE		3						
		NOTES:		4						
		1) This drawing is to be read with the subject report and project number as presented above.		5						
		2) Interpretation assistance by EXP is required before use by others.		6						
		3) Borehole backfilled with bentoni		7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

Time	Water Level (m)	Depth to Cave (m)

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Log of Borehole BH206

Project No. HAM-00801245-G0 | Drawing No. 13

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

Date Drilled: November 6, 2017

Drill Type: Geoprobe 7822

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			100.80	0						
		Asphalt	~100.7							
		Fill: brown, sand and gravel, moist	~100.6							
		SILTY CLAY TILL: brown to grey, moist, trace gravel		1				100	S1	
								100	S2	PEST
		red		2				100	S3	PEST
			~98.5							
		END OF BOREHOLE		3						
		NOTES:		4						
		1) This drawing is to be read with the subject report and project number as presented above.		5						
		2) Interpretation assistance by EXP is required before use by others.		6						
		3) Borehole backfilled with bentoni		7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

Time	Water Level (m)	Depth to Cave (m)

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Log of Borehole BH207

Project No. HAM-00801245-G0 | Drawing No. 14

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

Date Drilled: November 6, 2017

Drill Type: Geoprobe 7822

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Asphalt	100.80 ~100.7	0						
		Fill: brown, sand and gravel, wet	~100.6							
		SILTY CLAY TILL: brown to grey, moist, trace gravel						50	S1	
				1				50	S2	PEST
		red						50	S3	PEST
			~98.5	2						
		END OF BOREHOLE								
		NOTES:								
		1) This drawing is to be read with the subject report and project number as presented above.								
		2) Interpretation assistance by EXP is required before use by others.								
		3) Borehole backfilled with bentoni		3 4 5 6 7 8 9 10 11 12						

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Time	Water Level (m)	Depth to Cave (m)

Log of Borehole BH208

Project No. HAM-00801245-G0 | Drawing No. 15

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to Borehole Location Plan

Date Drilled: November 6, 2017

Drill Type: Geoprobe 7822

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			100.80							
		Asphalt	~100.7							
		Fill: brown, sand and gravel, moist	~100.6							
		SILTY CLAY TILL: brown, moist, trace gravel								
				1				100	S2	PEST
				2				100	S3	PEST
		red	~98.5							
		END OF BOREHOLE								
		NOTES:								
		1) This drawing is to be read with the subject report and project number as presented above.								
		2) Interpretation assistance by EXP is required before use by others.								
		3) Borehole backfilled with bentoni								

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Time	Water Level (m)	Depth to Cave (m)

Log of Borehole BH/MW301

Project No. HAM-00801245-G0 | Drawing No. 16

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to borehole location plan

Date Drilled: Jan 22, 2019

Drill Type: GeoProbe 7822DT

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH
		Asphalt	100.08 ~100.0	0
		Fill Brown, sand and gravel, moist	~99.8	
		SILTY CLAY TILL Dark brown, moist		1
		Red		2
			~97.5	
		SHALE/TILL COMPLEX Red, weathered, moist		3
		Sampler refusal at 3.51 m		4
			~94.1	5
		Borehole completed to 5.95 m.		6
		NOTES:		7
		1) This drawing is to be read with the subject report and project number as presented above.		8
		2) 50.8 mm diameter well installed.		9
		3) Well screen installed from 2.9 - 5.95 m.		10
				11
				12

N Value: 20, 40, 60

Combustible Vapour Reading (ppm): 25, 50, 75

0 (H) 0 (I)

SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
	67	SS1	MET*
	67	SS2	
	83	SS3	
	83	SS4	PHC VOC
	83	SS5	

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Time	Water Level (m)	Depth to Cave (m)
Jan 25, 2019	4.53	
Jan 31, 2019	1.863	

Log of Borehole BH/MW302

Project No. HAM-00801245-G0 | Drawing No. 17

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to borehole location plan

Date Drilled: Jan 22, 2019

Drill Type: GeoProbe 7822DT

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH
			101.50	0
		Concrete	~101.4	
		Fill Brown, sand and gravel, moist	~101.2	
		SILTY CLAY TILL Dark brown, moist		1
			~100.4	
		CLAYEY SILT TILL Red, moist		2
		Damp	~98.9	
		SHALE/TILL COMPLEX Red, weathered, moist		3
		Sampler refusal at 3.35 m		4
				5
				6
			~95.4	
		Borehole completed to 6.1 m.		7
		NOTES:		8
		1) This drawing is to be read with the subject report and project number as presented above.		9
		2) 50.8 mm diameter well installed.		10
		3) Well screen installed from 3.05 - 6.1 m.		11
				12

N Value: 20, 40, 60 | Combustible Vapour Reading (ppm): 25, 50, 75

SAMPLES	% RECOV	SAMPLE ID	ANALYSIS	N Value	Combustible Vapour Reading (ppm)
	67	SS1	MET	0 (H) 0 (I)	
	67	SS2		0 (H) 0 (I)	
	80	SS3		0 (H) 0 (I)	
	80	SS4	PHC VOC	0 (H) 0 (I)	
	92	SS5		0 (H) 0 (I)	

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Time	Water Level (m)	Depth to Cave (m)
Jan 25, 2019	5.85	
Jan 31, 2019	2.895	

Log of Borehole BH/MW303

Project No. HAM-00801245-G0 | Drawing No. 18

Project: Phase Two ESA | Sheet No. 1 of 1

Location: 1160 Blair Road, Burlington, ON

Refer to borehole location plan

Date Drilled: Jan 22, 2019

Drill Type: GeoProbe 7822DT

Datum: Relative

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value	Combustible Vapour Reading (ppm)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Concrete	101.38	0	20 40 60	25 50 75				
		Fill Brown, sand and gravel, moist	~101.1							
		SILTY CLAY TILL Dark brown, moist	~101.1			0 (H) 0 (I)		53	SS1	MET
				1		0 (H) 0 (I)		53	SS2	
				2		0 (H) 0 (I)		87	SS3	
		CLAYEY SILT TILL Red, wet	~98.8			0 (H) 0 (I)		87	SS4	PHC* VOC*
				3		0 (H) 0 (I)		87	SS5	
		SHALE/TILL COMPLEX Red, weathered, moist Sampler refusal at 4.27 m	~97.4	4		0 (H) 0 (I)		100	SS6	
			~96.6	5						
		Borehole completed to 4.73 m. NOTES: 1) This drawing is to be read with the subject report and project number as presented above. 2) 50.8 mm diameter well installed. 3) Well screen installed from 1.68 - 4.73 m.		6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP BOREHOLE LOGS - BLAIR - MERGED.GPJ 1/31/19

Time	Water Level (m)	Depth to Cave (m)
Jan 25, 2019	3.68	
Jan 31, 2019	3.598	

EXP Services Inc.
Brampton, Ontario
Telephone: 905-793-9800
Facsimile: 905-793-0641

Appendix D:
Analytical Data (Tables)

SOIL ANALYTICAL RESULTS - Legend
Phase Two ESA, 1160 Blair Road, Burlington , ON
HAM-00801245-G0

	All soil concentrations reported in µg/g, unless otherwise noted.
*	Maximum RDL below MECP (2011) SCS
'<' =	Parameter below detection limit, as indicated
-	Not Analyzed
'NV'=	No Value
Bold	Concentration exceeds applicable SCS.
	Non-detect but detection limit exceeds the applicable SCS.

1. Criteria refers to Ministry of Environment, Conservation and Parks "Soil, Ground Water and and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004, amended as of July 1, 2011
2. This table represents a summary of the data presented in the Laboratory Certificate of Analysis for convenience purposes only
3. This summary is to be use in conjuction with, not as a replacement of the Laboratory Ceriticate of Analysis which contains all QA/QC information

Table B1 - SOIL ANALYTICAL RESULTS - Organochlorine Pesticides
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reporting Detection Limit (RDL)*	**BH101-S2**	**BH101-S2 - A**	**BH101-S2 - B**	**BH101-S2 - C**	**BH101-S2 (average)**	**BH101-S3**
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B7J4925	B7J4925	B7J4925	B7J4925	N/A	B7O6106
Lab ID			FBV106	FDO579	FDO580	FDO581	N/A	FLX856
Sampling Date			6-Sep-17	6-Sep-17	6-Sep-17	6-Sep-17	6-Sep-17	6-Sep-17
Lab Report Date			22-Sep-17	22-Sep-17	22-Sep-17	22-Sep-17	N/A	7-Nov-17
Soil Sample Depth (m)			0.8 - 1.4	0.8 - 1.4	0.8 - 1.4	0.8 - 1.4	0.8 - 1.4	1.5 - 2.1
Consultant			EXP	EXP	EXP	EXP	EXP	EXP
Current Status			Excavated	Excavated	Excavated	Excavated	Excavated	Remains
Aldrin	0.11	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Chlordane (total)	0.05	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
DDD (total)	4.6	0.002	0.38	0.36	0.37	0.34	0.36	<0.0020
DDE (total)	0.65	0.002	**0.69**	**0.75**	**0.88**	**0.86**	**0.80**	0.0073
DDT (total)	1.4	0.002	0.0096	0.019	0.017	0.017	0.016	<0.0020
Dieldrin	0.11	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Endosulphan	0.38	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endrin	0.04	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor	0.19	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor Epoxide	0.05	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lindane	0.063	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Methoxychlor	1.6	0.005	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total PCB	1.1	0.015	<0.015	<0.050	<0.050	<0.050	<0.050	<0.015
Hexachlorobenzene	0.66	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobutadiene	0.095	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachloroethane	0.43	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table B1 - SOIL ANALYTICAL RESULTS - Organochlorine Pesticides
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reporting Detection Limit (RDL)*	**BH102-S1**	**BH103-S1**	**BH104-S1**	**BH105-S1**	**BH106-S2**	**BH107 SS1**
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B7J4925	B7J4925	B7J4925	B7J4925	B7J4925	B8F2998
Lab ID			FBV109	FBV112	FBV113	FBV114	FBV115	HAH072
Sampling Date			6-Sep-17	6-Sep-17	6-Sep-17	6-Sep-17	6-Sep-17	20-Jun-18
Lab Report Date			22-Sep-17	22-Sep-17	22-Sep-17	22-Sep-17	22-Sep-17	27-Jun-18
Soil Sample Depth (m)			0.0 - 0.6	0.0 - 0.6	0.0 - 0.6	0.0 - 0.6	0.8 - 1.4	0.0 - 0.6
Consultant			EXP	EXP	EXP	EXP	EXP	EXP
Current Status			Remains	Remains	Remains	Remains	Remains	Remains
Aldrin	0.11	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Chlordane (total)	0.05	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
DDD (total)	4.6	0.002	<0.0020	<0.0020	<0.0020	<0.0020	0.024	<0.0020
DDE (total)	0.65	0.002	<0.0020	0.0041	<0.0020	0.0043	0.054	<0.0020
DDT (total)	1.4	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dieldrin	0.11	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Endosulphan	0.38	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endrin	0.04	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor	0.19	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor Epoxide	0.05	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lindane	0.063	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Methoxychlor	1.6	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total PCB	1.1	0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Hexachlorobenzene	0.66	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobutadiene	0.095	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachloroethane	0.43	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table B1 - SOIL ANALYTICAL RESULTS - Organochlorine Pesticides
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reporting Detection Limit (RDL)*	**BH701 SS1 (Duplicate of BH 107 SS1)**	**BH201 S2**	**BH201 S3**	**BH202 S2**	**BH202 S3**	**BH203 S2**
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B8F2998	B7O8915	B7O8915	B7O8915	B7O8915	B7O8915
Lab ID			HAH074	FMO340	FMO341	FMO342	FMO343	FMO344
Sampling Date			20-Jun-18	6-Nov-17	6-Nov-17	6-Nov-17	6-Nov-17	6-Nov-17
Lab Report Date			27-Jun-18	16-Nov-17	16-Nov-17	16-Nov-17	16-Nov-17	16-Nov-17
Soil Sample Depth (m)			0.0 - 0.6	0.8 - 1.4	1.5 - 2.1	0.8 - 1.4	1.5 - 2.1	0.8 - 1.4
Consultant			EXP	EXP	EXP	EXP	EXP	EXP
Current Status			Remains	Remains	Remains	Remains	Remains	Remains
Aldrin	0.11	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Chlordane (total)	0.05	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
DDD (total)	4.6	0.002	<0.0020	0.17	0.025	0.12	0.11	0.011
DDE (total)	0.65	0.002	<0.0020	0.26	0.047	0.25	0.22	0.031
DDT (total)	1.4	0.002	<0.0020	<0.0060	<0.0020	0.0023	<0.0030	<0.0020
Dieldrin	0.11	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Endosulphan	0.38	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endrin	0.04	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor	0.19	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor Epoxide	0.05	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lindane	0.063	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Methoxychlor	1.6	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total PCB	1.1	0.015	<0.015	<0.020	<0.020	<0.020	<0.020	<0.015
Hexachlorobenzene	0.66	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobutadiene	0.095	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachloroethane	0.43	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table B1 - SOIL ANALYTICAL RESULTS - Organochlorine Pesticides
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reporting Detection Limit (RDL)*	**BH203 S3**	**BH204 S2**	**BH204 S3**	**BH205 S2**	**BH205 S3**	**BH206 S2**
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B7O8915	B7O8915	B7O8915	B7O8915	B7O8915	B7O8915
Lab ID			FMO345	FMO346	FMO347	FMO348	FMO349	FMO350
Sampling Date			6-Nov-17	6-Nov-17	6-Nov-17	6-Nov-17	6-Nov-17	6-Nov-17
Lab Report Date			16-Nov-17	16-Nov-17	16-Nov-17	16-Nov-17	16-Nov-17	16-Nov-17
Soil Sample Depth (m)			1.5 - 2.1	0.8 - 1.5	1.5 - 2.3	0.8 - 1.5	1.5 - 2.3	0.8 - 1.5
Consultant			EXP	EXP	EXP	EXP	EXP	EXP
Current Status			Remains	Remains	Remains	Remains	Remains	Remains
Aldrin	0.11	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Chlordane (total)	0.05	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
DDD (total)	4.6	0.002	<0.0020	0.06	<0.0020	<0.0020	<0.0020	<0.0020
DDE (total)	0.65	0.002	<0.0020	0.14	<0.0020	0.0027	<0.0020	<0.0020
DDT (total)	1.4	0.002	<0.0020	<0.0040	<0.0020	<0.0020	<0.0020	<0.0020
Dieldrin	0.11	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Endosulphan	0.38	0.002	<0.0020	<0.0030	<0.0020	<0.0020	<0.0020	<0.0020
Endrin	0.04	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor	0.19	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor Epoxide	0.05	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lindane	0.063	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Methoxychlor	1.6	0.005	<0.0050	0.0061	<0.0050	<0.0050	<0.0050	<0.0050
Total PCB	1.1	0.015	<0.015	<0.020	<0.015	<0.015	<0.015	<0.015
Hexachlorobenzene	0.66	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobutadiene	0.095	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachloroethane	0.43	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table B1 - SOIL ANALYTICAL RESULTS - Organochlorine Pesticides
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reporting Detection Limit (RDL)*	**BH206 S3**	**BH207 S2**	**BH207 S3**	**BH208 S2**	**BH208 S3**
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B7O8915	B7O8915	B7O8915	B7O8915	B7O8915
Lab ID			FMO351	FMO352	FMO353	FMO354	FMO355
Sampling Date			6-Nov-17	6-Nov-17	6-Nov-17	6-Nov-17	6-Nov-17
Lab Report Date			16-Nov-17	16-Nov-17	16-Nov-17	16-Nov-17	16-Nov-17
Soil Sample Depth (m)			1.5 - 2.3	0.8 - 1.5	1.5 - 2.3	0.8 - 1.5	1.5 - 2.3
Consultant			EXP	EXP	EXP	EXP	EXP
Current Status			Remains	Remains	Remains	Remains	Remains
Aldrin	0.11	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Chlordane (total)	0.05	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
DDD (total)	4.6	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
DDE (total)	0.65	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
DDT (total)	1.4	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dieldrin	0.11	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Endosulphan	0.38	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endrin	0.04	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor	0.19	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor Epoxide	0.05	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lindane	0.063	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Methoxychlor	1.6	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total PCB	1.1	0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Hexachlorobenzene	0.66	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobutadiene	0.095	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachloroethane	0.43	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table B2 - SOIL ANALYTICAL RESULTS - Metals
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reporting Detection Limit (RDL)*	BH101-S2	BH101-S4	BH102-S1	BH102-S2	BH103-S1	BH104-S1	BH105-S1	BH106-S2	BH107 SS1
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B7J4925	B7J4925	B7J4925	B7J4925	B7J4925	B7J4925	B7J4925	B7J4925	B8F2998
Lab ID			FBV106	FBV107	FBV109	FBV110	FBV112	FBV113	FBV114	FBV115	HAH072
Sampling Date			6-Sep-17	6-Sep-17	6-Sep-17	6-Sep-17	6-Sep-17	6-Sep-17	6-Sep-17	6-Sep-17	20-Jun-18
Lab Report Date			22-Sep-17	22-Sep-17	22-Sep-17	22-Sep-17	22-Sep-17	22-Sep-17	22-Sep-17	22-Sep-17	27-Jun-18
Soil Sample Depth (m)			0.8 - 1.4	2.3 - 2.9	0.0 - 0.6	0.8 - 1.4	0.0 - 0.6	0.0 - 0.6	0.0 - 0.6	0.8 - 1.4	0.0 - 0.6
Consultant			EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP
Current Status			Excavated	Remains	Remains	Remains	Remains	Remains	Remains	Remains	Remains
Antimony	50	0.2	0.23	-	<0.20	-	<0.20	<0.20	<0.20	0.23	0.22
Arsenic	18	1	7	-	4.6	-	7	4.9	5.7	8.6	4.8
Barium	670	0.5	89	-	110	-	78	120	100	250	160
Beryllium	10	0.2	0.66	-	0.65	-	0.67	0.8	0.86	1.3	0.67
Cadmium	1.9	0.1	0.19	-	0.13	-	0.16	<0.10	0.13	0.63	<0.10
Chromium	160	1	19	-	19	-	19	23	26	27	20
Cobalt	100	0.1	11	-	12	-	11	12	13	11	12
Copper	300	0.5	19	-	33	-	31	32	35	32	35
Lead	120	1	29	-	9.5	-	17	11	14	23	11
Molybdenum	40	0.5	0.66	-	<0.50	-	<0.50	<0.50	0.51	0.9	0.55
Nickel	340	0.5	19	-	24	-	25	28	31	27	26
Selenium	5.5	0.5	<0.50	-	<0.50	-	<0.50	<0.50	<0.50	0.82	<0.50
Silver	50	0.2	<0.20	-	<0.20	-	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	3.3	0.05	0.14	-	0.12	-	0.15	0.17	0.19	0.18	0.15
Vanadium	86	5	31	-	28	-	27	31	35	37	28
Zinc	340	5	76	-	57	-	83	62	84	100	62
pH (pH Units)	NV		-	7.93	-	7.88	-	-	-	-	-
Boron (Total)	120	5	<5.0	-	9.4	-	11	9.3	10	8.2	10
Uranium	33	0.05	0.84	-	0.5	-	0.52	0.6	0.52	7.5	0.6

Table B2 - SOIL ANALYTICAL RESULTS - Metals
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reporting Detection Limit (RDL)*	**BH701 SS1 (Duplicate of BH107 SS1)**	**BH301-SS1**	**BH301-SS11 (Duplicate of BH301 - SS1)**	**BH302-SS1**	**BH303-SS1**
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B8F2998	B920220	B920220	B920220	B920220
Lab ID			HAH074	IVD623	IVD624	IVD626	IVD628
Sampling Date			20-Jun-18	22-Jan-19	22-Jan-19	22-Jan-19	22-Jan-19
Lab Report Date			27-Jun-18	28-Jan-19	28-Jan-19	28-Jan-19	28-Jan-19
Soil Sample Depth (m)			0.0 - 0.6	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76
Consultant			EXP	EXP	EXP	EXP	EXP
Current Status			Remains	Remains	Remains	Remains	Remains
Antimony	50	0.2	<0.20	0.24	0.21	0.33	0.27
Arsenic	18	1	5.9	7.8	10	13	7.7
Barium	670	0.5	130	97	83	100	94
Beryllium	10	0.2	0.69	0.83	0.63	0.74	0.8
Cadmium	1.9	0.1	0.13	0.19	0.23	0.29	0.25
Chromium	160	1	20	24	18	20	23
Cobalt	100	0.1	13	12	9.8	11	13
Copper	300	0.5	35	32	25	23	26
Lead	120	1	12	30	43	57	32
Molybdenum	40	0.5	0.61	0.71	0.76	0.66	0.67
Nickel	340	0.5	27	26	20	20	25
Selenium	5.5	0.5	<0.50	<0.50	<0.50	<0.50	<0.50
Silver	50	0.2	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	3.3	0.05	0.12	0.17	0.14	0.14	0.15
Vanadium	86	5	29	34	29	31	33
Zinc	340	5	62	72	63	78	83
pH (pH Units)	NV		-	-	-	-	-
Boron (Total)	120	5	9.8	7.9	6	6.2	6.9
Uranium	33	0.05	0.61	0.73	0.65	0.89	0.57

Table B3 - SOIL ANALYTICAL RESULTS - Volatile Organic Compounds
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reporting Detection Limit (RDL)*	BH101-S5	BH102-S3	BH107 SS4	BH701 SS4 (Duplicate of BH107 SS4)	BH301-SS4	BH302-SS4	BH303-SS4	BH303-SS44 (Duplicate of BH303-SS4)
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B7J4925	B7J4925	B8F2998	B8F2998	B920220	B920220	B920220	B920220
Lab ID			FBV108	FBV111	HAH073	HAH075	IVD625	IVD627	IVD629	IVD630
Sampling Date			6-Sep-17	6-Sep-17	20-Jun-18	20-Jun-18	22-Jan-19	22-Jan-19	22-Jan-19	22-Jan-19
Lab Report Date			22-Sep-17	22-Sep-17	27-Jun-18	27-Jun-18	28-Jan-19	28-Jan-19	28-Jan-19	28-Jan-19
Soil Sample Depth (m)			3.0 - 3.7	1.5 - 2.1	2.3 - 2.9	2.3 - 2.9	2.29 - 3.05	2.29 - 3.05	2.29 - 3.05	2.29 - 3.05
Consultant			EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP
Current Status			Remains	Remains	Remains	Remains	Remains	Remains	Remains	Remains
Acetone	28	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	0.4	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Bromodichloromethane	18	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromoform	1.7	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromomethane	0.05	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Carbon Tetrachloride	1.5	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chlorobenzene	2.7	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chloroform	0.18	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibromochloromethane	13	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichlorobenzene	8.5	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-Dichlorobenzene	12	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,4-Dichlorobenzene	0.84	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1-Dichloroethane	21	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloroethane	0.05	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1-Dichloroethylene	0.48	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cis-1,2-Dichloroethylene	37	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Trans-1,2-Dichloroethylene	9.3	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloropropane	0.68	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	19	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ethylene Dibromide	0.05	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methyl Ethyl Ketone	88	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	2	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methyl Isobutyl Ketone	210	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl-t-Butyl Ether	3.2	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Styrene	43	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,1,2-Tetrachloroethane	0.11	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2,2-Tetrachloroethane	0.094	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	78	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Tetrachloroethylene	21	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,1-Trichloroethane	12	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2-Trichloroethane	0.11	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Trichloroethylene	0.61	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Vinyl Chloride	0.25	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Total Xylenes	30	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Dichlorodifluoromethane	25	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Hexane(n)	88	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Trichlorofluoromethane	5.8	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-Dichloropropene (cis + trans)	0.21	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

Table B4 - SOIL ANALYTICAL RESULTS - Petroleum Hydrocarbons
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reported Detection Limit (RDL)*	**BH101-S5**	**BH102-S3**	**BH107 SS4**	**BH701 SS4 (Duplicate of BH107 SS4)**	**BH301-SS4**	**BH302-SS4**	**BH303-SS4**	**BH303-SS44**
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B7J4925	B7J4925	B8F2998	B8F2998	B920220	B920220	B920220	B920220
Lab ID			FBV108	FBV111	HAH073	HAH075	IVD625	IVD627	IVD629	IVD630
Sampling Date			6-Sep-17	6-Sep-17	20-Jun-18	20-Jun-18	22-Jan-19	22-Jan-19	22-Jan-19	22-Jan-19
Lab Report Date			22-Sep-17	22-Sep-17	27-Jun-18	27-Jun-18	28-Jan-19	28-Jan-19	28-Jan-19	28-Jan-19
Soil Sample Depth (m)			3.0 - 3.7	1.5 - 2.1	2.3 - 2.9	2.3 - 2.9	2.29 - 3.05	2.29 - 3.05	2.29 - 3.05	2.29 - 3.05
Consultant			EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP
Current status			Remains	Remains	Remains	Remains	Remains	Remains	Remains	Remains
Benzene	0.4	-	Refer to VOC scan							
Toluene	78	-								
Ethylbenzene	19	-								
Total Xylenes	30	-								
F1 (C6-C10)	65	10	<10	<10	<10	<10	<10	<10	<10	<10
F2 (C10-C16)	250	10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16-C34)	2500	50	<50	<50	<10	<10	<50	<50	<50	<50
F4 (C34-C50)	6600	50	<50	<50	<50	<50	<50	<50	<50	<50
Reached Baseline at C50	NV	NV	YES	YES	<50	<50	YES	YES	YES	YES

GROUNDWATER ANALYTICAL RESULTS - Legend
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801287-G0

	All groundwater concentrations reported in µg/L.
*	Maximum RDL below MECP (2011) SCS
'<' =	Parameter below detection limit, as indicated
-	Not Analyzed
'NV'=	No value
Bold	Concentration exceeds applicable SCS.
	Non-detect but detection limit exceeds the applicable SCS.

1. Criteria refers to Ministry of Environment, Conservation and Parks "Soil, Ground Water and and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004, amended as of July 1, 2011
2. This table represents a summary of the data presented in the Laboratory Certificate of Analysis for convenience purposes only
3. This summary is to be use in conjuction with, not as a replacement of the Laboratory Ceriticate of Analysis which contains all QA/QC information

Table C1 - GROUNDWATER ANALYTICAL RESULTS - Organochlorine Pesticides
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reporting Detection Limit (RDL)*	**MW101**	**MW111 (Duplicate of MW101)**	**MW102**	**MW107**
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B8F9367	B8F9367	B8F9367	B8F9367
Lab ID			HBQ660	HBQ660	HBQ661	HBQ662
Sampling Date			26-Jun-18	26-Jun-18	26-Jun-18	26-Jun-18
Reporting Date			4-Jul-18	4-Jul-18	4-Jul-18	4-Jul-18
Screened Interval (m bgs)			4.0 - 5.5	4.0 - 5.5	2.1 - 5.2	4.6 - 7.6
Consultant			EXP	EXP	EXP	EXP
Aldrin	8.5	0.005	<0.005	<0.005	<0.005	<0.005
Chlordane (total)	28	0.005	<0.005	<0.005	<0.005	<0.005
DDD (total)	45	0.005	<0.005	<0.005	<0.005	<0.005
DDE (total)	20	0.005	<0.005	<0.005	<0.005	<0.005
DDT (total)	2.8	0.005	<0.005	<0.005	<0.005	<0.005
Dieldrin	0.75	0.005	<0.005	<0.005	<0.005	<0.005
Total Endosulphan	1.5	0.005	<0.005	<0.005	<0.005	<0.005
Endrin	0.48	0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	2.5	0.005	<0.005	<0.005	<0.005	<0.005
Hepatchlor Epoxide	0.048	0.005	<0.005	<0.005	<0.005	<0.005
Lindane	1.2	0.003	<0.003	<0.003	<0.003	<0.003
Methoxychlor	6.5	0.01	<0.01	<0.01	<0.01	<0.01
Total PCB	15	0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	3.1	0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	4.5	0.009	<0.009	<0.009	<0.009	<0.009
Hexachloroethane	200	0.01	<0.01	<0.01	<0.01	<0.01

Table C2 - GROUNDWATER ANALYTICAL RESULTS - Metals
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reporting Detection Limit (RDL)*	**MW101**	**MW111 (Duplicate of MW101)**	**MW102**	**MW107**	**MW301**	**MW303**	**MW3033 (Duplicate of MW303)**
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B8F9367	B8F9367	B8F9367	B8F9367	B927806	B927806	B927806
Lab ID			HBQ660	HBQ660	HBQ661	HBQ662	IWS213	IWS215	IWS217
Sampling Date			26-Jun-18	26-Jun-18	26-Jun-18	26-Jun-18	31-January-2019	31-January-2019	31-January-2019
Reporting Date			4-Jul-18	4-Jul-18	4-Jul-18	4-Jul-18	5-Feb-19	5-Feb-19	5-Feb-19
Screened Interval (m bgs)			4.0 - 5.5	4.0 - 5.5	2.1 - 5.2	4.6 - 7.6	2.9 - 5.9	1.7 - 4.7	1.7 - 4.7
Consultant			EXP	EXP	EXP	EXP	EXP	EXP	EXP
Antimony	20000	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Arsenic	1900	1	13	13	1.3	3.9	1.6	1	<1.0
Barium	29000	2	690	690	260	48	240	430	430
Beryllium	67	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Boron	45000	10	130	130	320	5000	1900	260	260
Cadmium	2.7	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chromium	810	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Cobalt	66	0.5	3.6	3.6	0.55	<0.50	0.65	1.9	1.9
Copper	87	1	<1.0	<1.0	1.5	<1.0	2.8	1	5.1
Lead	25	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Molybdenum	9200	0.5	1.2	1.2	22	59	3.7	12	13
Nickel	490	1	3.7	3.8	3.1	2.3	1.6	5.4	6.5
Selenium	63	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Silver	1.5	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Thallium	510	0.05	<0.050	<0.050	<0.050	0.052	<0.050	0.11	0.095
Vanadium	250	0.5	0.99	0.97	1.8	1.4	<0.50	1.8	1.6
Zinc	1100	5	<5.0	<5.0	<5.0	<5.0	6.3	<5.0	6.5
Uranium	420	0.1	2.5	2.5	42	5.1	5.6	8.3	8.3

Table C3 - GROUNDWATER ANALYTICAL RESULTS - Volatile Organic Compounds
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reporting Detection Limit (RDL)*	MW101	MW111 (Duplicate of MW101)	MW102	MW107	MW301	MW3011 (Duplicate of MW 3011)	MW302	MW303	TRIP BLANK
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B8F9367	B8F9367	B8F9367	B8F9367	B927806	B927806	B927806	B927806	B927806
Lab ID			HBQ660	HBQ660	HBQ661	HBQ662	IWS213	IWS216	IWS214	IWS215	IWS218
Sampling Date			26-Jun-18	26-Jun-18	26-Jun-18	26-Jun-18	31-Jan-19	31-Jan-19	31-Jan-19	31-Jan-19	31-Jan-19
Reporting Date			4-Jul-18	4-Jul-18	4-Jul-18	4-Jul-18	5-Feb-19	5-Feb-19	5-Feb-19	5-Feb-19	5-Feb-19
Screened Interval (m bgs)			4.0 - 5.5	4.0 - 5.5	2.1 - 5.2	4.6 - 7.6	2.9 - 5.9	2.9 - 5.9	3.1 - 6.1	1.7 - 4.7	NA
Consultant			EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP
Acetone	130000	10	<10	<10	<10	24	<10	<10	<10	25	<10
Benzene	430	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	85000	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	770	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	56	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride	8.4	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	630	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	22	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.22	<0.20
Dibromochloromethane	82000	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichlorobenzene	9600	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	9600	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	67	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethane	3100	0.2	<0.20	<0.20	<0.20	0.22	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	12	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	17	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Cis-1,2-Dichloroethylene	17	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trans-1,2-Dichloroethylene	17	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloropropane	140	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	2300	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylene Dibromide	0.83	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Ethyl Ketone	1500000	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	5500	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methyl Isobutyl Ketone	580000	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl-t-Butyl Ether	1400	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	9100	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	28	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	15	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	18000	0.2	<0.20	<0.20	<0.20	0.28	<0.20	<0.20	<0.20	<0.20	<0.20
Tetrachloroethylene	17	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	6700	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,2-Trichloroethane	30	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	17	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl Chloride	1.7	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Total Xylenes	4200	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichlorodifluoromethane	4400	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Hexane(n)	520	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane	2500	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichloropropene (cis + trans)	45	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Table C4 - GROUNDWATER ANALYTICAL RESULTS - Petroleum Hydrocarbons
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reporting Detection Limit (RDL)*	**MW101**	**MW111 (Duplicate of MW101)**	**MW102**	**MW107**	**MW301**	**MW3011 (Duplicate of MW301)**	**MW302**	**MW303**
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B8F9367	B8F9367	B8F9367	B8F9367	B927806	B927806	B927806	B927806
Lab ID			HBQ660	HBQ660	HBQ661	HBQ662	IWS213	IWS216	IWS214	IWS215
Sampling Date			26-Jun-18	26-Jun-18	26-Jun-18	26-Jun-18	31-Jan-19	31-Jan-19	31-Jan-19	31-Jan-19
Reporting Date			4-Jul-18	4-Jul-18	4-Jul-18	4-Jul-18	5-Feb-19	5-Feb-19	5-Feb-19	5-Feb-19
Screened Interval (m bgs)			4.0 - 5.5	4.0 - 5.5	2.1 - 5.2	4.6 - 7.6	2.9 - 5.9	2.9 - 5.9	3.1 - 6.1	1.7 - 4.7
Consultant			EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP
Benzene	430	-	Refer to VOC scan							
Toluene	18000	-								
Ethylbenzene	2300	-								
Total Xylenes	4200	-								
F1 (C6-C10)	750	25	<25	<25	<25	<25	<25	<25	<25	<25
F2 (C10-C16)	150	100	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16-C34)	500	200	<200	<200	<200	<200	<200	<200	<200	<200
F4 (C34-C50)	500	200	<200	<200	<200	<200	<200	<200	<200	<200
Reached Baseline at C50	NV	NV	YES	YES	YES	YES	YES	YES	YES	YES

SOIL ANALYTICAL RESULTS (Confirmatory Samples) - Legend
Phase Two ESA, 1160 Blair Road, Burlington , ON
HAM-00801245-G0

All soil concentrations reported in µg/g, unless otherwise noted.
* Maximum RDL below MECP (2011) SCS
'<' = Parameter below detection limit, as indicated
\- Not Analyzed
'NV'= No Value
Bold Concentration exceeds applicable SCS.
Non-detect but detection limit exceeds the applicable SCS.

1. Criteria refers to Ministry of Environment, Conservation and Parks "Soil, Ground Water and and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004, amended as of July 1, 2011
2. This table represents a summary of the data presented in the Laboratory Certificate of Analysis for convenience purposes only
3. This summary is to be use in conjuction with, not as a replacement of the Laboratory Ceriticate of Analysis which contains all QA/QC information

Table G1 - SOIL ANALYTICAL RESULTS - Organochlorine Pesticides
Confirmatory Soil Samples
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reporting Detection Limit (RDL)*	**FS1**	**FS2**	**FS3**	**WW1**	**WW101 (Duplicate of WW1)**	**NW1**	**EW1**	**FS1A**
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B8H0011	B8H0011	B8H0011	B8H0011	B8H0011	B8H0011	B8H0011	B8H8590
Lab ID			HEA039	HEA040	HEA041	HEA042	HEA045	HEA043	HEA044	HFV020
Sampling Date			9-Jul-18	9-Jul-18	9-Jul-18	9-Jul-18	9-Jul-18	9-Jul-18	9-Jul-18	17-July-2018
Lab Report Date			12-Jul-18	12-Jul-18	12-Jul-18	12-Jul-18	12-Jul-18	12-Jul-18	12-Jul-18	20-Jul-18
Soil Sample Depth (m)			1.5	1.5	1.5	0.8 - 1.1	0.8 - 1.1	1.0 - 1.2	0.8 - 1.0	2.0
Consultant			EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP
Current Status			Excavated	Excavated	Remains	Remains	Remains	Excavated	Remains	Remains
Aldrin	0.11	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Chlordane (total)	0.05	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
DDD (total)	4.6	0.002	2.1	0.49	<0.0020	0.02	0.014	0.59	<0.0020	<0.0020
DDE (total)	0.65	0.002	**3.2**	**1**	0.0031	0.062	0.047	**0.78**	0.0029	0.016
DDT (total)	1.4	0.002	<0.030	0.053	<0.0020	<0.0020	<0.0020	<0.020	<0.0020	<0.0020
Dieldrin	0.11	0.002	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Endosulphan	0.38	0.002	<0.030	<0.0080	<0.0020	<0.0020	<0.0020	<0.0080	<0.0020	<0.0020
Endrin	0.04	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor	0.19	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor Epoxide	0.05	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lindane	0.063	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Methoxychlor	1.6	0.005	<0.020	<0.0080	<0.0050	<0.0050	<0.0050	<0.0090	<0.0050	<0.0050
Total PCB	1.1	0.015	<0.035	<0.035	<0.015	<0.015	<0.015	<0.020	<0.015	<0.015
Hexachlorobenzene	0.66	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobutadiene	0.095	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachloroethane	0.43	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table G1 - SOIL ANALYTICAL RESULTS - Organochlorine Pesticides
Confirmatory Soil Samples
Phase Two ESA, 1160 Blair Road, Burlington, ON
HAM-00801245-G0

Sample ID	Table 3: Full Depth SCS in a Non-Potable Groundwater Condition Industrial/Commercial/Community Land Use (Fine Textured Soil)	Reporting Detection Limit (RDL)*	**FS2A**	**NW1A**	**NW101 (Duplicate of NW1A)**	**NW2**	**NW3**
Laboratory			Maxxam	Maxxam	Maxxam	Maxxam	Maxxam
Lab Report #			B8H8590	B8H8590	B8H8590	B8H8590	B8H8590
Lab ID			HFV021	HFV022	HFV025	HFV023	HFV024
Sampling Date			17-July-2018	17-July-2018	17-July-2018	17-July-2018	17-July-2018
Lab Report Date			20-Jul-18	20-Jul-18	20-Jul-18	20-Jul-18	20-Jul-18
Soil Sample Depth (m)			2.0	1.0 - 1.2	1.0 - 1.2	1.0 - 1.2	1.0 - 1.2
Consultant			EXP	EXP	EXP	EXP	EXP
Current Status			Remains	Remains	Remains	Remains	Remains
Aldrin	0.11	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Chlordane (total)	0.05	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
DDD (total)	4.6	0.002	<0.0020	<0.0020	<0.0020	0.037	0.28
DDE (total)	0.65	0.002	0.0044	0.0053	0.0031	0.1	0.49
DDT (total)	1.4	0.002	<0.0020	<0.0020	<0.0020	<0.0020	0.0063
Dieldrin	0.11	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Endosulphan	0.38	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040
Endrin	0.04	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor	0.19	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor Epoxide	0.05	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lindane	0.063	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Methoxychlor	1.6	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total PCB	1.1	0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Hexachlorobenzene	0.66	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobutadiene	0.095	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachloroethane	0.43	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Appendix E:
Laboratory Certificates of Analysis

Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-B0
Site Location: BLAIR
Your C.O.C. #: na

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/09/22
Report #: R4727307
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B7J4925
Received: 2017/09/07, 16:22

Sample Matrix: Soil
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	2	N/A	2017/09/13		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Soil (1)	2	2017/09/09	2017/09/10	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	6	2017/09/11	2017/09/13	CAM SOP-00447	EPA 6020B m
Moisture	2	N/A	2017/09/09	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	6	N/A	2017/09/11	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	3	N/A	2017/09/22	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (2)	1	2017/09/11	2017/09/12	CAM SOP-00307	SW846 8081, 8082
OC Pesticides (Selected) & PCB (2)	5	2017/09/11	2017/09/13	CAM SOP-00307	SW846 8081, 8082
OC Pesticides (Selected) & PCB (2)	3	2017/09/19	2017/09/22	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	6	N/A	2017/09/12	CAM SOP-00307	EPA 8081/8082 m
OC Pesticides Summed Parameters	3	N/A	2017/09/22	CAM SOP-00307	EPA 8081/8082 m
pH CaCl2 EXTRACT	2	2017/09/12	2017/09/12	CAM SOP-00413	EPA 9045 D m
Sieve, 75um	1	N/A	2017/09/11	CAM SOP-00467	Carter 2nd ed m
Volatile Organic Compounds and F1 PHCs	2	N/A	2017/09/13	CAM SOP-00230	EPA 8260C 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.

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 #: HAM-00801245-B0
Site Location: BLAIR
Your C.O.C. #: na

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/09/22
Report #: R4727307
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B7J4925
Received: 2017/09/07, 16:22

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(2) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

==========

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 #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

RESULTS OF ANALYSES OF SOIL

Maxxam ID		FBV106	FBV107		FBV108		FBV109		FBV110	
Sampling Date		2017/09/06 10:00	2017/09/06 10:15		2017/09/06 10:25		2017/09/06 01:10		2017/09/06 01:20	
COC Number		na	na		na		na		na	
	UNITS	**BH101-S2**	**BH101-S4**	**QC Batch**	**BH101-S5**	**QC Batch**	**BH102-S1**	**RDL**	**BH102-S2**	**QC Batch**
Inorganics										
Moisture	%	21		5158013	8.7	5157289	12	1.0		5158013
Available (CaCl2) pH	pH		7.93	5158335					7.88	5158335
Miscellaneous Parameters										
Grain Size	%		FINE	5158309				N/A		
Sieve - #200 (<0.075mm)	%		91	5158309				1		
Sieve - #200 (>0.075mm)	%		9	5158309				1		

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FBV111		FBV112	FBV113	FBV114	FBV115		
Sampling Date		2017/09/06 01:30		2017/09/06 02:45	2017/09/06 12:40	2017/09/06 12:10	2017/09/06 09:25		
COC Number		na		na	na	na	na		
	UNITS	**BH102-S3**	**QC Batch**	**BH103-S1**	**BH104-S1**	**BH105-S1**	**BH106-S2**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	10	5157289	9.7	14	14	26	1.0	5158013

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FDO579	FDO580	FDO581		
Sampling Date		2017/09/06 10:00	2017/09/06 10:00	2017/09/06 10:00		
COC Number		na	na	na		
	UNITS	**BH101-S2 - A**	**BH101-S2 - B**	**BH101-S2 - C**	**RDL**	**QC Batch**
Inorganics						
Moisture	%	21	21	21	1.0	5177360

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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 #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		FBV106	FBV109	FBV112	FBV113	FBV114	FBV114		
Sampling Date		2017/09/06 10:00	2017/09/06 01:10	2017/09/06 02:45	2017/09/06 12:40	2017/09/06 12:10	2017/09/06 12:10		
COC Number		na	na	na	na	na	na		
	UNITS	**BH101-S2**	**BH102-S1**	**BH103-S1**	**BH104-S1**	**BH105-S1**	**BH105-S1 Lab-Dup**	**RDL**	**QC Batch**
Metals									
Acid Extractable Antimony (Sb)	ug/g	0.23	<0.20	<0.20	<0.20	<0.20	0.20	0.20	5158189
Acid Extractable Arsenic (As)	ug/g	7.0	4.6	7.0	4.9	5.7	5.6	1.0	5158189
Acid Extractable Barium (Ba)	ug/g	89	110	78	120	100	100	0.50	5158189
Acid Extractable Beryllium (Be)	ug/g	0.66	0.65	0.67	0.80	0.86	0.86	0.20	5158189
Acid Extractable Boron (B)	ug/g	<5.0	9.4	11	9.3	10	10	5.0	5158189
Acid Extractable Cadmium (Cd)	ug/g	0.19	0.13	0.16	<0.10	0.13	0.15	0.10	5158189
Acid Extractable Chromium (Cr)	ug/g	19	19	19	23	26	25	1.0	5158189
Acid Extractable Cobalt (Co)	ug/g	11	12	11	12	13	13	0.10	5158189
Acid Extractable Copper (Cu)	ug/g	19	33	31	32	35	35	0.50	5158189
Acid Extractable Lead (Pb)	ug/g	29	9.5	17	11	14	14	1.0	5158189
Acid Extractable Molybdenum (Mo)	ug/g	0.66	<0.50	<0.50	<0.50	0.51	0.57	0.50	5158189
Acid Extractable Nickel (Ni)	ug/g	19	24	25	28	31	29	0.50	5158189
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	5158189
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	5158189
Acid Extractable Thallium (Tl)	ug/g	0.14	0.12	0.15	0.17	0.19	0.18	0.050	5158189
Acid Extractable Uranium (U)	ug/g	0.84	0.50	0.52	0.60	0.52	0.52	0.050	5158189
Acid Extractable Vanadium (V)	ug/g	31	28	27	31	35	35	5.0	5158189
Acid Extractable Zinc (Zn)	ug/g	76	57	83	62	84	80	5.0	5158189

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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 #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		FBV115		
Sampling Date		2017/09/06 09:25		
COC Number		na		
	UNITS	**BH106-S2**	**RDL**	**QC Batch**
Metals				
Acid Extractable Antimony (Sb)	ug/g	0.23	0.20	5158189
Acid Extractable Arsenic (As)	ug/g	8.6	1.0	5158189
Acid Extractable Barium (Ba)	ug/g	250	0.50	5158189
Acid Extractable Beryllium (Be)	ug/g	1.3	0.20	5158189
Acid Extractable Boron (B)	ug/g	8.2	5.0	5158189
Acid Extractable Cadmium (Cd)	ug/g	0.63	0.10	5158189
Acid Extractable Chromium (Cr)	ug/g	27	1.0	5158189
Acid Extractable Cobalt (Co)	ug/g	11	0.10	5158189
Acid Extractable Copper (Cu)	ug/g	32	0.50	5158189
Acid Extractable Lead (Pb)	ug/g	23	1.0	5158189
Acid Extractable Molybdenum (Mo)	ug/g	0.90	0.50	5158189
Acid Extractable Nickel (Ni)	ug/g	27	0.50	5158189
Acid Extractable Selenium (Se)	ug/g	0.82	0.50	5158189
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	5158189
Acid Extractable Thallium (Tl)	ug/g	0.18	0.050	5158189
Acid Extractable Uranium (U)	ug/g	7.5	0.050	5158189
Acid Extractable Vanadium (V)	ug/g	37	5.0	5158189
Acid Extractable Zinc (Zn)	ug/g	100	5.0	5158189

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		FBV108	FBV111		
Sampling Date		2017/09/06 10:25	2017/09/06 01:30		
COC Number		na	na		
	UNITS	**BH101-S5**	**BH102-S3**	**RDL**	**QC Batch**
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	5155068
Volatile Organics					
Acetone (2-Propanone)	ug/g	<0.50	<0.50	0.50	5159358
Benzene	ug/g	<0.020	<0.020	0.020	5159358
Bromodichloromethane	ug/g	<0.050	<0.050	0.050	5159358
Bromoform	ug/g	<0.050	<0.050	0.050	5159358
Bromomethane	ug/g	<0.050	<0.050	0.050	5159358
Carbon Tetrachloride	ug/g	<0.050	<0.050	0.050	5159358
Chlorobenzene	ug/g	<0.050	<0.050	0.050	5159358
Chloroform	ug/g	<0.050	<0.050	0.050	5159358
Dibromochloromethane	ug/g	<0.050	<0.050	0.050	5159358
1,2-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5159358
1,3-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5159358
1,4-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5159358
Dichlorodifluoromethane (FREON 12)	ug/g	<0.050	<0.050	0.050	5159358
1,1-Dichloroethane	ug/g	<0.050	<0.050	0.050	5159358
1,2-Dichloroethane	ug/g	<0.050	<0.050	0.050	5159358
1,1-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5159358
cis-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5159358
trans-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5159358
1,2-Dichloropropane	ug/g	<0.050	<0.050	0.050	5159358
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	5159358
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	5159358
Ethylbenzene	ug/g	<0.020	<0.020	0.020	5159358
Ethylene Dibromide	ug/g	<0.050	<0.050	0.050	5159358
Hexane	ug/g	<0.050	<0.050	0.050	5159358
Methylene Chloride(Dichloromethane)	ug/g	<0.050	<0.050	0.050	5159358
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.50	<0.50	0.50	5159358
Methyl Isobutyl Ketone	ug/g	<0.50	<0.50	0.50	5159358
Methyl t-butyl ether (MTBE)	ug/g	<0.050	<0.050	0.050	5159358
Styrene	ug/g	<0.050	<0.050	0.050	5159358
1,1,1,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	5159358
1,1,2,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	5159358

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		FBV108	FBV111		
Sampling Date		2017/09/06 10:25	2017/09/06 01:30		
COC Number		na	na		
	UNITS	**BH101-S5**	**BH102-S3**	**RDL**	**QC Batch**
Tetrachloroethylene	ug/g	<0.050	<0.050	0.050	5159358
Toluene	ug/g	<0.020	<0.020	0.020	5159358
1,1,1-Trichloroethane	ug/g	<0.050	<0.050	0.050	5159358
1,1,2-Trichloroethane	ug/g	<0.050	<0.050	0.050	5159358
Trichloroethylene	ug/g	<0.050	<0.050	0.050	5159358
Trichlorofluoromethane (FREON 11)	ug/g	<0.050	<0.050	0.050	5159358
Vinyl Chloride	ug/g	<0.020	<0.020	0.020	5159358
p+m-Xylene	ug/g	<0.020	<0.020	0.020	5159358
o-Xylene	ug/g	<0.020	<0.020	0.020	5159358
Total Xylenes	ug/g	<0.020	<0.020	0.020	5159358
F1 (C6-C10)	ug/g	<10	<10	10	5159358
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	5159358
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	93	93		5159358
D10-o-Xylene	%	96	93		5159358
D4-1,2-Dichloroethane	%	96	98		5159358
D8-Toluene	%	95	94		5159358

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QC Batch = Quality Control Batch

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		FBV108	FBV111		
Sampling Date		2017/09/06 10:25	2017/09/06 01:30		
COC Number		na	na		
	UNITS	**BH101-S5**	**BH102-S3**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	5156918
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	5156918
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	5156918
Reached Baseline at C50	ug/g	Yes	Yes		5156918
Surrogate Recovery (%)					
o-Terphenyl	%	94	94		5156918

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FBV106	FBV106		FBV109	FBV112	FBV113	FBV114		
Sampling Date		2017/09/06 10:00	2017/09/06 10:00		2017/09/06 01:10	2017/09/06 02:45	2017/09/06 12:40	2017/09/06 12:10		
COC Number		na	na		na	na	na	na		
	UNITS	**BH101-S2**	**BH101-S2 Lab-Dup**	**RDL**	**BH102-S1**	**BH103-S1**	**BH104-S1**	**BH105-S1**	**RDL**	**QC Batch**
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020		0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5155307
o,p-DDD + p,p-DDD	ug/g	0.38		0.020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5155307
o,p-DDE + p,p-DDE	ug/g	0.69		0.10	<0.0020	0.0041	<0.0020	0.0043	0.0020	5155307
o,p-DDT + p,p-DDT	ug/g	0.0096		0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5155307
Total Endosulfan	ug/g	<0.0020		0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5155307
Total PCB	ug/g	<0.015		0.015	<0.015	<0.015	<0.015	<0.015	0.015	5155307
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
a-Chlordane	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
g-Chlordane	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
o,p-DDD	ug/g	0.089	0.084	0.020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
p,p-DDD	ug/g	0.29	0.26	0.020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
o,p-DDE	ug/g	<0.010	<0.010	0.010	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
p,p-DDE	ug/g	0.69	0.64	0.10	<0.0020	0.0041	<0.0020	0.0043	0.0020	5158607
o,p-DDT	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
p,p-DDT	ug/g	0.0096	0.0094	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Dieldrin	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Lindane	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Endrin	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Heptachlor	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Heptachlor epoxide	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Hexachlorobenzene	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Hexachloroethane	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Methoxychlor	ug/g	<0.015	<0.015	0.015	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5158607
Aroclor 1242	ug/g	<0.015	<0.015	0.015	<0.015	<0.015	<0.015	<0.015	0.015	5158607
Aroclor 1248	ug/g	<0.015	<0.015	0.015	<0.015	<0.015	<0.015	<0.015	0.015	5158607
Aroclor 1254	ug/g	<0.015	<0.015	0.015	<0.015	<0.015	<0.015	<0.015	0.015	5158607
Aroclor 1260	ug/g	<0.015	<0.015	0.015	<0.015	<0.015	<0.015	<0.015	0.015	5158607

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FBV106	FBV106		FBV109	FBV112	FBV113	FBV114		
Sampling Date		2017/09/06 10:00	2017/09/06 10:00		2017/09/06 01:10	2017/09/06 02:45	2017/09/06 12:40	2017/09/06 12:10		
COC Number		na	na		na	na	na	na		
	UNITS	**BH101-S2**	**BH101-S2 Lab-Dup**	**RDL**	**BH102-S1**	**BH103-S1**	**BH104-S1**	**BH105-S1**	**RDL**	**QC Batch**
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	79	85		90	84	87	87		5158607
Decachlorobiphenyl	%	80	78		58	78	83	76		5158607

RDL = Reportable Detection Limit
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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FBV115			FDO579		FDO580	FDO581		
Sampling Date		2017/09/06 09:25			2017/09/06 10:00		2017/09/06 10:00	2017/09/06 10:00		
COC Number		na			na		na	na		
	UNITS	**BH106-S2**	**RDL**	**QC Batch**	**BH101-S2 - A**	**RDL**	**BH101-S2 - B**	**BH101-S2 - C**	**RDL**	**QC Batch**
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020	0.0020	5155307	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5171014
o,p-DDD + p,p-DDD	ug/g	0.024	0.0020	5155307	0.36	0.020	0.37	0.34	0.020	5171014
o,p-DDE + p,p-DDE	ug/g	0.054	0.010	5155307	0.75	0.10	0.88	0.86	0.10	5171014
o,p-DDT + p,p-DDT	ug/g	<0.0020	0.0020	5155307	0.019	0.0020	0.017	0.017	0.0020	5171014
Total Endosulfan	ug/g	<0.0020	0.0020	5155307	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5171014
Total PCB	ug/g	<0.015	0.015	5155307	<0.050	0.050	<0.050	<0.050	0.050	5171014
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
a-Chlordane	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
g-Chlordane	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
o,p-DDD	ug/g	0.0075	0.0020	5158607	0.081	0.020	0.076	0.071	0.020	5176135
p,p-DDD	ug/g	0.017	0.0020	5158607	0.28	0.020	0.30	0.27	0.020	5176135
o,p-DDE	ug/g	<0.0020	0.0020	5158607	<0.010	0.010	<0.010	<0.010	0.010	5176135
p,p-DDE	ug/g	0.054	0.010	5158607	0.75	0.10	0.88	0.86	0.10	5176135
o,p-DDT	ug/g	<0.0020	0.0020	5158607	0.0024	0.0020	<0.0020	<0.0020	0.0020	5176135
p,p-DDT	ug/g	<0.0020	0.0020	5158607	0.017	0.0020	0.017	0.017	0.0020	5176135
Dieldrin	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Lindane	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Endosulfan II (beta)	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Endrin	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Heptachlor	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Heptachlor epoxide	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Hexachlorobenzene	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Hexachlorobutadiene	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Hexachloroethane	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Methoxychlor	ug/g	<0.0050	0.0050	5158607	<0.0050	0.0050	<0.0050	<0.0050	0.0050	5176135
Aroclor 1242	ug/g	<0.015	0.015	5158607	<0.015	0.015	<0.015	<0.015	0.015	5176135
Aroclor 1248	ug/g	<0.015	0.015	5158607	<0.015	0.015	<0.015	<0.015	0.015	5176135
Aroclor 1254	ug/g	<0.015	0.015	5158607	<0.050	0.050	<0.050	<0.050	0.050	5176135
Aroclor 1260	ug/g	<0.015	0.015	5158607	<0.015	0.015	<0.020	<0.020	0.020	5176135

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FBV115			FDO579		FDO580	FDO581		
Sampling Date		2017/09/06 09:25			2017/09/06 10:00		2017/09/06 10:00	2017/09/06 10:00		
COC Number		na			na		na	na		
	UNITS	**BH106-S2**	**RDL**	**QC Batch**	**BH101-S2 - A**	**RDL**	**BH101-S2 - B**	**BH101-S2 - C**	**RDL**	**QC Batch**
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	73		5158607	95		102	93		5176135
Decachlorobiphenyl	%	80		5158607	124		121	119		5176135

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: FBV106 **Collected:** 2017/09/06
Sample ID: BH101-S2 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/12	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Automated Statchk

Maxxam ID: FBV106 Dup **Collected:** 2017/09/06
Sample ID: BH101-S2 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/12	Mahmudul Khan

Maxxam ID: FBV107 **Collected:** 2017/09/06
Sample ID: BH101-S4 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	5158335	2017/09/12	2017/09/12	Tahir Anwar
Sieve, 75um	SIEV	5158309	N/A	2017/09/11	Chun Yan

Maxxam ID: FBV108 **Collected:** 2017/09/06
Sample ID: BH101-S5 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5155068	N/A	2017/09/13	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5156918	2017/09/09	2017/09/10	Jeevaraj Jeevaratrnam
Moisture	BAL	5157289	N/A	2017/09/09	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5159358	N/A	2017/09/13	Manpreet Sarao

Maxxam ID: FBV109 **Collected:** 2017/09/06
Sample ID: BH102-S1 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: FBV110 **Collected:** 2017/09/06
Sample ID: BH102-S2 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	5158335	2017/09/12	2017/09/12	Tahir Anwar

Maxxam ID: FBV111 **Collected:** 2017/09/06
Sample ID: BH102-S3 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5155068	N/A	2017/09/13	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5156918	2017/09/09	2017/09/10	Jeevaraj Jeevaratrnam
Moisture	BAL	5157289	N/A	2017/09/09	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5159358	N/A	2017/09/13	Manpreet Sarao

Maxxam ID: FBV112 **Collected:** 2017/09/06
Sample ID: BH103-S1 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

Maxxam ID: FBV113 **Collected:** 2017/09/06
Sample ID: BH104-S1 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

Maxxam ID: FBV114 **Collected:** 2017/09/06
Sample ID: BH105-S1 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: FBV114 Dup
Sample ID: BH105-S1
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu

Maxxam ID: FBV115
Sample ID: BH106-S2
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

Maxxam ID: FDO579
Sample ID: BH101-S2 - A
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5177360	N/A	2017/09/22	Chun Yan
OC Pesticides (Selected) & PCB	GC/ECD	5176135	2017/09/19	2017/09/22	Joy Zhang
OC Pesticides Summed Parameters	CALC	5171014	N/A	2017/09/22	Automated Statchk

Maxxam ID: FDO580
Sample ID: BH101-S2 - B
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5177360	N/A	2017/09/22	Chun Yan
OC Pesticides (Selected) & PCB	GC/ECD	5176135	2017/09/19	2017/09/22	Joy Zhang
OC Pesticides Summed Parameters	CALC	5171014	N/A	2017/09/22	Automated Statchk

Maxxam ID: FDO581
Sample ID: BH101-S2 - C
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5177360	N/A	2017/09/22	Chun Yan
OC Pesticides (Selected) & PCB	GC/ECD	5176135	2017/09/19	2017/09/22	Joy Zhang
OC Pesticides Summed Parameters	CALC	5171014	N/A	2017/09/22	Automated Statchk

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Sampler Initials: KP

GENERAL COMMENTS

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

Package 1	4.7°C

Revised Report[2017/09/22] - Reworked results for sample BH101-S2 included as per client request.
OC Pesticide Analysis: Due to high concentrations of the target analytes, samples required dilution. Detection limits were adjusted accordingly. Detection Limits were raised due to matrix interferences for some parameters.

Sample FBV106 [BH101-S2] : OC Pesticide Analysis: Due to high concentrations of the target analytes, sample required dilution. Detection limits were adjusted accordingly. Detection limits for some parameters were raised due to matrix interferences.

Sample FBV115 [BH106-S2] : OC Pesticide Anaysis: Due to high concentrations of the target analytes, sample required dilution. Detection limits were adjusted accordingly.

Results relate only to the items tested.

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Maxxam Job #: B7J4925
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QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5156918	o-Terphenyl	2017/09/09	88	60 - 130	89	60 - 130	98	%				
5158607	2,4,5,6-Tetrachloro-m-xylene	2017/09/12	85	50 - 130	77	50 - 130	76	%				
5158607	Decachlorobiphenyl	2017/09/12	91	50 - 130	90	50 - 130	90	%				
5159358	4-Bromofluorobenzene	2017/09/13	103	60 - 140	104	60 - 140	93	%				
5159358	D10-o-Xylene	2017/09/13	107	60 - 130	92	60 - 130	89	%				
5159358	D4-1,2-Dichloroethane	2017/09/13	95	60 - 140	93	60 - 140	100	%				
5159358	D8-Toluene	2017/09/13	102	60 - 140	103	60 - 140	95	%				
5176135	2,4,5,6-Tetrachloro-m-xylene	2017/09/22	84	50 - 130	82	50 - 130	85	%				
5176135	Decachlorobiphenyl	2017/09/22	104	50 - 130	114	50 - 130	122	%				
5156918	F2 (C10-C16 Hydrocarbons)	2017/09/10	101	50 - 130	94	80 - 120	<10	ug/g	NC	30		
5156918	F3 (C16-C34 Hydrocarbons)	2017/09/10	105	50 - 130	98	80 - 120	<50	ug/g	NC	30		
5156918	F4 (C34-C50 Hydrocarbons)	2017/09/10	105	50 - 130	97	80 - 120	<50	ug/g	NC	30		
5157289	Moisture	2017/09/09							2.5	20		
5158013	Moisture	2017/09/11							0.69	20		
5158189	Acid Extractable Antimony (Sb)	2017/09/13	92	75 - 125	101	80 - 120	<0.20	ug/g	0.16	30		
5158189	Acid Extractable Arsenic (As)	2017/09/13	99	75 - 125	102	80 - 120	<1.0	ug/g	3.0	30		
5158189	Acid Extractable Barium (Ba)	2017/09/13	NC	75 - 125	106	80 - 120	<0.50	ug/g	2.3	30		
5158189	Acid Extractable Beryllium (Be)	2017/09/13	104	75 - 125	102	80 - 120	<0.20	ug/g	0.63	30		
5158189	Acid Extractable Boron (B)	2017/09/13	96	75 - 125	98	80 - 120	<5.0	ug/g	2.2	30		
5158189	Acid Extractable Cadmium (Cd)	2017/09/13	102	75 - 125	101	80 - 120	<0.10	ug/g	15	30		
5158189	Acid Extractable Chromium (Cr)	2017/09/13	NC	75 - 125	102	80 - 120	<1.0	ug/g	3.5	30		
5158189	Acid Extractable Cobalt (Co)	2017/09/13	101	75 - 125	101	80 - 120	<0.10	ug/g	0.44	30		
5158189	Acid Extractable Copper (Cu)	2017/09/13	NC	75 - 125	101	80 - 120	<0.50	ug/g	1.0	30		
5158189	Acid Extractable Lead (Pb)	2017/09/13	102	75 - 125	102	80 - 120	<1.0	ug/g	1.1	30		
5158189	Acid Extractable Molybdenum (Mo)	2017/09/13	101	75 - 125	102	80 - 120	<0.50	ug/g	10	30		
5158189	Acid Extractable Nickel (Ni)	2017/09/13	NC	75 - 125	105	80 - 120	<0.50	ug/g	5.2	30		
5158189	Acid Extractable Selenium (Se)	2017/09/13	103	75 - 125	105	80 - 120	<0.50	ug/g	NC	30		
5158189	Acid Extractable Silver (Ag)	2017/09/13	102	75 - 125	101	80 - 120	<0.20	ug/g	NC	30		
5158189	Acid Extractable Thallium (Tl)	2017/09/13	100	75 - 125	101	80 - 120	<0.050	ug/g	0.64	30		
5158189	Acid Extractable Uranium (U)	2017/09/13	102	75 - 125	99	80 - 120	<0.050	ug/g	0.17	30		
5158189	Acid Extractable Vanadium (V)	2017/09/13	NC	75 - 125	101	80 - 120	<5.0	ug/g	0.58	30		

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Maxxam Job #: B7J4925
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QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5158189	Acid Extractable Zinc (Zn)	2017/09/13	NC	75 - 125	113	80 - 120	<5.0	ug/g	5.8	30		
5158309	Sieve - #200 (<0.075mm)	2017/09/11							2.3	20	57	53 - 58
5158309	Sieve - #200 (>0.075mm)	2017/09/11							4.7	20	43	42 - 47
5158335	Available (CaCl2) pH	2017/09/12			99	97 - 103			0.96	N/A		
5158607	a-Chlordane	2017/09/12	109	50 - 130	95	50 - 130	<0.0020	ug/g	NC	40		
5158607	Aldrin	2017/09/12	100	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40		
5158607	Aroclor 1242	2017/09/12					<0.015	ug/g	NC	40		
5158607	Aroclor 1248	2017/09/12					<0.015	ug/g	NC	40		
5158607	Aroclor 1254	2017/09/12					<0.015	ug/g	NC	40		
5158607	Aroclor 1260	2017/09/12					<0.015	ug/g	NC	40		
5158607	Dieldrin	2017/09/12	115	50 - 130	126	50 - 130	<0.0020	ug/g	NC	40		
5158607	Endosulfan I (alpha)	2017/09/12	98	50 - 130	115	50 - 130	<0.0020	ug/g	NC	40		
5158607	Endosulfan II (beta)	2017/09/12	113	50 - 130	111	50 - 130	<0.0020	ug/g	NC	40		
5158607	Endrin	2017/09/12	97	50 - 130	124	50 - 130	<0.0020	ug/g	NC	40		
5158607	g-Chlordane	2017/09/12	111	50 - 130	101	50 - 130	<0.0020	ug/g	NC	40		
5158607	Heptachlor epoxide	2017/09/12	94	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5158607	Heptachlor	2017/09/12	86	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40		
5158607	Hexachlorobenzene	2017/09/12	97	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40		
5158607	Hexachlorobutadiene	2017/09/12	75	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40		
5158607	Hexachloroethane	2017/09/12	55	50 - 130	70	50 - 130	<0.0020	ug/g	NC	40		
5158607	Lindane	2017/09/12	105	50 - 130	102	50 - 130	<0.0020	ug/g	NC	40		
5158607	Methoxychlor	2017/09/12	161 (1)	50 - 130	132 (2)	50 - 130	<0.0050	ug/g	NC	40		
5158607	o,p-DDD	2017/09/12	NC	50 - 130	124	50 - 130	<0.0020	ug/g	5.9	40		
5158607	o,p-DDE	2017/09/12	93	50 - 130	92	50 - 130	<0.0020	ug/g	NC	40		
5158607	o,p-DDT	2017/09/12	131 (1)	50 - 130	95	50 - 130	<0.0020	ug/g	NC	40		
5158607	p,p-DDD	2017/09/12	NC	50 - 130	119	50 - 130	<0.0020	ug/g	8.2	40		
5158607	p,p-DDE	2017/09/12	NC	50 - 130	106	50 - 130	<0.0020	ug/g	6.3	40		
5158607	p,p-DDT	2017/09/12	NC	50 - 130	100	50 - 130	<0.0020	ug/g	1.8	40		
5159358	1,1,1,2-Tetrachloroethane	2017/09/13	100	60 - 140	98	60 - 130	<0.050	ug/g	NC	50		
5159358	1,1,1-Trichloroethane	2017/09/13	91	60 - 140	88	60 - 130	<0.050	ug/g	NC	50		
5159358	1,1,2,2-Tetrachloroethane	2017/09/13	107	60 - 140	108	60 - 130	<0.050	ug/g	NC	50		

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QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5159358	1,1,2-Trichloroethane	2017/09/13	89	60 - 140	87	60 - 130	<0.050	ug/g	NC	50		
5159358	1,1-Dichloroethane	2017/09/13	95	60 - 140	91	60 - 130	<0.050	ug/g	NC	50		
5159358	1,1-Dichloroethylene	2017/09/13	100	60 - 140	95	60 - 130	<0.050	ug/g	NC	50		
5159358	1,2-Dichlorobenzene	2017/09/13	92	60 - 140	88	60 - 130	<0.050	ug/g	NC	50		
5159358	1,2-Dichloroethane	2017/09/13	102	60 - 140	100	60 - 130	<0.050	ug/g	NC	50		
5159358	1,2-Dichloropropane	2017/09/13	88	60 - 140	86	60 - 130	<0.050	ug/g	NC	50		
5159358	1,3-Dichlorobenzene	2017/09/13	96	60 - 140	92	60 - 130	<0.050	ug/g	NC	50		
5159358	1,4-Dichlorobenzene	2017/09/13	102	60 - 140	93	60 - 130	<0.050	ug/g	NC	50		
5159358	Acetone (2-Propanone)	2017/09/13	79	60 - 140	84	60 - 140	<0.50	ug/g	NC	50		
5159358	Benzene	2017/09/13	97	60 - 140	93	60 - 130	<0.020	ug/g	NC	50		
5159358	Bromodichloromethane	2017/09/13	90	60 - 140	88	60 - 130	<0.050	ug/g	NC	50		
5159358	Bromoform	2017/09/13	98	60 - 140	99	60 - 130	<0.050	ug/g	NC	50		
5159358	Bromomethane	2017/09/13	96	60 - 140	94	60 - 140	<0.050	ug/g	NC	50		
5159358	Carbon Tetrachloride	2017/09/13	93	60 - 140	89	60 - 130	<0.050	ug/g	NC	50		
5159358	Chlorobenzene	2017/09/13	94	60 - 140	91	60 - 130	<0.050	ug/g	NC	50		
5159358	Chloroform	2017/09/13	91	60 - 140	88	60 - 130	<0.050	ug/g	NC	50		
5159358	cis-1,2-Dichloroethylene	2017/09/13	95	60 - 140	92	60 - 130	<0.050	ug/g	NC	50		
5159358	cis-1,3-Dichloropropene	2017/09/13	83	60 - 140	83	60 - 130	<0.030	ug/g	NC	50		
5159358	Dibromochloromethane	2017/09/13	97	60 - 140	96	60 - 130	<0.050	ug/g	NC	50		
5159358	Dichlorodifluoromethane (FREON 12)	2017/09/13	87	60 - 140	89	60 - 140	<0.050	ug/g	NC	50		
5159358	Ethylbenzene	2017/09/13	94	60 - 140	91	60 - 130	<0.020	ug/g	NC	50		
5159358	Ethylene Dibromide	2017/09/13	99	60 - 140	99	60 - 130	<0.050	ug/g	NC	50		
5159358	F1 (C6-C10) - BTEX	2017/09/13					<10	ug/g	NC	30		
5159358	F1 (C6-C10)	2017/09/13	101	60 - 140	91	80 - 120	<10	ug/g	NC	30		
5159358	Hexane	2017/09/13	99	60 - 140	95	60 - 130	<0.050	ug/g	NC	50		
5159358	Methyl Ethyl Ketone (2-Butanone)	2017/09/13	82	60 - 140	86	60 - 140	<0.50	ug/g	NC	50		
5159358	Methyl Isobutyl Ketone	2017/09/13	85	60 - 140	87	60 - 130	<0.50	ug/g	NC	50		
5159358	Methyl t-butyl ether (MTBE)	2017/09/13	92	60 - 140	90	60 - 130	<0.050	ug/g	NC	50		
5159358	Methylene Chloride(Dichloromethane)	2017/09/13	100	60 - 140	97	60 - 130	<0.050	ug/g	NC	50		
5159358	o-Xylene	2017/09/13	94	60 - 140	92	60 - 130	<0.020	ug/g	NC	50		
5159358	p+m-Xylene	2017/09/13	97	60 - 140	94	60 - 130	<0.020	ug/g	NC	50		

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QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5159358	Styrene	2017/09/13	96	60 - 140	94	60 - 130	<0.050	ug/g	NC	50		
5159358	Tetrachloroethylene	2017/09/13	95	60 - 140	90	60 - 130	<0.050	ug/g	NC	50		
5159358	Toluene	2017/09/13	93	60 - 140	89	60 - 130	<0.020	ug/g	NC	50		
5159358	Total Xylenes	2017/09/13					<0.020	ug/g	NC	50		
5159358	trans-1,2-Dichloroethylene	2017/09/13	98	60 - 140	92	60 - 130	<0.050	ug/g	NC	50		
5159358	trans-1,3-Dichloropropene	2017/09/13	85	60 - 140	86	60 - 130	<0.040	ug/g	NC	50		
5159358	Trichloroethylene	2017/09/13	95	60 - 140	91	60 - 130	<0.050	ug/g	NC	50		
5159358	Trichlorofluoromethane (FREON 11)	2017/09/13	97	60 - 140	93	60 - 130	<0.050	ug/g	NC	50		
5159358	Vinyl Chloride	2017/09/13	78	60 - 140	93	60 - 130	<0.020	ug/g	NC	50		
5176135	a-Chlordane	2017/09/22	100	50 - 130	102	50 - 130	<0.0020	ug/g	NC	40		
5176135	Aldrin	2017/09/22	96	50 - 130	96	50 - 130	<0.0020	ug/g	NC	40		
5176135	Aroclor 1242	2017/09/22					<0.015	ug/g	NC	40		
5176135	Aroclor 1248	2017/09/22					<0.015	ug/g	NC	40		
5176135	Aroclor 1254	2017/09/22					<0.015	ug/g	NC	40		
5176135	Aroclor 1260	2017/09/22					<0.015	ug/g	NC	40		
5176135	Dieldrin	2017/09/22	107	50 - 130	127	50 - 130	<0.0020	ug/g	NC	40		
5176135	Endosulfan I (alpha)	2017/09/22	100	50 - 130	109	50 - 130	<0.0020	ug/g	NC	40		
5176135	Endosulfan II (beta)	2017/09/22	101	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40		
5176135	Endrin	2017/09/22	104	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5176135	g-Chlordane	2017/09/22	97	50 - 130	95	50 - 130	<0.0020	ug/g	NC	40		
5176135	Heptachlor epoxide	2017/09/22	99	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5176135	Heptachlor	2017/09/22	100	50 - 130	100	50 - 130	<0.0020	ug/g	NC	40		
5176135	Hexachlorobenzene	2017/09/22	100	50 - 130	95	50 - 130	<0.0020	ug/g	NC	40		
5176135	Hexachlorobutadiene	2017/09/22	84	50 - 130	98	50 - 130	<0.0020	ug/g	NC	40		
5176135	Hexachloroethane	2017/09/22	68	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40		
5176135	Lindane	2017/09/22	97	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40		
5176135	Methoxychlor	2017/09/22	154 (3)	50 - 130	138 (3)	50 - 130	<0.0050	ug/g	NC	40		
5176135	o,p-DDD	2017/09/22	106	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5176135	o,p-DDE	2017/09/22	103	50 - 130	106	50 - 130	<0.0020	ug/g	NC	40		
5176135	o,p-DDT	2017/09/22	119	50 - 130	111	50 - 130	<0.0020	ug/g	NC	40		
5176135	p,p-DDD	2017/09/22	122	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		

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QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5176135	p,p-DDE	2017/09/22	91	50 - 130	116	50 - 130	<0.0020	ug/g	0.62	40		
5176135	p,p-DDT	2017/09/22	117	50 - 130	114	50 - 130	<0.0020	ug/g	NC	40		

N/A = Not Applicable

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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 spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

(1) The 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.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(3) Surrogate recovery was above the upper control limit due to matrix interference. This may represent a high bias in some results.

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

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 Service Specialist

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A Bureau Veritas Group Company

Your Project #: HAM-00801245-C0
Site Location: BLAIR
Your C.O.C. #: n/a

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/11/07
Report #: R4834183
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7O6106
Received: 2017/11/02, 16:29

Sample Matrix: Soil
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Moisture	1	N/A	2017/11/06	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (1)	1	2017/11/03	2017/11/05	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	1	N/A	2017/11/07	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.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
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

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Your Project #: HAM-00801245-C0
Site Location: BLAIR
Your C.O.C. #: n/a

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/11/07
Report #: R4834183
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7O6106
Received: 2017/11/02, 16:29

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

==========

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

RESULTS OF ANALYSES OF SOIL

Maxxam ID		FLX856		
Sampling Date		2017/09/06 10:10		
COC Number		n/a		
	UNITS	**BH101-S3**	**RDL**	**QC Batch**
Inorganics				
Moisture	%	20	1.0	5250864

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FLX856		
Sampling Date		2017/09/06 10:10		
COC Number		n/a		
	UNITS	**BH101-S3**	**RDL**	**QC Batch**
Calculated Parameters				
Chlordane (Total)	ug/g	<0.0020	0.0020	5246901
o,p-DDD + p,p-DDD	ug/g	<0.0020	0.0020	5246901
o,p-DDE + p,p-DDE	ug/g	0.0073	0.0020	5246901
o,p-DDT + p,p-DDT	ug/g	<0.0020	0.0020	5246901
Total Endosulfan	ug/g	<0.0020	0.0020	5246901
Total PCB	ug/g	<0.015	0.015	5246901
Pesticides & Herbicides				
Aldrin	ug/g	<0.0020	0.0020	5248270
a-Chlordane	ug/g	<0.0020	0.0020	5248270
g-Chlordane	ug/g	<0.0020	0.0020	5248270
o,p-DDD	ug/g	<0.0020	0.0020	5248270
p,p-DDD	ug/g	<0.0020	0.0020	5248270
o,p-DDE	ug/g	<0.0020	0.0020	5248270
p,p-DDE	ug/g	0.0073	0.0020	5248270
o,p-DDT	ug/g	<0.0020	0.0020	5248270
p,p-DDT	ug/g	<0.0020	0.0020	5248270
Dieldrin	ug/g	<0.0020	0.0020	5248270
Lindane	ug/g	<0.0020	0.0020	5248270
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	5248270
Endosulfan II (beta)	ug/g	<0.0020	0.0020	5248270
Endrin	ug/g	<0.0020	0.0020	5248270
Heptachlor	ug/g	<0.0020	0.0020	5248270
Heptachlor epoxide	ug/g	<0.0020	0.0020	5248270
Hexachlorobenzene	ug/g	<0.0020	0.0020	5248270
Hexachlorobutadiene	ug/g	<0.0020	0.0020	5248270
Hexachloroethane	ug/g	<0.0020	0.0020	5248270
Methoxychlor	ug/g	<0.0050	0.0050	5248270
Aroclor 1242	ug/g	<0.015	0.015	5248270
Aroclor 1248	ug/g	<0.015	0.015	5248270
Aroclor 1254	ug/g	<0.015	0.015	5248270
Aroclor 1260	ug/g	<0.015	0.015	5248270
Surrogate Recovery (%)				
2,4,5,6-Tetrachloro-m-xylene	%	79		5248270

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FLX856		
Sampling Date		2017/09/06 10:10		
COC Number		n/a		
	UNITS	**BH101-S3**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	100		5248270

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: FLX856
Sample ID: BH101-S3
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/11/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5250864	N/A	2017/11/06	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5248270	2017/11/03	2017/11/05	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5246901	N/A	2017/11/07	Automated Statchk

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

GENERAL COMMENTS

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

Package 1	7.7°C

Results relate only to the items tested.

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5248270	2,4,5,6-Tetrachloro-m-xylene	2017/11/05	89	50 - 130	79	50 - 130	84	%		
5248270	Decachlorobiphenyl	2017/11/05	112	50 - 130	107	50 - 130	111	%		
5248270	a-Chlordane	2017/11/05	110	50 - 130	96	50 - 130	<0.0020	ug/g	NC	40
5248270	Aldrin	2017/11/05	96	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40
5248270	Aroclor 1242	2017/11/05					<0.015	ug/g	NC	40
5248270	Aroclor 1248	2017/11/05					<0.015	ug/g	NC	40
5248270	Aroclor 1254	2017/11/05					<0.015	ug/g	NC	40
5248270	Aroclor 1260	2017/11/05					<0.015	ug/g	NC	40
5248270	Dieldrin	2017/11/05	126	50 - 130	115	50 - 130	<0.0020	ug/g	NC	40
5248270	Endosulfan I (alpha)	2017/11/05	89	50 - 130	83	50 - 130	<0.0020	ug/g	NC	40
5248270	Endosulfan II (beta)	2017/11/05	111	50 - 130	98	50 - 130	<0.0020	ug/g	NC	40
5248270	Endrin	2017/11/05	105	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40
5248270	g-Chlordane	2017/11/05	101	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40
5248270	Heptachlor epoxide	2017/11/05	108	50 - 130	98	50 - 130	<0.0020	ug/g	NC	40
5248270	Heptachlor	2017/11/05	96	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
5248270	Hexachlorobenzene	2017/11/05	94	50 - 130	82	50 - 130	<0.0020	ug/g	NC	40
5248270	Hexachlorobutadiene	2017/11/05	77	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40
5248270	Hexachloroethane	2017/11/05	53	50 - 130	73	50 - 130	<0.0020	ug/g	NC	40
5248270	Lindane	2017/11/05	87	50 - 130	79	50 - 130	<0.0020	ug/g	NC	40
5248270	Methoxychlor	2017/11/05	105	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
5248270	o,p-DDD	2017/11/05	118	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40
5248270	o,p-DDE	2017/11/05	101	50 - 130	93	50 - 130	<0.0020	ug/g	NC	40
5248270	o,p-DDT	2017/11/05	97	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
5248270	p,p-DDD	2017/11/05	115	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40
5248270	p,p-DDE	2017/11/05	119	50 - 130	105	50 - 130	<0.0020	ug/g	NC	40
5248270	p,p-DDT	2017/11/05	102	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5250864	Moisture	2017/11/06							1.4	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 (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 (absolute difference <= 2x RDL).

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

VALIDATION SIGNATURE PAGE

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Cristina Carriere

Cristina Carriere, Scientific Service Specialist

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Your Project #: HAM-00801245-C0
Site Location: BLAIR
Your C.O.C. #: na

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/11/16
Report #: R4861359
Version: 3 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7O8915
Received: 2017/11/06, 15:57

Sample Matrix: Soil
Samples Received: 17

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Cyanide (WAD) in Leachates	1	N/A	2017/11/10	CAM SOP-00457	OMOE 3015 m
Fluoride by ISE in Leachates	1	2017/11/10	2017/11/10	CAM SOP-00449	SM 22 4500-F- C m
Mercury (TCLP Leachable) (mg/L)	1	N/A	2017/11/10	CAM SOP-00453	EPA 7470A m
Total Metals in TCLP Leachate by ICPMS	1	2017/11/10	2017/11/10	CAM SOP-00447	EPA 6020B m
Moisture	16	N/A	2017/11/09	CAM SOP-00445	Carter 2nd ed 51.2 m
Nitrate(NO3) + Nitrite(NO2) in Leachate	1	N/A	2017/11/10	CAM SOP-00440	SM 22 4500-NO3I/NO2B
OC Pesticides (Selected) & PCB (1)	9	2017/11/14	2017/11/15	CAM SOP-00307	SW846 8081, 8082
OC Pesticides (Selected) & PCB (1)	7	2017/11/15	2017/11/16	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	16	N/A	2017/11/10	CAM SOP-00307	EPA 8081/8082 m
Polychlorinated Biphenyl in Leachate	1	2017/11/10	2017/11/10	CAM SOP-00309	EPA 8082A m
TCLP - % Solids	1	2017/11/09	2017/11/10	CAM SOP-00401	EPA 1311 Update I m
TCLP - Extraction Fluid	1	N/A	2017/11/10	CAM SOP-00401	EPA 1311 Update I m
TCLP - Initial and final pH	1	N/A	2017/11/10	CAM SOP-00401	EPA 1311 Update I m
TCLP Zero Headspace Extraction	1	2017/11/09	2017/11/10	CAM SOP-00430	EPA 1311 m
VOCs in ZHE Leachates	1	2017/11/10	2017/11/10	CAM SOP-00228	EPA 8260C m

Remarks:

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

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Your Project #: HAM-00801245-C0
Site Location: BLAIR
Your C.O.C. #: na

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/11/16
Report #: R4861359
Version: 3 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7O8915
Received: 2017/11/06, 15:57

Results relate to samples tested.

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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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

RESULTS OF ANALYSES OF SOIL

Maxxam ID		FMO340	FMO341	FMO342	FMO343	FMO344	FMO345		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na	na		
	UNITS	**BH201 S2**	**BH201 S3**	**BH202 S2**	**BH202 S3**	**BH203 S2**	**BH203 S3**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	14	20	16	16	19	10	1.0	5257005

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FMO346	FMO347	FMO348	FMO348	FMO349	FMO350		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na	na		
	UNITS	**BH204 S2**	**BH204 S3**	**BH205 S2**	**BH205 S2 Lab-Dup**	**BH205 S3**	**BH206 S2**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	18	12	15	15	11	18	1.0	5257005

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

RESULTS OF ANALYSES OF SOIL

Maxxam ID		FMO351	FMO352	FMO353	FMO354	FMO355	FMO356		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na	na		
	UNITS	**BH206 S3**	**BH207 S2**	**BH207 S3**	**BH208 S2**	**BH208 S3**	**TCLP**	**RDL**	**QC Batch**
Charge/Prep Analysis									
Amount Extracted (Wet Weight) (g)	N/A						25	N/A	5256925
Inorganics									
Final pH	pH						5.30		5257881
Leachable Fluoride (F-)	mg/L						0.27	0.10	5259512
Initial pH	pH						9.12		5257881
Moisture	%	11	19	9.3	13	12		1.0	5257005
TCLP - % Solids	%						100	0.2	5257878
TCLP Extraction Fluid	N/A						FLUID 1		5257879
Leachable WAD Cyanide (Free)	mg/L						<0.010	0.010	5259514
Leachable Nitrite (N)	mg/L						<0.10	0.10	5259516
Leachable Nitrate (N)	mg/L						<1.0	1.0	5259516
Leachable Nitrate + Nitrite (N)	mg/L						<1.0	1.0	5259516
Metals									
Leachable Mercury (Hg)	mg/L						<0.0010	0.0010	5259413

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam ID		FMO356	
Sampling Date		2017/11/06	
COC Number		na	
	UNITS	**TCLP Lab-Dup**	**QC Batch**
Charge/Prep Analysis			
Amount Extracted (Wet Weight) (g)	N/A	25	5256925

QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		FMO356		
Sampling Date		2017/11/06		
COC Number		na		
	UNITS	**TCLP**	**RDL**	**QC Batch**
Metals				
Leachable Arsenic (As)	mg/L	<0.2	0.2	5259435
Leachable Barium (Ba)	mg/L	0.6	0.2	5259435
Leachable Boron (B)	mg/L	0.2	0.1	5259435
Leachable Cadmium (Cd)	mg/L	<0.05	0.05	5259435
Leachable Chromium (Cr)	mg/L	<0.1	0.1	5259435
Leachable Lead (Pb)	mg/L	<0.1	0.1	5259435
Leachable Selenium (Se)	mg/L	<0.1	0.1	5259435
Leachable Silver (Ag)	mg/L	<0.01	0.01	5259435
Leachable Uranium (U)	mg/L	<0.01	0.01	5259435

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		FMO356	FMO356		
Sampling Date		2017/11/06	2017/11/06		
COC Number		na	na		
	UNITS	**TCLP**	**TCLP Lab-Dup**	**RDL**	**QC Batch**
Volatile Organics					
Leachable Benzene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Carbon Tetrachloride	mg/L	<0.020	<0.020	0.020	5259176
Leachable Chlorobenzene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Chloroform	mg/L	<0.020	<0.020	0.020	5259176
Leachable 1,2-Dichlorobenzene	mg/L	<0.050	<0.050	0.050	5259176
Leachable 1,4-Dichlorobenzene	mg/L	<0.050	<0.050	0.050	5259176
Leachable 1,2-Dichloroethane	mg/L	<0.050	<0.050	0.050	5259176
Leachable 1,1-Dichloroethylene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Methylene Chloride(Dichloromethane)	mg/L	<0.20	<0.20	0.20	5259176
Leachable Methyl Ethyl Ketone (2-Butanone)	mg/L	<1.0	<1.0	1.0	5259176
Leachable Tetrachloroethylene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Trichloroethylene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Vinyl Chloride	mg/L	<0.020	<0.020	0.020	5259176
Surrogate Recovery (%)					
Leachable 4-Bromofluorobenzene	%	78	90		5259176
Leachable D4-1,2-Dichloroethane	%	116	117		5259176
Leachable D8-Toluene	%	91	91		5259176

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		FMO356		
Sampling Date		2017/11/06		
COC Number		na		
	UNITS	**TCLP**	**RDL**	**QC Batch**
PCBs				
Leachable Total PCB	ug/L	<3.0	3.0	5259459
Surrogate Recovery (%)				
Leachable Decachlorobiphenyl	%	96		5259459

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO340		FMO341		FMO342		FMO343		
Sampling Date		2017/11/06		2017/11/06		2017/11/06		2017/11/06		
COC Number		na		na		na		na		
	UNITS	**BH201 S2**	**RDL**	**BH201 S3**	**RDL**	**BH202 S2**	**RDL**	**BH202 S3**	**RDL**	**QC Batch**
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5252027
o,p-DDD + p,p-DDD	ug/g	0.17	0.020	0.025	0.0020	0.12	0.020	0.11	0.020	5252027
o,p-DDE + p,p-DDE	ug/g	0.26	0.020	0.047	0.020	0.25	0.020	0.22	0.020	5252027
o,p-DDT + p,p-DDT	ug/g	<0.0060	0.0060	<0.0020	0.0020	0.0023	0.0020	<0.0030	0.0030	5252027
Total Endosulfan	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5252027
Total PCB	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5252027
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
a-Chlordane	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
g-Chlordane	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
o,p-DDD	ug/g	0.045	0.020	0.0048	0.0020	0.025	0.0020	0.028	0.0020	5267348
p,p-DDD	ug/g	0.13	0.020	0.020	0.0020	0.094	0.020	0.083	0.020	5267348
o,p-DDE	ug/g	<0.0050	0.0050	<0.0020	0.0020	<0.0050	0.0050	<0.0050	0.0050	5267348
p,p-DDE	ug/g	0.26	0.020	0.047	0.020	0.25	0.020	0.22	0.020	5267348
o,p-DDT	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
p,p-DDT	ug/g	<0.0060	0.0060	<0.0020	0.0020	0.0023	0.0020	<0.0030	0.0030	5267348
Dieldrin	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Lindane	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Endosulfan II (beta)	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Endrin	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Heptachlor	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Heptachlor epoxide	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Hexachlorobenzene	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Hexachlorobutadiene	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Hexachloroethane	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Methoxychlor	ug/g	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	5267348
Aroclor 1242	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5267348
Aroclor 1248	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5267348
Aroclor 1254	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5267348
Aroclor 1260	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5267348
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	87		88		81		84		5267348

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B7O8915
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ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO340		FMO341		FMO342		FMO343		
Sampling Date		2017/11/06		2017/11/06		2017/11/06		2017/11/06		
COC Number		na		na		na		na		
	UNITS	**BH201 S2**	**RDL**	**BH201 S3**	**RDL**	**BH202 S2**	**RDL**	**BH202 S3**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	108		104		98		102		5267348

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Maxxam Job #: B7O8915
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Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO344		FMO345			FMO346		
Sampling Date		2017/11/06		2017/11/06			2017/11/06		
COC Number		na		na			na		
	UNITS	**BH203 S2**	**QC Batch**	**BH203 S3**	**RDL**	**QC Batch**	**BH204 S2**	**RDL**	**QC Batch**
Calculated Parameters									
Chlordane (Total)	ug/g	<0.0020	5252027	<0.0020	0.0020	5252027	<0.0020	0.0020	5252027
o,p-DDD + p,p-DDD	ug/g	0.011	5252027	<0.0020	0.0020	5252027	0.060	0.020	5252027
o,p-DDE + p,p-DDE	ug/g	0.031	5252027	<0.0020	0.0020	5252027	0.14	0.020	5252027
o,p-DDT + p,p-DDT	ug/g	<0.0020	5252027	<0.0020	0.0020	5252027	<0.0040	0.0040	5252027
Total Endosulfan	ug/g	<0.0020	5252027	<0.0020	0.0020	5252027	<0.0030	0.0030	5252027
Total PCB	ug/g	<0.015	5252027	<0.015	0.015	5252027	<0.020	0.020	5252027
Pesticides & Herbicides									
Aldrin	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
a-Chlordane	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
g-Chlordane	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
o,p-DDD	ug/g	0.0028	5267348	<0.0020	0.0020	5265061	0.018	0.0020	5267348
p,p-DDD	ug/g	0.0079	5267348	<0.0020	0.0020	5265061	0.043	0.020	5267348
o,p-DDE	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0040	0.0040	5267348
p,p-DDE	ug/g	0.031	5267348	<0.0020	0.0020	5265061	0.14	0.020	5267348
o,p-DDT	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
p,p-DDT	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0040	0.0040	5267348
Dieldrin	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Lindane	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Endosulfan I (alpha)	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0030	0.0030	5267348
Endosulfan II (beta)	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Endrin	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Heptachlor	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Heptachlor epoxide	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Hexachlorobenzene	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Hexachlorobutadiene	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Hexachloroethane	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Methoxychlor	ug/g	<0.0050	5267348	<0.0050	0.0050	5265061	0.0061	0.0050	5267348
Aroclor 1242	ug/g	<0.015	5267348	<0.015	0.015	5265061	<0.020	0.020	5267348
Aroclor 1248	ug/g	<0.015	5267348	<0.015	0.015	5265061	<0.020	0.020	5267348
Aroclor 1254	ug/g	<0.015	5267348	<0.015	0.015	5265061	<0.020	0.020	5267348
Aroclor 1260	ug/g	<0.015	5267348	<0.015	0.015	5265061	<0.020	0.020	5267348
Surrogate Recovery (%)									
2,4,5,6-Tetrachloro-m-xylene	%	82	5267348	97		5265061	87		5267348

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO344		FMO345			FMO346		
Sampling Date		2017/11/06		2017/11/06			2017/11/06		
COC Number		na		na			na		
	UNITS	**BH203 S2**	**QC Batch**	**BH203 S3**	**RDL**	**QC Batch**	**BH204 S2**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	99	5267348	130		5265061	103		5267348

RDL = Reportable Detection Limit
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ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO347		FMO348		FMO349	FMO350	FMO351		
Sampling Date		2017/11/06		2017/11/06		2017/11/06	2017/11/06	2017/11/06		
COC Number		na		na		na	na	na		
	UNITS	**BH204 S3**	**QC Batch**	**BH205 S2**	**QC Batch**	**BH205 S3**	**BH206 S2**	**BH206 S3**	**RDL**	**QC Batch**
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020	5252027	<0.0020	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDD + p,p-DDD	ug/g	<0.0020	5252027	<0.0020	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDE + p,p-DDE	ug/g	<0.0020	5252027	0.0027	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDT + p,p-DDT	ug/g	<0.0020	5252027	<0.0020	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
Total Endosulfan	ug/g	<0.0020	5252027	<0.0020	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
Total PCB	ug/g	<0.015	5252027	<0.015	5252027	<0.015	<0.015	<0.015	0.015	5252027
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
a-Chlordane	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
g-Chlordane	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDD	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDD	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDE	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDE	ug/g	<0.0020	5265061	0.0027	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDT	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDT	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Dieldrin	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Lindane	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endosulfan I (alpha)	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endosulfan II (beta)	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endrin	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Heptachlor	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Heptachlor epoxide	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachlorobenzene	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachlorobutadiene	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachloroethane	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Methoxychlor	ug/g	<0.0050	5265061	<0.0050	5267348	<0.0050	<0.0050	<0.0050	0.0050	5265061
Aroclor 1242	ug/g	<0.015	5265061	<0.015	5267348	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1248	ug/g	<0.015	5265061	<0.015	5267348	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1254	ug/g	<0.015	5265061	<0.015	5267348	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1260	ug/g	<0.015	5265061	<0.015	5267348	<0.015	<0.015	<0.015	0.015	5265061
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	88	5265061	85	5267348	94	109	104		5265061

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO347		FMO348		FMO349	FMO350	FMO351		
Sampling Date		2017/11/06		2017/11/06		2017/11/06	2017/11/06	2017/11/06		
COC Number		na		na		na	na	na		
	UNITS	**BH204 S3**	**QC Batch**	**BH205 S2**	**QC Batch**	**BH205 S3**	**BH206 S2**	**BH206 S3**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	116	5265061	105	5267348	124	111	112		5265061

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO351	FMO352	FMO353	FMO354	FMO355		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na		
	UNITS	**BH206 S3 Lab-Dup**	**BH207 S2**	**BH207 S3**	**BH208 S2**	**BH208 S3**	**RDL**	**QC Batch**
Calculated Parameters								
Chlordane (Total)	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDD + p,p-DDD	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDE + p,p-DDE	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDT + p,p-DDT	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
Total Endosulfan	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
Total PCB	ug/g		<0.015	<0.015	<0.015	<0.015	0.015	5252027
Pesticides & Herbicides								
Aldrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
a-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
g-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Dieldrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Lindane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Heptachlor	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Heptachlor epoxide	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachlorobenzene	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachloroethane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Methoxychlor	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5265061
Aroclor 1242	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1248	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1254	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1260	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	5265061

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO351	FMO352	FMO353	FMO354	FMO355		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na		
	UNITS	**BH206 S3 Lab-Dup**	**BH207 S2**	**BH207 S3**	**BH208 S2**	**BH208 S3**	**RDL**	**QC Batch**
Surrogate Recovery (%)								
2,4,5,6-Tetrachloro-m-xylene	%	93	93	89	94	81		5265061
Decachlorobiphenyl	%	116	114	120	113	119		5265061

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

TEST SUMMARY

Maxxam ID: FMO340
Sample ID: BH201 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO341
Sample ID: BH201 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO342
Sample ID: BH202 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO343
Sample ID: BH202 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO344
Sample ID: BH203 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
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Sampler Initials: KM

TEST SUMMARY

Maxxam ID: FMO345 **Collected:** 2017/11/06
Sample ID: BH203 S3 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO346 **Collected:** 2017/11/06
Sample ID: BH204 S2 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO347 **Collected:** 2017/11/06
Sample ID: BH204 S3 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO348 **Collected:** 2017/11/06
Sample ID: BH205 S2 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO348 Dup **Collected:** 2017/11/06
Sample ID: BH205 S2 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang

Maxxam ID: FMO349 **Collected:** 2017/11/06
Sample ID: BH205 S3 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

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Sampler Initials: KM

TEST SUMMARY

Maxxam ID: FMO349
Sample ID: BH205 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO350
Sample ID: BH206 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO351
Sample ID: BH206 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO351 Dup
Sample ID: BH206 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang

Maxxam ID: FMO352
Sample ID: BH207 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO353
Sample ID: BH207 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

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Maxxam Job #: B7O8915
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exp Services Inc
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Site Location: BLAIR
Sampler Initials: KM

TEST SUMMARY

Maxxam ID: FMO354
Sample ID: BH208 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO355
Sample ID: BH208 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO356
Sample ID: TCLP
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide (WAD) in Leachates	SKAL/CN	5259514	N/A	2017/11/10	Xuanhong Qiu
Fluoride by ISE in Leachates	ISE	5259512	2017/11/10	2017/11/10	Surinder Rai
Mercury (TCLP Leachable) (mg/L)	CV/AA	5259413	N/A	2017/11/10	Ron Morrison
Total Metals in TCLP Leachate by ICPMS	ICP1/MS	5259435	2017/11/10	2017/11/10	Arefa Dabhad
Nitrate(NO3) + Nitrite(NO2) in Leachate	LACH	5259516	N/A	2017/11/10	Chandra Nandlal
Polychlorinated Biphenyl in Leachate	GC/ECD	5259459	2017/11/10	2017/11/10	Dawn Alarie
TCLP - % Solids	BAL	5257878	2017/11/09	2017/11/10	Jian (Ken) Wang
TCLP - Extraction Fluid		5257879	N/A	2017/11/10	Jian (Ken) Wang
TCLP - Initial and final pH	PH	5257881	N/A	2017/11/10	Jian (Ken) Wang
TCLP Zero Headspace Extraction		5256925	2017/11/09	2017/11/10	Walt Wang
VOCs in ZHE Leachates	GC/MS	5259176	2017/11/10	2017/11/10	Blair Gannon

Maxxam ID: FMO356 Dup
Sample ID: TCLP
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TCLP Zero Headspace Extraction		5256925	2017/11/09	2017/11/10	Walt Wang
VOCs in ZHE Leachates	GC/MS	5259176	2017/11/10	2017/11/10	Blair Gannon

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Sampler Initials: KM

GENERAL COMMENTS

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

Package 1	8.0°C

Cooler custody seal was present and intact.

OC Pesticide Analysis: Due to high concentrations of the target analytes, some samples required dilution. Detection limits were adjusted accordingly. Detection limits for some parameters were raised due to matrix interferences.

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

OC Pesticides (Selected) & PCB: Matrix spike recoveries were above the upper control limits. This may represent a high bias in some results for this specific analytes. For results that were not detected (ND), this potential bias has no impact.

Results relate only to the items tested.

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
5259176	Leachable 4-Bromofluorobenzene	2017/11/10	88	70 - 130	104	70 - 130	91	%				
5259176	Leachable D4-1,2-Dichloroethane	2017/11/10	115	70 - 130	94	70 - 130	115	%				
5259176	Leachable D8-Toluene	2017/11/10	107	70 - 130	106	70 - 130	92	%				
5259459	Leachable Decachlorobiphenyl	2017/11/10	102	30 - 130	97	30 - 130	95	%				
5265061	2,4,5,6-Tetrachloro-m-xylene	2017/11/15	110	50 - 130	102	50 - 130	91	%				
5265061	Decachlorobiphenyl	2017/11/15	127	50 - 130	116	50 - 130	124	%				
5267348	2,4,5,6-Tetrachloro-m-xylene	2017/11/16	91	50 - 130	92	50 - 130	81	%				
5267348	Decachlorobiphenyl	2017/11/16	115	50 - 130	124	50 - 130	102	%				
5257005	Moisture	2017/11/09							5.4	20		
5259176	Leachable 1,1-Dichloroethylene	2017/11/10	106	70 - 130	105	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable 1,2-Dichlorobenzene	2017/11/10	100	70 - 130	99	70 - 130	<0.050	mg/L	NC	30		
5259176	Leachable 1,2-Dichloroethane	2017/11/10	95	70 - 130	95	70 - 130	<0.050	mg/L	NC	30		
5259176	Leachable 1,4-Dichlorobenzene	2017/11/10	103	70 - 130	102	70 - 130	<0.050	mg/L	NC	30		
5259176	Leachable Benzene	2017/11/10	111	70 - 130	109	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Carbon Tetrachloride	2017/11/10	97	70 - 130	96	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Chlorobenzene	2017/11/10	101	70 - 130	99	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Chloroform	2017/11/10	97	70 - 130	96	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Methyl Ethyl Ketone (2-Butanone)	2017/11/10	97	60 - 140	97	60 - 140	<1.0	mg/L	NC	30		
5259176	Leachable Methylene Chloride(Dichloromethane)	2017/11/10	103	70 - 130	102	70 - 130	<0.20	mg/L	NC	30		
5259176	Leachable Tetrachloroethylene	2017/11/10	96	70 - 130	95	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Trichloroethylene	2017/11/10	98	70 - 130	97	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Vinyl Chloride	2017/11/10	95	70 - 130	93	70 - 130	<0.020	mg/L	NC	30		
5259413	Leachable Mercury (Hg)	2017/11/10	99	75 - 125	96	80 - 120	<0.0010	mg/L	NC	25	<0.0010	mg/L
5259435	Leachable Arsenic (As)	2017/11/10	101	80 - 120	102	80 - 120			NC	35	<0.2	mg/L
5259435	Leachable Barium (Ba)	2017/11/10	99	80 - 120	105	80 - 120			3.6	35	<0.2	mg/L
5259435	Leachable Boron (B)	2017/11/10	107	80 - 120	104	80 - 120			NC	35	<0.1	mg/L
5259435	Leachable Cadmium (Cd)	2017/11/10	105	80 - 120	105	80 - 120			NC	35	<0.05	mg/L
5259435	Leachable Chromium (Cr)	2017/11/10	100	80 - 120	103	80 - 120			NC	35	<0.1	mg/L
5259435	Leachable Lead (Pb)	2017/11/10	100	80 - 120	102	80 - 120			NC	35	<0.1	mg/L
5259435	Leachable Selenium (Se)	2017/11/10	102	80 - 120	105	80 - 120			NC	35	<0.1	mg/L

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
5259435	Leachable Silver (Ag)	2017/11/10	102	80 - 120	104	80 - 120			NC	35	<0.01	mg/L
5259435	Leachable Uranium (U)	2017/11/10	102	80 - 120	100	80 - 120			NC	35	<0.01	mg/L
5259459	Leachable Total PCB	2017/11/10	104	30 - 130	99	30 - 130	<3.0	ug/L	NC	40		
5259512	Leachable Fluoride (F-)	2017/11/10	98	80 - 120	98	80 - 120	<0.10	mg/L	24	25	<0.10	mg/L
5259514	Leachable WAD Cyanide (Free)	2017/11/10	96	80 - 120	100	80 - 120	<0.0020	mg/L	NC	20	<0.010	mg/L
5259516	Leachable Nitrate (N)	2017/11/10	112	80 - 120	106	80 - 120	<1.0	mg/L	NC	25	<1.0	mg/L
5259516	Leachable Nitrate + Nitrite (N)	2017/11/10	110	80 - 120	106	80 - 120	<1.0	mg/L	NC	25	<1.0	mg/L
5259516	Leachable Nitrite (N)	2017/11/10	105	80 - 120	102	80 - 120	<0.10	mg/L	NC	25	<0.10	mg/L
5265061	a-Chlordane	2017/11/15	137 (1)	50 - 130	100	50 - 130	<0.0020	ug/g	NC	40		
5265061	Aldrin	2017/11/15	100	50 - 130	91	50 - 130	<0.0020	ug/g	NC	40		
5265061	Aroclor 1242	2017/11/15					<0.015	ug/g	NC	40		
5265061	Aroclor 1248	2017/11/15					<0.015	ug/g	NC	40		
5265061	Aroclor 1254	2017/11/15					<0.015	ug/g	NC	40		
5265061	Aroclor 1260	2017/11/15					<0.015	ug/g	NC	40		
5265061	Dieldrin	2017/11/15	155 (1)	50 - 130	117	50 - 130	<0.0020	ug/g	NC	40		
5265061	Endosulfan I (alpha)	2017/11/15	128	50 - 130	102	50 - 130	<0.0020	ug/g	NC	40		
5265061	Endosulfan II (beta)	2017/11/15	146 (1)	50 - 130	105	50 - 130	<0.0020	ug/g	NC	40		
5265061	Endrin	2017/11/15	133 (1)	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40		
5265061	g-Chlordane	2017/11/15	129	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40		
5265061	Heptachlor epoxide	2017/11/15	129	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40		
5265061	Heptachlor	2017/11/15	93	50 - 130	93	50 - 130	<0.0020	ug/g	NC	40		
5265061	Hexachlorobenzene	2017/11/15	120	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40		
5265061	Hexachlorobutadiene	2017/11/15	85	50 - 130	96	50 - 130	<0.0020	ug/g	NC	40		
5265061	Hexachloroethane	2017/11/15	65	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40		
5265061	Lindane	2017/11/15	113	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40		
5265061	Methoxychlor	2017/11/15	172 (1)	50 - 130	105	50 - 130	<0.0050	ug/g	NC	40		
5265061	o,p-DDD	2017/11/15	148 (1)	50 - 130	110	50 - 130	<0.0020	ug/g	NC	40		
5265061	o,p-DDE	2017/11/15	102	50 - 130	99	50 - 130	<0.0020	ug/g	NC	40		
5265061	o,p-DDT	2017/11/15	126	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40		
5265061	p,p-DDD	2017/11/15	150 (1)	50 - 130	109	50 - 130	<0.0020	ug/g	NC	40		
5265061	p,p-DDE	2017/11/15	108	50 - 130	104	50 - 130	<0.0020	ug/g	NC	40		

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
5265061	p,p-DDT	2017/11/15	123	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40		
5267348	a-Chlordane	2017/11/16	117	50 - 130	114	50 - 130	<0.0020	ug/g	NC	40		
5267348	Aldrin	2017/11/16	88	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40		
5267348	Aroclor 1242	2017/11/16					<0.015	ug/g	NC	40		
5267348	Aroclor 1248	2017/11/16					<0.015	ug/g				
5267348	Aroclor 1254	2017/11/16					<0.015	ug/g				
5267348	Aroclor 1260	2017/11/16					<0.015	ug/g				
5267348	Dieldrin	2017/11/16	125	50 - 130	130 (2)	50 - 130	<0.0020	ug/g	NC	40		
5267348	Endosulfan I (alpha)	2017/11/16	124	50 - 130	133 (2)	50 - 130	<0.0020	ug/g	NC	40		
5267348	Endosulfan II (beta)	2017/11/16	125	50 - 130	122	50 - 130	<0.0020	ug/g	NC	40		
5267348	Endrin	2017/11/16	100	50 - 130	103	50 - 130	<0.0020	ug/g	NC	40		
5267348	g-Chlordane	2017/11/16	112	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5267348	Heptachlor epoxide	2017/11/16	101	50 - 130	104	50 - 130	<0.0020	ug/g	NC	40		
5267348	Heptachlor	2017/11/16	88	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40		
5267348	Hexachlorobenzene	2017/11/16	99	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40		
5267348	Hexachlorobutadiene	2017/11/16	98	50 - 130	105	50 - 130	<0.0020	ug/g	NC	40		
5267348	Hexachloroethane	2017/11/16	65	50 - 130	73	50 - 130	<0.0020	ug/g	NC	40		
5267348	Lindane	2017/11/16	86	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40		
5267348	Methoxychlor	2017/11/16	110	50 - 130	114	50 - 130	<0.0050	ug/g	NC	40		
5267348	o,p-DDD	2017/11/16	118	50 - 130	122	50 - 130	<0.0020	ug/g	NC	40		
5267348	o,p-DDE	2017/11/16	95	50 - 130	89	50 - 130	<0.0020	ug/g	NC	40		
5267348	o,p-DDT	2017/11/16	83	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40		
5267348	p,p-DDD	2017/11/16	113	50 - 130	121	50 - 130	<0.0020	ug/g	NC	40		
5267348	p,p-DDE	2017/11/16	107	50 - 130	102	50 - 130	<0.0020	ug/g	5.4	40		

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QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
5267348	p,p-DDT	2017/11/16	83	50 - 130	91	50 - 130	<0.0020	ug/g	1.3	40		

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.

Leachate Blank: A blank matrix containing all reagents used in the leaching procedure. Used to determine any process contamination.

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 (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) The 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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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

VALIDATION SIGNATURE PAGE

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

Cristina Carriere, Scientific Service 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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Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-G0
Site Location: Blair
Your C.O.C. #: 39772

Attention: Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
CANADA L8E 2W5

Report Date: 2018/06/27
Report #: R5268354
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F2998
Received: 2018/06/21, 16:30

Sample Matrix: Soil
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	2	N/A	2018/06/25		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Soil (1)	2	2018/06/22	2018/06/23	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	2	2018/06/25	2018/06/26	CAM SOP-00447	EPA 6020B m
Moisture	4	N/A	2018/06/22	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (2)	2	2018/06/25	2018/06/26	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	2	N/A	2018/06/23	CAM SOP-00307	EPA 8081/8082 m
Volatile Organic Compounds and F1 PHCs	2	N/A	2018/06/24	CAM SOP-00230	EPA 8260C 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.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(2) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Your Project #: HAM-00801245-G0
Site Location: Blair
Your C.O.C. #: 39772

Attention: Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
CANADA L8E 2W5

Report Date: 2018/06/27
Report #: R5268354
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F2998
Received: 2018/06/21, 16:30

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

==========

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 #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

RESULTS OF ANALYSES OF SOIL

Maxxam ID		HAH072		HAH073		HAH074		HAH075		
Sampling Date		2018/06/20 10:20		2018/06/20 10:40		2018/06/20 10:25		2018/06/20 10:45		
COC Number		39772		39772		39772		39772		
	UNITS	**BH107 SS1**	**QC Batch**	**BH107 SS4**	**QC Batch**	**BH701 SS1**	**QC Batch**	**BH701 SS4**	**RDL**	**QC Batch**
Inorganics										
Moisture	%	11	5594936	7.6	5594347	12	5594936	8.3	1.0	5594347

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		HAH072	HAH074		
Sampling Date		2018/06/20 10:20	2018/06/20 10:25		
COC Number		39772	39772		
	UNITS	**BH107 SS1**	**BH701 SS1**	**RDL**	**QC Batch**
Metals					
Acid Extractable Antimony (Sb)	ug/g	0.22	<0.20	0.20	5596887
Acid Extractable Arsenic (As)	ug/g	4.8	5.9	1.0	5596887
Acid Extractable Barium (Ba)	ug/g	160	130	0.50	5596887
Acid Extractable Beryllium (Be)	ug/g	0.67	0.69	0.20	5596887
Acid Extractable Boron (B)	ug/g	10	9.8	5.0	5596887
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.13	0.10	5596887
Acid Extractable Chromium (Cr)	ug/g	20	20	1.0	5596887
Acid Extractable Cobalt (Co)	ug/g	12	13	0.10	5596887
Acid Extractable Copper (Cu)	ug/g	35	35	0.50	5596887
Acid Extractable Lead (Pb)	ug/g	11	12	1.0	5596887
Acid Extractable Molybdenum (Mo)	ug/g	0.55	0.61	0.50	5596887
Acid Extractable Nickel (Ni)	ug/g	26	27	0.50	5596887
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	0.50	5596887
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	0.20	5596887
Acid Extractable Thallium (Tl)	ug/g	0.15	0.12	0.050	5596887
Acid Extractable Uranium (U)	ug/g	0.60	0.61	0.050	5596887
Acid Extractable Vanadium (V)	ug/g	28	29	5.0	5596887
Acid Extractable Zinc (Zn)	ug/g	62	62	5.0	5596887

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		HAH073	HAH075		
Sampling Date		2018/06/20 10:40	2018/06/20 10:45		
COC Number		39772	39772		
	UNITS	**BH107 SS4**	**BH701 SS4**	**RDL**	**QC Batch**
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	5592897
Volatile Organics					
Acetone (2-Propanone)	ug/g	<0.50	<0.50	0.50	5594579
Benzene	ug/g	<0.020	<0.020	0.020	5594579
Bromodichloromethane	ug/g	<0.050	<0.050	0.050	5594579
Bromoform	ug/g	<0.050	<0.050	0.050	5594579
Bromomethane	ug/g	<0.050	<0.050	0.050	5594579
Carbon Tetrachloride	ug/g	<0.050	<0.050	0.050	5594579
Chlorobenzene	ug/g	<0.050	<0.050	0.050	5594579
Chloroform	ug/g	<0.050	<0.050	0.050	5594579
Dibromochloromethane	ug/g	<0.050	<0.050	0.050	5594579
1,2-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5594579
1,3-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5594579
1,4-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5594579
Dichlorodifluoromethane (FREON 12)	ug/g	<0.050	<0.050	0.050	5594579
1,1-Dichloroethane	ug/g	<0.050	<0.050	0.050	5594579
1,2-Dichloroethane	ug/g	<0.050	<0.050	0.050	5594579
1,1-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5594579
cis-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5594579
trans-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5594579
1,2-Dichloropropane	ug/g	<0.050	<0.050	0.050	5594579
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	5594579
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	5594579
Ethylbenzene	ug/g	<0.020	<0.020	0.020	5594579
Ethylene Dibromide	ug/g	<0.050	<0.050	0.050	5594579
Hexane	ug/g	<0.050	<0.050	0.050	5594579
Methylene Chloride(Dichloromethane)	ug/g	<0.050	<0.050	0.050	5594579
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.50	<0.50	0.50	5594579
Methyl Isobutyl Ketone	ug/g	<0.50	<0.50	0.50	5594579
Methyl t-butyl ether (MTBE)	ug/g	<0.050	<0.050	0.050	5594579
Styrene	ug/g	<0.050	<0.050	0.050	5594579
1,1,1,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	5594579
1,1,2,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	5594579

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		HAH073	HAH075		
Sampling Date		2018/06/20 10:40	2018/06/20 10:45		
COC Number		39772	39772		
	UNITS	**BH107 SS4**	**BH701 SS4**	**RDL**	**QC Batch**
Tetrachloroethylene	ug/g	<0.050	<0.050	0.050	5594579
Toluene	ug/g	<0.020	<0.020	0.020	5594579
1,1,1-Trichloroethane	ug/g	<0.050	<0.050	0.050	5594579
1,1,2-Trichloroethane	ug/g	<0.050	<0.050	0.050	5594579
Trichloroethylene	ug/g	<0.050	<0.050	0.050	5594579
Trichlorofluoromethane (FREON 11)	ug/g	<0.050	<0.050	0.050	5594579
Vinyl Chloride	ug/g	<0.020	<0.020	0.020	5594579
p+m-Xylene	ug/g	<0.020	<0.020	0.020	5594579
o-Xylene	ug/g	<0.020	<0.020	0.020	5594579
Total Xylenes	ug/g	<0.020	<0.020	0.020	5594579
F1 (C6-C10)	ug/g	<10	<10	10	5594579
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	5594579
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	95	95		5594579
D10-o-Xylene	%	112	113		5594579
D4-1,2-Dichloroethane	%	96	98		5594579
D8-Toluene	%	104	103		5594579

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		HAH073	HAH075		
Sampling Date		2018/06/20 10:40	2018/06/20 10:45		
COC Number		39772	39772		
	UNITS	**BH107 SS4**	**BH701 SS4**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	5594430
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	5594430
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	5594430
Reached Baseline at C50	ug/g	Yes	Yes		5594430
Surrogate Recovery (%)					
o-Terphenyl	%	92	91		5594430

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		HAH072	HAH074		
Sampling Date		2018/06/20 10:20	2018/06/20 10:25		
COC Number		39772	39772		
	UNITS	**BH107 SS1**	**BH701 SS1**	**RDL**	**QC Batch**
Calculated Parameters					
Chlordane (Total)	ug/g	<0.0020	<0.0020	0.0020	5592217
o,p-DDD + p,p-DDD	ug/g	<0.0020	<0.0020	0.0020	5592217
o,p-DDE + p,p-DDE	ug/g	<0.0020	<0.0020	0.0020	5592217
o,p-DDT + p,p-DDT	ug/g	<0.0020	<0.0020	0.0020	5592217
Total Endosulfan	ug/g	<0.0020	<0.0020	0.0020	5592217
Total PCB	ug/g	<0.015	<0.015	0.015	5592217
Pesticides & Herbicides					
Aldrin	ug/g	<0.0020	<0.0020	0.0020	5596865
a-Chlordane	ug/g	<0.0020	<0.0020	0.0020	5596865
g-Chlordane	ug/g	<0.0020	<0.0020	0.0020	5596865
o,p-DDD	ug/g	<0.0020	<0.0020	0.0020	5596865
p,p-DDD	ug/g	<0.0020	<0.0020	0.0020	5596865
o,p-DDE	ug/g	<0.0020	<0.0020	0.0020	5596865
p,p-DDE	ug/g	<0.0020	<0.0020	0.0020	5596865
o,p-DDT	ug/g	<0.0020	<0.0020	0.0020	5596865
p,p-DDT	ug/g	<0.0020	<0.0020	0.0020	5596865
Dieldrin	ug/g	<0.0020	<0.0020	0.0020	5596865
Lindane	ug/g	<0.0020	<0.0020	0.0020	5596865
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	0.0020	5596865
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	0.0020	5596865
Endrin	ug/g	<0.0020	<0.0020	0.0020	5596865
Heptachlor	ug/g	<0.0020	<0.0020	0.0020	5596865
Heptachlor epoxide	ug/g	<0.0020	<0.0020	0.0020	5596865
Hexachlorobenzene	ug/g	<0.0020	<0.0020	0.0020	5596865
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	0.0020	5596865
Hexachloroethane	ug/g	<0.0020	<0.0020	0.0020	5596865
Methoxychlor	ug/g	<0.0050	<0.0050	0.0050	5596865
Aroclor 1242	ug/g	<0.015	<0.015	0.015	5596865
Aroclor 1248	ug/g	<0.015	<0.015	0.015	5596865
Aroclor 1254	ug/g	<0.015	<0.015	0.015	5596865
Aroclor 1260	ug/g	<0.015	<0.015	0.015	5596865
Surrogate Recovery (%)					
2,4,5,6-Tetrachloro-m-xylene	%	78	78		5596865

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B8F2998
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exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		HAH072	HAH074		
Sampling Date		2018/06/20 10:20	2018/06/20 10:25		
COC Number		39772	39772		
	UNITS	**BH107 SS1**	**BH701 SS1**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	101	94		5596865

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: HAH072
Sample ID: BH107 SS1
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5596887	2018/06/25	2018/06/26	Viviana Canzonieri
Moisture	BAL	5594936	N/A	2018/06/22	Gargi Gireesh
OC Pesticides (Selected) & PCB	GC/ECD	5596865	2018/06/25	2018/06/26	Li Peng
OC Pesticides Summed Parameters	CALC	5592217	N/A	2018/06/23	Automated Statchk

Maxxam ID: HAH073
Sample ID: BH107 SS4
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5592897	N/A	2018/06/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5594430	2018/06/22	2018/06/23	Zhiyue (Frank) Zhu
Moisture	BAL	5594347	N/A	2018/06/22	Gargi Gireesh
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5594579	N/A	2018/06/24	Anna Gabrielyan

Maxxam ID: HAH074
Sample ID: BH701 SS1
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5596887	2018/06/25	2018/06/26	Viviana Canzonieri
Moisture	BAL	5594936	N/A	2018/06/22	Gargi Gireesh
OC Pesticides (Selected) & PCB	GC/ECD	5596865	2018/06/25	2018/06/26	Li Peng
OC Pesticides Summed Parameters	CALC	5592217	N/A	2018/06/23	Automated Statchk

Maxxam ID: HAH075
Sample ID: BH701 SS4
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5592897	N/A	2018/06/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5594430	2018/06/22	2018/06/23	Zhiyue (Frank) Zhu
Moisture	BAL	5594347	N/A	2018/06/22	Gargi Gireesh
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5594579	N/A	2018/06/24	Anna Gabrielyan

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
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GENERAL COMMENTS

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

Package 1	1.7°C

Results relate only to the items tested.

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5594430	o-Terphenyl	2018/06/23	96	60 - 130	92	60 - 130	91	%		
5594579	4-Bromofluorobenzene	2018/06/23	102	60 - 140	97	60 - 140	95	%		
5594579	D10-o-Xylene	2018/06/23	112	60 - 130	89	60 - 130	109	%		
5594579	D4-1,2-Dichloroethane	2018/06/23	109	60 - 140	101	60 - 140	99	%		
5594579	D8-Toluene	2018/06/23	97	60 - 140	104	60 - 140	102	%		
5596865	2,4,5,6-Tetrachloro-m-xylene	2018/06/25	75	50 - 130	79	50 - 130	67	%		
5596865	Decachlorobiphenyl	2018/06/25	112	50 - 130	109	50 - 130	95	%		
5594347	Moisture	2018/06/22							2.2	20
5594430	F2 (C10-C16 Hydrocarbons)	2018/06/23	100	50 - 130	96	80 - 120	<10	ug/g	NC	30
5594430	F3 (C16-C34 Hydrocarbons)	2018/06/23	94	50 - 130	88	80 - 120	<50	ug/g	NC	30
5594430	F4 (C34-C50 Hydrocarbons)	2018/06/23	87	50 - 130	83	80 - 120	<50	ug/g	NC	30
5594579	1,1,1,2-Tetrachloroethane	2018/06/23	100	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	1,1,1-Trichloroethane	2018/06/23	115	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
5594579	1,1,2,2-Tetrachloroethane	2018/06/23	95	60 - 140	93	60 - 130	<0.050	ug/g	NC	50
5594579	1,1,2-Trichloroethane	2018/06/23	105	60 - 140	101	60 - 130	<0.050	ug/g	NC	50
5594579	1,1-Dichloroethane	2018/06/23	118	60 - 140	101	60 - 130	<0.050	ug/g	NC	50
5594579	1,1-Dichloroethylene	2018/06/23	120	60 - 140	101	60 - 130	<0.050	ug/g	NC	50
5594579	1,2-Dichlorobenzene	2018/06/23	93	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	1,2-Dichloroethane	2018/06/23	113	60 - 140	99	60 - 130	<0.050	ug/g	NC	50
5594579	1,2-Dichloropropane	2018/06/23	118	60 - 140	101	60 - 130	<0.050	ug/g	NC	50
5594579	1,3-Dichlorobenzene	2018/06/23	98	60 - 140	97	60 - 130	<0.050	ug/g	NC	50
5594579	1,4-Dichlorobenzene	2018/06/23	97	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
5594579	Acetone (2-Propanone)	2018/06/23	112	60 - 140	93	60 - 140	<0.50	ug/g	NC	50
5594579	Benzene	2018/06/23	118	60 - 140	99	60 - 130	<0.020	ug/g	NC	50
5594579	Bromodichloromethane	2018/06/23	107	60 - 140	93	60 - 130	<0.050	ug/g	NC	50
5594579	Bromoform	2018/06/23	86	60 - 140	83	60 - 130	<0.050	ug/g	NC	50
5594579	Bromomethane	2018/06/23	112	60 - 140	96	60 - 140	<0.050	ug/g	NC	50
5594579	Carbon Tetrachloride	2018/06/23	113	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Chlorobenzene	2018/06/23	103	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Chloroform	2018/06/23	114	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
5594579	cis-1,2-Dichloroethylene	2018/06/23	111	60 - 140	95	60 - 130	<0.050	ug/g	NC	50

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5594579	cis-1,3-Dichloropropene	2018/06/23	104	60 - 140	90	60 - 130	<0.030	ug/g	NC	50
5594579	Dibromochloromethane	2018/06/23	94	60 - 140	90	60 - 130	<0.050	ug/g	NC	50
5594579	Dichlorodifluoromethane (FREON 12)	2018/06/23	107	60 - 140	91	60 - 140	<0.050	ug/g	NC	50
5594579	Ethylbenzene	2018/06/23	108	60 - 140	100	60 - 130	<0.020	ug/g	NC	50
5594579	Ethylene Dibromide	2018/06/23	98	60 - 140	94	60 - 130	<0.050	ug/g	NC	50
5594579	F1 (C6-C10) - BTEX	2018/06/23					<10	ug/g	NC	30
5594579	F1 (C6-C10)	2018/06/23	100	60 - 140	85	80 - 120	<10	ug/g	NC	30
5594579	Hexane	2018/06/23	120	60 - 140	100	60 - 130	<0.050	ug/g	NC	50
5594579	Methyl Ethyl Ketone (2-Butanone)	2018/06/23	109	60 - 140	92	60 - 140	<0.50	ug/g	NC	50
5594579	Methyl Isobutyl Ketone	2018/06/23	104	60 - 140	90	60 - 130	<0.50	ug/g	NC	50
5594579	Methyl t-butyl ether (MTBE)	2018/06/23	112	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Methylene Chloride(Dichloromethane)	2018/06/23	116	60 - 140	100	60 - 130	<0.050	ug/g	NC	50
5594579	o-Xylene	2018/06/23	106	60 - 140	98	60 - 130	<0.020	ug/g	NC	50
5594579	p+m-Xylene	2018/06/23	105	60 - 140	96	60 - 130	<0.020	ug/g	NC	50
5594579	Styrene	2018/06/23	103	60 - 140	95	60 - 130	<0.050	ug/g	NC	50
5594579	Tetrachloroethylene	2018/06/23	104	60 - 140	96	60 - 130	<0.050	ug/g	3.0	50
5594579	Toluene	2018/06/23	104	60 - 140	97	60 - 130	<0.020	ug/g	NC	50
5594579	Total Xylenes	2018/06/23					<0.020	ug/g	NC	50
5594579	trans-1,2-Dichloroethylene	2018/06/23	116	60 - 140	99	60 - 130	<0.050	ug/g	NC	50
5594579	trans-1,3-Dichloropropene	2018/06/23	96	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
5594579	Trichloroethylene	2018/06/23	114	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Trichlorofluoromethane (FREON 11)	2018/06/23	112	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Vinyl Chloride	2018/06/23	119	60 - 140	100	60 - 130	<0.020	ug/g	NC	50
5594936	Moisture	2018/06/22							1.9	20
5596865	a-Chlordane	2018/06/25	76	50 - 130	77	50 - 130	<0.0020	ug/g	NC	40
5596865	Aldrin	2018/06/25	70	50 - 130	72	50 - 130	<0.0020	ug/g	NC	40
5596865	Aroclor 1242	2018/06/25					<0.015	ug/g	200 (1)	40
5596865	Aroclor 1248	2018/06/25					<0.015	ug/g		
5596865	Aroclor 1254	2018/06/25					<0.015	ug/g		
5596865	Aroclor 1260	2018/06/25					<0.015	ug/g		
5596865	Dieldrin	2018/06/25	70	50 - 130	75	50 - 130	<0.0020	ug/g	NC	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5596865	Endosulfan I (alpha)	2018/06/25	56	50 - 130	58	50 - 130	<0.0020	ug/g	NC	40
5596865	Endosulfan II (beta)	2018/06/25	63	50 - 130	66	50 - 130	<0.0020	ug/g	NC	40
5596865	Endrin	2018/06/25	61	50 - 130	67	50 - 130	<0.0020	ug/g	NC	40
5596865	g-Chlordane	2018/06/25	67	50 - 130	72	50 - 130	<0.0020	ug/g	NC	40
5596865	Heptachlor epoxide	2018/06/25	67	50 - 130	62	50 - 130	<0.0020	ug/g	NC	40
5596865	Heptachlor	2018/06/25	75	50 - 130	74	50 - 130	<0.0020	ug/g	NC	40
5596865	Hexachlorobenzene	2018/06/25	83	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40
5596865	Hexachlorobutadiene	2018/06/25	91	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40
5596865	Hexachloroethane	2018/06/25	73	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
5596865	Lindane	2018/06/25	62	50 - 130	70	50 - 130	<0.0020	ug/g	NC	40
5596865	Methoxychlor	2018/06/25	79	50 - 130	85	50 - 130	<0.0050	ug/g	NC	40
5596865	o,p-DDD	2018/06/25	80	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40
5596865	o,p-DDE	2018/06/25	94	50 - 130	69	50 - 130	<0.0020	ug/g	NC	40
5596865	o,p-DDT	2018/06/25	84	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
5596865	p,p-DDD	2018/06/25	63	50 - 130	68	50 - 130	<0.0020	ug/g	NC	40
5596865	p,p-DDE	2018/06/25	82	50 - 130	74	50 - 130	<0.0020	ug/g	NC	40
5596865	p,p-DDT	2018/06/25	80	50 - 130	81	50 - 130	<0.0020	ug/g	NC	40
5596887	Acid Extractable Antimony (Sb)	2018/06/26	88	75 - 125	103	80 - 120	<0.20	ug/g	13	30
5596887	Acid Extractable Arsenic (As)	2018/06/26	98	75 - 125	106	80 - 120	<1.0	ug/g	5.2	30
5596887	Acid Extractable Barium (Ba)	2018/06/26	NC	75 - 125	103	80 - 120	<0.50	ug/g	1.1	30
5596887	Acid Extractable Beryllium (Be)	2018/06/26	101	75 - 125	101	80 - 120	<0.20	ug/g	0.75	30
5596887	Acid Extractable Boron (B)	2018/06/26	93	75 - 125	97	80 - 120	<5.0	ug/g	2.7	30
5596887	Acid Extractable Cadmium (Cd)	2018/06/26	101	75 - 125	103	80 - 120	<0.10	ug/g	NC	30
5596887	Acid Extractable Chromium (Cr)	2018/06/26	102	75 - 125	102	80 - 120	<1.0	ug/g	1.2	30
5596887	Acid Extractable Cobalt (Co)	2018/06/26	98	75 - 125	104	80 - 120	<0.10	ug/g	0.90	30
5596887	Acid Extractable Copper (Cu)	2018/06/26	NC	75 - 125	103	80 - 120	<0.50	ug/g	4.2	30
5596887	Acid Extractable Lead (Pb)	2018/06/26	97	75 - 125	105	80 - 120	<1.0	ug/g	1.0	30
5596887	Acid Extractable Molybdenum (Mo)	2018/06/26	97	75 - 125	100	80 - 120	<0.50	ug/g	9.0	30
5596887	Acid Extractable Nickel (Ni)	2018/06/26	NC	75 - 125	104	80 - 120	<0.50	ug/g	0.45	30
5596887	Acid Extractable Selenium (Se)	2018/06/26	102	75 - 125	106	80 - 120	<0.50	ug/g	NC	30
5596887	Acid Extractable Silver (Ag)	2018/06/26	99	75 - 125	103	80 - 120	<0.20	ug/g	NC	30

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Maxxam Job #: B8F2998
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QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5596887	Acid Extractable Thallium (Tl)	2018/06/26	99	75 - 125	106	80 - 120	<0.050	ug/g	0.74	30
5596887	Acid Extractable Uranium (U)	2018/06/26	100	75 - 125	103	80 - 120	<0.050	ug/g	2.1	30
5596887	Acid Extractable Vanadium (V)	2018/06/26	NC	75 - 125	104	80 - 120	<5.0	ug/g	0.19	30
5596887	Acid Extractable Zinc (Zn)	2018/06/26	NC	75 - 125	104	80 - 120	<5.0	ug/g	0.78	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 (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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exp Services Inc
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Sampler Initials: KP

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 Service Specialist

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Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-G0
Site Location: Blair
Your C.O.C. #: 670515-01-01

Attention: Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
CANADA L8E 2W5

Report Date: 2018/07/04
Report #: R5279996
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F9367
Received: 2018/06/27, 16:25

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	4	N/A	2018/07/03		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Water (1)	4	2018/06/29	2018/07/03	CAM SOP-00316	CCME PHC-CWS m
Dissolved Metals by ICPMS	4	N/A	2018/07/03	CAM SOP-00447	EPA 6020B m
OC Pesticides (Selected) & PCB (2)	4	2018/06/29	2018/07/01	CAM SOP-00307	EPA 8081A/8082B m
OC Pesticides Summed Parameters	4	N/A	2018/07/03	CAM SOP-00307	EPA 8081A/8082B m
Volatile Organic Compounds and F1 PHCs	5	N/A	2018/06/30	CAM SOP-00230	EPA 8260C 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.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(2) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Your Project #: HAM-00801245-G0
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80 Bancroft St
Hamilton, ON
CANADA L8E 2W5

Report Date: 2018/07/04
Report #: R5279996
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CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F9367
Received: 2018/06/27, 16:25

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

==========

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Metals							
Dissolved Antimony (Sb)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5603788
Dissolved Arsenic (As)	ug/L	13	1.3	3.9	13	1.0	5603788
Dissolved Barium (Ba)	ug/L	690	260	48	690	2.0	5603788
Dissolved Beryllium (Be)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5603788
Dissolved Boron (B)	ug/L	130	320	5000	130	10	5603788
Dissolved Cadmium (Cd)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	5603788
Dissolved Chromium (Cr)	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	5603788
Dissolved Cobalt (Co)	ug/L	3.6	0.55	<0.50	3.6	0.50	5603788
Dissolved Copper (Cu)	ug/L	<1.0	1.5	<1.0	<1.0	1.0	5603788
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5603788
Dissolved Molybdenum (Mo)	ug/L	1.2	22	59	1.2	0.50	5603788
Dissolved Nickel (Ni)	ug/L	3.7	3.1	2.3	3.8	1.0	5603788
Dissolved Selenium (Se)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	5603788
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	5603788
Dissolved Thallium (Tl)	ug/L	<0.050	<0.050	0.052	<0.050	0.050	5603788
Dissolved Uranium (U)	ug/L	2.5	42	5.1	2.5	0.10	5603788
Dissolved Vanadium (V)	ug/L	0.99	1.8	1.4	0.97	0.50	5603788
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	5603788

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5603227
Volatile Organics							
Acetone (2-Propanone)	ug/L	<10	<10	24	<10	10	5600881
Benzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Bromodichloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Bromoform	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	5600881
Bromomethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Carbon Tetrachloride	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Chlorobenzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Chloroform	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Dibromochloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	5600881
1,1-Dichloroethane	ug/L	<0.20	<0.20	0.22	<0.20	0.20	5600881
1,2-Dichloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	<0.30	0.30	5600881
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	5600881
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Ethylene Dibromide	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Hexane	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	5600881
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	5600881
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	<10	<10	10	5600881
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	5600881
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Styrene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Tetrachloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Toluene	ug/L	<0.20	<0.20	0.28	<0.20	0.20	5600881
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
p+m-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
o-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Total Xylenes	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
F1 (C6-C10)	ug/L	<25	<25	<25	<25	25	5600881
F1 (C6-C10) - BTEX	ug/L	<25	<25	<25	<25	25	5600881
Surrogate Recovery (%)							
4-Bromofluorobenzene	%	95	96	95	97		5600881
D4-1,2-Dichloroethane	%	100	103	102	102		5600881
D8-Toluene	%	99	100	101	99		5600881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (WATER)

Maxxam ID		HBQ664		
Sampling Date		2018/06/26		
COC Number		670515-01-01		
	UNITS	**TRIP SPIKE**	**RDL**	**QC Batch**
Volatile Organics				
Acetone (2-Propanone)	ug/L	90	10	5600881
Benzene	ug/L	90	0.20	5600881
Bromodichloromethane	ug/L	85	0.50	5600881
Bromoform	ug/L	80	1.0	5600881
Bromomethane	ug/L	90	0.50	5600881
Carbon Tetrachloride	ug/L	90	0.20	5600881
Chlorobenzene	ug/L	85	0.20	5600881
Chloroform	ug/L	90	0.20	5600881
Dibromochloromethane	ug/L	80	0.50	5600881
1,2-Dichlorobenzene	ug/L	85	0.50	5600881
1,3-Dichlorobenzene	ug/L	80	0.50	5600881
1,4-Dichlorobenzene	ug/L	75	0.50	5600881
Dichlorodifluoromethane (FREON 12)	ug/L	90	1.0	5600881
1,1-Dichloroethane	ug/L	95	0.20	5600881
1,2-Dichloroethane	ug/L	90	0.50	5600881
1,1-Dichloroethylene	ug/L	95	0.20	5600881
cis-1,2-Dichloroethylene	ug/L	90	0.50	5600881
trans-1,2-Dichloroethylene	ug/L	90	0.50	5600881
1,2-Dichloropropane	ug/L	90	0.20	5600881
cis-1,3-Dichloropropene	ug/L	60	0.30	5600881
trans-1,3-Dichloropropene	ug/L	60	0.40	5600881
Ethylbenzene	ug/L	85	0.20	5600881
Ethylene Dibromide	ug/L	90	0.20	5600881
Hexane	ug/L	50	1.0	5600881
Methylene Chloride(Dichloromethane)	ug/L	100	2.0	5600881
Methyl Ethyl Ketone (2-Butanone)	ug/L	80	10	5600881
Methyl Isobutyl Ketone	ug/L	75	5.0	5600881
Methyl t-butyl ether (MTBE)	ug/L	95	0.50	5600881
Styrene	ug/L	80	0.50	5600881
1,1,1,2-Tetrachloroethane	ug/L	85	0.50	5600881
1,1,2,2-Tetrachloroethane	ug/L	85	0.50	5600881
Tetrachloroethylene	ug/L	85	0.20	5600881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (WATER)

Maxxam ID		HBQ664		
Sampling Date		2018/06/26		
COC Number		670515-01-01		
	UNITS	**TRIP SPIKE**	**RDL**	**QC Batch**
Toluene	ug/L	85	0.20	5600881
1,1,1-Trichloroethane	ug/L	90	0.20	5600881
1,1,2-Trichloroethane	ug/L	90	0.50	5600881
Trichloroethylene	ug/L	90	0.20	5600881
Trichlorofluoromethane (FREON 11)	ug/L	95	0.50	5600881
Vinyl Chloride	ug/L	90	0.20	5600881
p+m-Xylene	ug/L	75	0.20	5600881
o-Xylene	ug/L	85	0.20	5600881
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	97		5600881
D4-1,2-Dichloroethane	%	101		5600881
D8-Toluene	%	101		5600881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Site Location: Blair
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PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	<100	<100	100	5605863
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	<200	<200	200	5605863
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	<200	<200	200	5605863
Reached Baseline at C50	ug/L	Yes	Yes	Yes	Yes		5605863
Surrogate Recovery (%)							
o-Terphenyl	%	95	94	90	90		5605863

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
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Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Calculated Parameters							
Chlordane (Total)	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
o,p-DDD + p,p-DDD	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
o,p-DDE + p,p-DDE	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
o,p-DDT + p,p-DDT	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
Total Endosulfan	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
Total PCB	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5603187
Pesticides & Herbicides							
Aldrin	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Dieldrin	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
a-Chlordane	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
g-Chlordane	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
o,p-DDD	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
p,p-DDD	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
o,p-DDE	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
p,p-DDE	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
o,p-DDT	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
p,p-DDT	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Lindane	ug/L	<0.003	<0.003	<0.003	<0.003	0.003	5605830
Endosulfan I (alpha)	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Endosulfan II (beta)	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Endrin	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Heptachlor	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Heptachlor epoxide	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Hexachlorobenzene	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Hexachlorobutadiene	ug/L	<0.009	<0.009	<0.009	<0.009	0.009	5605830
Hexachloroethane	ug/L	<0.01	<0.01	<0.01	<0.01	0.01	5605830
Methoxychlor	ug/L	<0.01	<0.01	<0.01	<0.01	0.01	5605830
Aroclor 1242	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5605830
Aroclor 1248	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5605830
Aroclor 1254	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5605830
Aroclor 1260	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5605830
Surrogate Recovery (%)							
2,4,5,6-Tetrachloro-m-xylene	%	71	68	65	69		5605830

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	110	95	91	91		5605830

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: HBQ660
Sample ID: MW101
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5603227	N/A	2018/07/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5605863	2018/06/29	2018/07/03	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	5603788	N/A	2018/07/03	Arefa Dabhad
OC Pesticides (Selected) & PCB	GC/ECD	5605830	2018/06/29	2018/07/01	Li Peng
OC Pesticides Summed Parameters	CALC	5603187	N/A	2018/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

Maxxam ID: HBQ661
Sample ID: MW102
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5603227	N/A	2018/07/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5605863	2018/06/29	2018/07/03	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	5603788	N/A	2018/07/03	Arefa Dabhad
OC Pesticides (Selected) & PCB	GC/ECD	5605830	2018/06/29	2018/07/01	Li Peng
OC Pesticides Summed Parameters	CALC	5603187	N/A	2018/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

Maxxam ID: HBQ662
Sample ID: MW107
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5603227	N/A	2018/07/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5605863	2018/06/29	2018/07/03	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	5603788	N/A	2018/07/03	Arefa Dabhad
OC Pesticides (Selected) & PCB	GC/ECD	5605830	2018/06/29	2018/07/01	Li Peng
OC Pesticides Summed Parameters	CALC	5603187	N/A	2018/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

Maxxam ID: HBQ663
Sample ID: MW111
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5603227	N/A	2018/07/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5605863	2018/06/29	2018/07/03	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	5603788	N/A	2018/07/03	Arefa Dabhad
OC Pesticides (Selected) & PCB	GC/ECD	5605830	2018/06/29	2018/07/01	Li Peng
OC Pesticides Summed Parameters	CALC	5603187	N/A	2018/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: HBQ664
Sample ID: TRIP SPIKE
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

GENERAL COMMENTS

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

Package 1	4.3°C

Sample HBQ664 [TRIP SPIKE] : VOCF1 Analysis: Trip Spike results are expressed as percent recoveries.

Results relate only to the items tested.

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5600881	4-Bromofluorobenzene	2018/06/30	100	70 - 130	100	70 - 130	96	%		
5600881	D4-1,2-Dichloroethane	2018/06/30	101	70 - 130	100	70 - 130	99	%		
5600881	D8-Toluene	2018/06/30	100	70 - 130	101	70 - 130	101	%		
5605830	2,4,5,6-Tetrachloro-m-xylene	2018/06/30	62	50 - 130	51	50 - 130	50	%		
5605830	Decachlorobiphenyl	2018/06/30	104	50 - 130	95	50 - 130	100	%		
5605863	o-Terphenyl	2018/07/03	100	60 - 130	94	60 - 130	92	%		
5600881	1,1,1,2-Tetrachloroethane	2018/06/30	93	70 - 130	91	70 - 130	<0.50	ug/L	NC	30
5600881	1,1,1-Trichloroethane	2018/06/30	99	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
5600881	1,1,2,2-Tetrachloroethane	2018/06/30	92	70 - 130	93	70 - 130	<0.50	ug/L	NC	30
5600881	1,1,2-Trichloroethane	2018/06/30	95	70 - 130	94	70 - 130	<0.50	ug/L	NC	30
5600881	1,1-Dichloroethane	2018/06/30	101	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
5600881	1,1-Dichloroethylene	2018/06/30	102	70 - 130	99	70 - 130	<0.20	ug/L	NC	30
5600881	1,2-Dichlorobenzene	2018/06/30	92	70 - 130	90	70 - 130	<0.50	ug/L	NC	30
5600881	1,2-Dichloroethane	2018/06/30	99	70 - 130	97	70 - 130	<0.50	ug/L	NC	30
5600881	1,2-Dichloropropane	2018/06/30	97	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
5600881	1,3-Dichlorobenzene	2018/06/30	93	70 - 130	89	70 - 130	<0.50	ug/L	NC	30
5600881	1,4-Dichlorobenzene	2018/06/30	95	70 - 130	91	70 - 130	<0.50	ug/L	NC	30
5600881	Acetone (2-Propanone)	2018/06/30	104	60 - 140	118	60 - 140	<10	ug/L	NC	30
5600881	Benzene	2018/06/30	98	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
5600881	Bromodichloromethane	2018/06/30	95	70 - 130	92	70 - 130	<0.50	ug/L	NC	30
5600881	Bromoform	2018/06/30	92	70 - 130	91	70 - 130	<1.0	ug/L	NC	30
5600881	Bromomethane	2018/06/30	86	60 - 140	84	60 - 140	<0.50	ug/L	NC	30
5600881	Carbon Tetrachloride	2018/06/30	100	70 - 130	97	70 - 130	<0.20	ug/L	NC	30
5600881	Chlorobenzene	2018/06/30	92	70 - 130	89	70 - 130	<0.20	ug/L	NC	30
5600881	Chloroform	2018/06/30	98	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
5600881	cis-1,2-Dichloroethylene	2018/06/30	99	70 - 130	97	70 - 130	<0.50	ug/L	NC	30
5600881	cis-1,3-Dichloropropene	2018/06/30	78	70 - 130	77	70 - 130	<0.30	ug/L	NC	30
5600881	Dibromochloromethane	2018/06/30	90	70 - 130	88	70 - 130	<0.50	ug/L	NC	30
5600881	Dichlorodifluoromethane (FREON 12)	2018/06/30	94	60 - 140	93	60 - 140	<1.0	ug/L	NC	30
5600881	Ethylbenzene	2018/06/30	92	70 - 130	89	70 - 130	<0.20	ug/L	NC	30
5600881	Ethylene Dibromide	2018/06/30	96	70 - 130	96	70 - 130	<0.20	ug/L	NC	30

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5600881	F1 (C6-C10) - BTEX	2018/06/30					<25	ug/L	NC	30
5600881	F1 (C6-C10)	2018/06/30	93	60 - 140	99	60 - 140	<25	ug/L	NC	30
5600881	Hexane	2018/06/30	95	70 - 130	93	70 - 130	<1.0	ug/L	NC	30
5600881	Methyl Ethyl Ketone (2-Butanone)	2018/06/30	95	60 - 140	103	60 - 140	<10	ug/L	NC	30
5600881	Methyl Isobutyl Ketone	2018/06/30	90	70 - 130	92	70 - 130	<5.0	ug/L	NC	30
5600881	Methyl t-butyl ether (MTBE)	2018/06/30	101	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
5600881	Methylene Chloride(Dichloromethane)	2018/06/30	107	70 - 130	104	70 - 130	<2.0	ug/L	NC	30
5600881	o-Xylene	2018/06/30	93	70 - 130	90	70 - 130	<0.20	ug/L	NC	30
5600881	p+m-Xylene	2018/06/30	89	70 - 130	86	70 - 130	<0.20	ug/L	NC	30
5600881	Styrene	2018/06/30	89	70 - 130	89	70 - 130	<0.50	ug/L	NC	30
5600881	Tetrachloroethylene	2018/06/30	96	70 - 130	92	70 - 130	<0.20	ug/L	NC	30
5600881	Toluene	2018/06/30	93	70 - 130	90	70 - 130	<0.20	ug/L	NC	30
5600881	Total Xylenes	2018/06/30					<0.20	ug/L	NC	30
5600881	trans-1,2-Dichloroethylene	2018/06/30	101	70 - 130	96	70 - 130	<0.50	ug/L	NC	30
5600881	trans-1,3-Dichloropropene	2018/06/30	77	70 - 130	76	70 - 130	<0.40	ug/L	NC	30
5600881	Trichloroethylene	2018/06/30	99	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
5600881	Trichlorofluoromethane (FREON 11)	2018/06/30	105	70 - 130	103	70 - 130	<0.50	ug/L	NC	30
5600881	Vinyl Chloride	2018/06/30	100	70 - 130	93	70 - 130	<0.20	ug/L	NC	30
5603788	Dissolved Antimony (Sb)	2018/07/03	106	80 - 120	102	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Arsenic (As)	2018/07/03	102	80 - 120	100	80 - 120	<1.0	ug/L	NC	20
5603788	Dissolved Barium (Ba)	2018/07/03	105	80 - 120	99	80 - 120	<2.0	ug/L	1.8	20
5603788	Dissolved Beryllium (Be)	2018/07/03	99	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Boron (B)	2018/07/03	101	80 - 120	96	80 - 120	<10	ug/L	1.1	20
5603788	Dissolved Cadmium (Cd)	2018/07/03	97	80 - 120	101	80 - 120	<0.10	ug/L	NC	20
5603788	Dissolved Chromium (Cr)	2018/07/03	101	80 - 120	97	80 - 120	<5.0	ug/L	NC	20
5603788	Dissolved Cobalt (Co)	2018/07/03	103	80 - 120	103	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Copper (Cu)	2018/07/03	106	80 - 120	102	80 - 120	<1.0	ug/L	NC	20
5603788	Dissolved Lead (Pb)	2018/07/03	89	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Molybdenum (Mo)	2018/07/03	115	80 - 120	104	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Nickel (Ni)	2018/07/03	96	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
5603788	Dissolved Selenium (Se)	2018/07/03	98	80 - 120	102	80 - 120	<2.0	ug/L	NC	20

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5603788	Dissolved Silver (Ag)	2018/07/03	92	80 - 120	98	80 - 120	<0.10	ug/L	NC	20
5603788	Dissolved Thallium (Tl)	2018/07/03	89	80 - 120	99	80 - 120	<0.050	ug/L	NC	20
5603788	Dissolved Uranium (U)	2018/07/03	93	80 - 120	100	80 - 120	<0.10	ug/L	0	20
5603788	Dissolved Vanadium (V)	2018/07/03	107	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Zinc (Zn)	2018/07/03	90	80 - 120	101	80 - 120	<5.0	ug/L	NC	20
5605830	a-Chlordane	2018/06/30	98	50 - 130	85	50 - 130	<0.005	ug/L		
5605830	Aldrin	2018/06/30	79	50 - 130	71	50 - 130	<0.005	ug/L		
5605830	Aroclor 1242	2018/06/30					<0.05	ug/L	200 (1)	30
5605830	Aroclor 1248	2018/06/30					<0.05	ug/L		
5605830	Aroclor 1254	2018/06/30					<0.05	ug/L		
5605830	Aroclor 1260	2018/06/30					<0.05	ug/L		
5605830	Dieldrin	2018/06/30	112	50 - 130	97	50 - 130	<0.005	ug/L		
5605830	Endosulfan I (alpha)	2018/06/30	99	50 - 130	89	50 - 130	<0.005	ug/L		
5605830	Endosulfan II (beta)	2018/06/30	100	50 - 130	88	50 - 130	<0.005	ug/L		
5605830	Endrin	2018/06/30	98	50 - 130	84	50 - 130	<0.005	ug/L		
5605830	g-Chlordane	2018/06/30	94	50 - 130	82	50 - 130	<0.005	ug/L		
5605830	Heptachlor epoxide	2018/06/30	103	50 - 130	84	50 - 130	<0.005	ug/L		
5605830	Heptachlor	2018/06/30	76	50 - 130	68	50 - 130	<0.005	ug/L		
5605830	Hexachlorobenzene	2018/06/30	92	50 - 130	85	50 - 130	<0.005	ug/L		
5605830	Hexachlorobutadiene	2018/06/30	78	50 - 130	73	50 - 130	<0.009	ug/L		
5605830	Hexachloroethane	2018/06/30	65	50 - 130	61	50 - 130	<0.01	ug/L		
5605830	Lindane	2018/06/30	84	50 - 130	74	50 - 130	<0.003	ug/L		
5605830	Methoxychlor	2018/06/30	100	50 - 130	90	50 - 130	<0.01	ug/L		
5605830	o,p-DDD	2018/06/30	112	50 - 130	95	50 - 130	<0.005	ug/L		
5605830	o,p-DDE	2018/06/30	94	50 - 130	82	50 - 130	<0.005	ug/L		
5605830	o,p-DDT	2018/06/30	96	50 - 130	82	50 - 130	<0.005	ug/L	NC	30
5605830	p,p-DDD	2018/06/30	105	50 - 130	89	50 - 130	<0.005	ug/L		
5605830	p,p-DDE	2018/06/30	98	50 - 130	85	50 - 130	<0.005	ug/L		
5605830	p,p-DDT	2018/06/30	89	50 - 130	77	50 - 130	<0.005	ug/L	NC	30
5605863	F2 (C10-C16 Hydrocarbons)	2018/07/03	NC	50 - 130	92	60 - 130	<100	ug/L	NC	30
5605863	F3 (C16-C34 Hydrocarbons)	2018/07/03	NC	50 - 130	93	60 - 130	<200	ug/L	NC	30

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5605863	F4 (C34-C50 Hydrocarbons)	2018/07/03	102	50 - 130	86	60 - 130	<200	ug/L	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 (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

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 Service 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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Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your C.O.C. #: 700832-01-01

Attention: David Mably

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/01/28
Report #: R5573960
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B920220
Received: 2019/01/23, 15:15

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	4	N/A	2019/01/25		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Soil (1)	4	2019/01/24	2019/01/25	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	4	2019/01/25	2019/01/25	CAM SOP-00447	EPA 6020B m
Moisture	4	N/A	2019/01/24	CAM SOP-00445	Carter 2nd ed 51.2 m
Volatile Organic Compounds and F1 PHCs	1	N/A	2019/01/24	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds and F1 PHCs	3	N/A	2019/01/25	CAM SOP-00230	EPA 8260C 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

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. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

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 #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your C.O.C. #: 700832-01-01

Attention: David Mably

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/01/28
Report #: R5573960
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B920220
Received: 2019/01/23, 15:15

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Tanya Fidlin, Project Manager
Email: tfidlin@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 #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

O.REG 153 ICPMS METALS (SOIL)

Maxxam ID		IVD623	IVD624	IVD626	IVD628		
Sampling Date		2019/01/22 11:00	2019/01/22 11:00	2019/01/22 13:30	2019/01/22 16:00		
COC Number		700832-01-01	700832-01-01	700832-01-01	700832-01-01		
	UNITS	BH301-SS1	BH301-SS11	BH302-SS1	BH303-SS1	RDL	QC Batch
Metals							
Acid Extractable Antimony (Sb)	ug/g	0.24	0.21	0.33	0.27	0.20	5945600
Acid Extractable Arsenic (As)	ug/g	7.8	10	13	7.7	1.0	5945600
Acid Extractable Barium (Ba)	ug/g	97	83	100	94	0.50	5945600
Acid Extractable Beryllium (Be)	ug/g	0.83	0.63	0.74	0.80	0.20	5945600
Acid Extractable Boron (B)	ug/g	7.9	6.0	6.2	6.9	5.0	5945600
Acid Extractable Cadmium (Cd)	ug/g	0.19	0.23	0.29	0.25	0.10	5945600
Acid Extractable Chromium (Cr)	ug/g	24	18	20	23	1.0	5945600
Acid Extractable Cobalt (Co)	ug/g	12	9.8	11	13	0.10	5945600
Acid Extractable Copper (Cu)	ug/g	32	25	23	26	0.50	5945600
Acid Extractable Lead (Pb)	ug/g	30	43	57	32	1.0	5945600
Acid Extractable Molybdenum (Mo)	ug/g	0.71	0.76	0.66	0.67	0.50	5945600
Acid Extractable Nickel (Ni)	ug/g	26	20	20	25	0.50	5945600
Acid Extractable Selenium (Se)	ug/g	ND	ND	ND	ND	0.50	5945600
Acid Extractable Silver (Ag)	ug/g	ND	ND	ND	ND	0.20	5945600
Acid Extractable Thallium (Tl)	ug/g	0.17	0.14	0.14	0.15	0.050	5945600
Acid Extractable Uranium (U)	ug/g	0.73	0.65	0.89	0.57	0.050	5945600
Acid Extractable Vanadium (V)	ug/g	34	29	31	33	5.0	5945600
Acid Extractable Zinc (Zn)	ug/g	72	63	78	83	5.0	5945600

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Maxxam ID		IVD625	IVD627	IVD629	IVD630		
Sampling Date		2019/01/22 11:00	2019/01/22 13:30	2019/01/22 16:00	2019/01/22 16:00		
COC Number		700832-01-01	700832-01-01	700832-01-01	700832-01-01		
	UNITS	BH301-SS4	BH302-SS4	BH303-SS4	BH303-SS44	RDL	QC Batch
Inorganics							
Moisture	%	13	11	16	18	1.0	5943826
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/g	ND	ND	ND	ND	0.050	5941727
Volatile Organics							
Acetone (2-Propanone)	ug/g	ND	ND	ND	ND	0.50	5944584
Benzene	ug/g	ND	ND	ND	ND	0.020	5944584
Bromodichloromethane	ug/g	ND	ND	ND	ND	0.050	5944584
Bromoform	ug/g	ND	ND	ND	ND	0.050	5944584
Bromomethane	ug/g	ND	ND	ND	ND	0.050	5944584
Carbon Tetrachloride	ug/g	ND	ND	ND	ND	0.050	5944584
Chlorobenzene	ug/g	ND	ND	ND	ND	0.050	5944584
Chloroform	ug/g	ND	ND	ND	ND	0.050	5944584
Dibromochloromethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,2-Dichlorobenzene	ug/g	ND	ND	ND	ND	0.050	5944584
1,3-Dichlorobenzene	ug/g	ND	ND	ND	ND	0.050	5944584
1,4-Dichlorobenzene	ug/g	ND	ND	ND	ND	0.050	5944584
Dichlorodifluoromethane (FREON 12)	ug/g	ND	ND	ND	ND	0.050	5944584
1,1-Dichloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,2-Dichloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,1-Dichloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
cis-1,2-Dichloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
trans-1,2-Dichloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
1,2-Dichloropropane	ug/g	ND	ND	ND	ND	0.050	5944584
cis-1,3-Dichloropropene	ug/g	ND	ND	ND	ND	0.030	5944584
trans-1,3-Dichloropropene	ug/g	ND	ND	ND	ND	0.040	5944584
Ethylbenzene	ug/g	ND	ND	ND	ND	0.020	5944584
Ethylene Dibromide	ug/g	ND	ND	ND	ND	0.050	5944584
Hexane	ug/g	ND	ND	ND	ND	0.050	5944584
Methylene Chloride(Dichloromethane)	ug/g	ND	ND	ND	ND	0.050	5944584
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	ND	ND	ND	0.50	5944584

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Maxxam ID		IVD625	IVD627	IVD629	IVD630		
Sampling Date		2019/01/22 11:00	2019/01/22 13:30	2019/01/22 16:00	2019/01/22 16:00		
COC Number		700832-01-01	700832-01-01	700832-01-01	700832-01-01		
	UNITS	BH301-SS4	BH302-SS4	BH303-SS4	BH303-SS44	RDL	QC Batch
Methyl Isobutyl Ketone	ug/g	ND	ND	ND	ND	0.50	5944584
Methyl t-butyl ether (MTBE)	ug/g	ND	ND	ND	ND	0.050	5944584
Styrene	ug/g	ND	ND	ND	ND	0.050	5944584
1,1,1,2-Tetrachloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,1,2,2-Tetrachloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
Tetrachloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
Toluene	ug/g	ND	ND	ND	ND	0.020	5944584
1,1,1-Trichloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,1,2-Trichloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
Trichloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
Trichlorofluoromethane (FREON 11)	ug/g	ND	ND	ND	ND	0.050	5944584
Vinyl Chloride	ug/g	ND	ND	ND	ND	0.020	5944584
p+m-Xylene	ug/g	ND	ND	ND	ND	0.020	5944584
o-Xylene	ug/g	ND	ND	ND	ND	0.020	5944584
Total Xylenes	ug/g	ND	ND	ND	ND	0.020	5944584
F1 (C6-C10)	ug/g	ND	ND	ND	ND	10	5944584
F1 (C6-C10) - BTEX	ug/g	ND	ND	ND	ND	10	5944584
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	ND	ND	10	5945270
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	ND	ND	50	5945270
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND	ND	50	5945270
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		5945270
Surrogate Recovery (%)							
o-Terphenyl	%	89	92	93	92		5945270
4-Bromofluorobenzene	%	91	92	91	89		5944584
D10-o-Xylene	%	119	113	110	119		5944584
D4-1,2-Dichloroethane	%	100	99	100	100		5944584
D8-Toluene	%	103	103	103	104		5944584

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

TEST SUMMARY

Maxxam ID: IVD623 **Collected:** 2019/01/22
Sample ID: BH301-SS1 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5945600	2019/01/25	2019/01/25	Daniel Teclu

Maxxam ID: IVD624 **Collected:** 2019/01/22
Sample ID: BH301-SS11 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5945600	2019/01/25	2019/01/25	Daniel Teclu

Maxxam ID: IVD625 **Collected:** 2019/01/22
Sample ID: BH301-SS4 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5941727	N/A	2019/01/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5945270	2019/01/24	2019/01/25	Prabhjot Gulati
Moisture	BAL	5943826	N/A	2019/01/24	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5944584	N/A	2019/01/24	Yang (Philip) Yu

Maxxam ID: IVD626 **Collected:** 2019/01/22
Sample ID: BH302-SS1 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5945600	2019/01/25	2019/01/25	Daniel Teclu

Maxxam ID: IVD627 **Collected:** 2019/01/22
Sample ID: BH302-SS4 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5941727	N/A	2019/01/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5945270	2019/01/24	2019/01/25	Prabhjot Gulati
Moisture	BAL	5943826	N/A	2019/01/24	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5944584	N/A	2019/01/25	Yang (Philip) Yu

Maxxam ID: IVD628 **Collected:** 2019/01/22
Sample ID: BH303-SS1 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5945600	2019/01/25	2019/01/25	Daniel Teclu

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 #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

TEST SUMMARY

Maxxam ID: IVD629
Sample ID: BH303-SS4
Matrix: Soil

Collected: 2019/01/22
Shipped:
Received: 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5941727	N/A	2019/01/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5945270	2019/01/24	2019/01/25	Prabhjot Gulati
Moisture	BAL	5943826	N/A	2019/01/24	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5944584	N/A	2019/01/25	Yang (Philip) Yu

Maxxam ID: IVD630
Sample ID: BH303-SS44
Matrix: Soil

Collected: 2019/01/22
Shipped:
Received: 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5941727	N/A	2019/01/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5945270	2019/01/24	2019/01/25	Prabhjot Gulati
Moisture	BAL	5943826	N/A	2019/01/24	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5944584	N/A	2019/01/25	Yang (Philip) Yu

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 #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

GENERAL COMMENTS

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

Package 1	2.0°C

Cooler custody seal was present and intact.

Results relate only to the items tested.

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 #: B920220
Report Date: 2019/01/28

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5944584	4-Bromofluorobenzene	2019/01/24	95	60 - 140	95	60 - 140	91	%		
5944584	D10-o-Xylene	2019/01/24	117	60 - 130	101	60 - 130	102	%		
5944584	D4-1,2-Dichloroethane	2019/01/24	98	60 - 140	98	60 - 140	99	%		
5944584	D8-Toluene	2019/01/24	107	60 - 140	106	60 - 140	104	%		
5945270	o-Terphenyl	2019/01/25	96	60 - 130	98	60 - 130	98	%		
5943826	Moisture	2019/01/24							0	20
5944584	1,1,1,2-Tetrachloroethane	2019/01/24	98	60 - 140	94	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1,1-Trichloroethane	2019/01/24	94	60 - 140	94	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1,2,2-Tetrachloroethane	2019/01/24	101	60 - 140	97	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1,2-Trichloroethane	2019/01/24	112	60 - 140	107	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1-Dichloroethane	2019/01/24	108	60 - 140	108	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1-Dichloroethylene	2019/01/24	110	60 - 140	110	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,2-Dichlorobenzene	2019/01/24	100	60 - 140	97	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,2-Dichloroethane	2019/01/24	96	60 - 140	96	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,2-Dichloropropane	2019/01/24	107	60 - 140	106	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,3-Dichlorobenzene	2019/01/24	103	60 - 140	98	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,4-Dichlorobenzene	2019/01/24	102	60 - 140	98	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Acetone (2-Propanone)	2019/01/24	99	60 - 140	90	60 - 140	ND, RDL=0.50	ug/g	NC	50
5944584	Benzene	2019/01/24	103	60 - 140	104	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	Bromodichloromethane	2019/01/24	91	60 - 140	90	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Bromoform	2019/01/24	87	60 - 140	83	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Bromomethane	2019/01/24	121	60 - 140	121	60 - 140	ND, RDL=0.050	ug/g	NC	50
5944584	Carbon Tetrachloride	2019/01/24	93	60 - 140	94	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Chlorobenzene	2019/01/24	99	60 - 140	96	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Chloroform	2019/01/24	99	60 - 140	100	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	cis-1,2-Dichloroethylene	2019/01/24	97	60 - 140	97	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	cis-1,3-Dichloropropene	2019/01/24	96	60 - 140	95	60 - 130	ND, RDL=0.030	ug/g	NC	50
5944584	Dibromochloromethane	2019/01/24	94	60 - 140	89	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Dichlorodifluoromethane (FREON 12)	2019/01/24	101	60 - 140	105	60 - 140	ND, RDL=0.050	ug/g	NC	50
5944584	Ethylbenzene	2019/01/24	104	60 - 140	101	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	Ethylene Dibromide	2019/01/24	97	60 - 140	93	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	F1 (C6-C10) - BTEX	2019/01/24					ND, RDL=10	ug/g	NC	30

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Maxxam Job #: B920220
Report Date: 2019/01/28

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5944584	F1 (C6-C10)	2019/01/24	94	60 - 140	97	80 - 120	ND, RDL=10	ug/g	NC	30
5944584	Hexane	2019/01/24	113	60 - 140	113	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Methyl Ethyl Ketone (2-Butanone)	2019/01/24	101	60 - 140	93	60 - 140	ND, RDL=0.50	ug/g	NC	50
5944584	Methyl Isobutyl Ketone	2019/01/24	95	60 - 140	89	60 - 130	ND, RDL=0.50	ug/g	NC	50
5944584	Methyl t-butyl ether (MTBE)	2019/01/24	96	60 - 140	96	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Methylene Chloride(Dichloromethane)	2019/01/24	100	60 - 140	100	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	o-Xylene	2019/01/24	102	60 - 140	98	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	p+m-Xylene	2019/01/24	100	60 - 140	96	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	Styrene	2019/01/24	97	60 - 140	93	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Tetrachloroethylene	2019/01/24	100	60 - 140	100	60 - 130	ND, RDL=0.050	ug/g	1.8	50
5944584	Toluene	2019/01/24	102	60 - 140	100	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	Total Xylenes	2019/01/24					ND, RDL=0.020	ug/g	NC	50
5944584	trans-1,2-Dichloroethylene	2019/01/24	102	60 - 140	102	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	trans-1,3-Dichloropropene	2019/01/24	104	60 - 140	98	60 - 130	ND, RDL=0.040	ug/g	NC	50
5944584	Trichloroethylene	2019/01/24	95	60 - 140	96	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Trichlorofluoromethane (FREON 11)	2019/01/24	111	60 - 140	111	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Vinyl Chloride	2019/01/24	113	60 - 140	124	60 - 130	ND, RDL=0.020	ug/g	NC	50
5945270	F2 (C10-C16 Hydrocarbons)	2019/01/25	92	50 - 130	94	80 - 120	ND, RDL=10	ug/g	NC	30
5945270	F3 (C16-C34 Hydrocarbons)	2019/01/25	91	50 - 130	92	80 - 120	ND, RDL=50	ug/g	NC	30
5945270	F4 (C34-C50 Hydrocarbons)	2019/01/25	93	50 - 130	95	80 - 120	ND, RDL=50	ug/g	NC	30
5945600	Acid Extractable Antimony (Sb)	2019/01/25	91	75 - 125	97	80 - 120	ND, RDL=0.20	ug/g	18	30
5945600	Acid Extractable Arsenic (As)	2019/01/25	102	75 - 125	101	80 - 120	ND, RDL=1.0	ug/g	0.71	30
5945600	Acid Extractable Barium (Ba)	2019/01/25	NC	75 - 125	98	80 - 120	ND, RDL=0.50	ug/g	6.4	30
5945600	Acid Extractable Beryllium (Be)	2019/01/25	105	75 - 125	96	80 - 120	ND, RDL=0.20	ug/g	1.4	30
5945600	Acid Extractable Boron (B)	2019/01/25	98	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	6.1	30
5945600	Acid Extractable Cadmium (Cd)	2019/01/25	103	75 - 125	97	80 - 120	ND, RDL=0.10	ug/g	NC	30
5945600	Acid Extractable Chromium (Cr)	2019/01/25	NC	75 - 125	100	80 - 120	ND, RDL=1.0	ug/g	4.9	30
5945600	Acid Extractable Cobalt (Co)	2019/01/25	109	75 - 125	99	80 - 120	ND, RDL=0.10	ug/g	3.0	30
5945600	Acid Extractable Copper (Cu)	2019/01/25	NC	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	6.4	30
5945600	Acid Extractable Lead (Pb)	2019/01/25	102	75 - 125	99	80 - 120	ND, RDL=1.0	ug/g	16	30
5945600	Acid Extractable Molybdenum (Mo)	2019/01/25	101	75 - 125	95	80 - 120	ND, RDL=0.50	ug/g	NC	30
5945600	Acid Extractable Nickel (Ni)	2019/01/25	NC	75 - 125	106	80 - 120	ND, RDL=0.50	ug/g	4.5	30

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Maxxam Job #: B920220
Report Date: 2019/01/28

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5945600	Acid Extractable Selenium (Se)	2019/01/25	98	75 - 125	95	80 - 120	ND, RDL=0.50	ug/g	NC	30
5945600	Acid Extractable Silver (Ag)	2019/01/25	103	75 - 125	98	80 - 120	ND, RDL=0.20	ug/g	NC	30
5945600	Acid Extractable Thallium (Tl)	2019/01/25	100	75 - 125	97	80 - 120	ND, RDL=0.050	ug/g	23	30
5945600	Acid Extractable Uranium (U)	2019/01/25	103	75 - 125	96	80 - 120	ND, RDL=0.050	ug/g	1.2	30
5945600	Acid Extractable Vanadium (V)	2019/01/25	NC	75 - 125	99	80 - 120	ND, RDL=5.0	ug/g	6.6	30
5945600	Acid Extractable Zinc (Zn)	2019/01/25	NC	75 - 125	119	80 - 120	ND, RDL=5.0	ug/g	4.4	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 (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

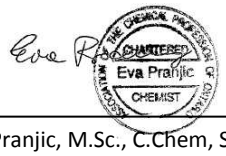
Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

VALIDATION SIGNATURE PAGE

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



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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Maxxam
A Bureau Veritas Group Company

Your P.O. #: BRM-ENV
Your Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your C.O.C. #: 700817-01-01

Attention: David Mably

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/02/05
Report #: R5583593
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B927806
Received: 2019/01/31, 16:23

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	1	N/A	2019/02/04		EPA 8260C m
1,3-Dichloropropene Sum	4	N/A	2019/02/05		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2019/02/02	2019/02/02	CAM SOP-00316	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2019/02/02	2019/02/03	CAM SOP-00316	CCME PHC-CWS m
Dissolved Metals by ICPMS	3	N/A	2019/02/05	CAM SOP-00447	EPA 6020B m
Volatile Organic Compounds and F1 PHCs	4	N/A	2019/02/04	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds in Water	1	N/A	2019/02/02	CAM SOP-00228	EPA 8260C 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

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. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

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 P.O. #: BRM-ENV
Your Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your C.O.C. #: 700817-01-01

Attention: David Mably

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/02/05
Report #: R5583593
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B927806
Received: 2019/01/31, 16:23

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Tanya Fidlin, Project Manager
Email: tfidlin@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.

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 DISSOLVED ICPMS METALS (WATER)

Maxxam ID		IWS213	IWS213	IWS215	IWS217		
Sampling Date		2019/01/31 10:00	2019/01/31 10:00	2019/01/31 10:30	2019/01/31 10:30		
COC Number		700817-01-01	700817-01-01	700817-01-01	700817-01-01		
	UNITS	MW301	MW301 Lab-Dup	MW303	MW3033	RDL	QC Batch
Metals							
Dissolved Antimony (Sb)	ug/L	ND	ND	ND	ND	0.50	5957789
Dissolved Arsenic (As)	ug/L	1.6	1.5	1.0	ND	1.0	5957789
Dissolved Barium (Ba)	ug/L	240	240	430	430	2.0	5957789
Dissolved Beryllium (Be)	ug/L	ND	ND	ND	ND	0.50	5957789
Dissolved Boron (B)	ug/L	1900	1900	260	260	10	5957789
Dissolved Cadmium (Cd)	ug/L	ND	ND	ND	ND	0.10	5957789
Dissolved Chromium (Cr)	ug/L	ND	ND	ND	ND	5.0	5957789
Dissolved Cobalt (Co)	ug/L	0.65	0.68	1.9	1.9	0.50	5957789
Dissolved Copper (Cu)	ug/L	2.8	3.0	1.0	5.1	1.0	5957789
Dissolved Lead (Pb)	ug/L	ND	ND	ND	ND	0.50	5957789
Dissolved Molybdenum (Mo)	ug/L	3.7	3.7	12	13	0.50	5957789
Dissolved Nickel (Ni)	ug/L	1.6	1.5	5.4	6.5	1.0	5957789
Dissolved Selenium (Se)	ug/L	ND	ND	ND	ND	2.0	5957789
Dissolved Silver (Ag)	ug/L	ND	ND	ND	ND	0.10	5957789
Dissolved Thallium (Tl)	ug/L	ND	ND	0.11	0.095	0.050	5957789
Dissolved Uranium (U)	ug/L	5.6	5.4	8.3	8.3	0.10	5957789
Dissolved Vanadium (V)	ug/L	ND	ND	1.8	1.6	0.50	5957789
Dissolved Zinc (Zn)	ug/L	6.3	6.1	ND	6.5	5.0	5957789

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Maxxam ID		IWS213	IWS214	IWS215	IWS216		
Sampling Date		2019/01/31 10:00	2019/01/31 11:30	2019/01/31 10:30	2019/01/31 10:00		
COC Number		700817-01-01	700817-01-01	700817-01-01	700817-01-01		
	UNITS	MW301	MW302	MW303	MW3011	RDL	QC Batch
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND	ND	ND	0.50	5954696
Volatile Organics							
Acetone (2-Propanone)	ug/L	ND	ND	25	ND	10	5956017
Benzene	ug/L	ND	ND	ND	ND	0.20	5956017
Bromodichloromethane	ug/L	ND	ND	ND	ND	0.50	5956017
Bromoform	ug/L	ND	ND	ND	ND	1.0	5956017
Bromomethane	ug/L	ND	ND	ND	ND	0.50	5956017
Carbon Tetrachloride	ug/L	ND	ND	ND	ND	0.20	5956017
Chlorobenzene	ug/L	ND	ND	ND	ND	0.20	5956017
Chloroform	ug/L	ND	ND	0.22	ND	0.20	5956017
Dibromochloromethane	ug/L	ND	ND	ND	ND	0.50	5956017
1,2-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	5956017
1,3-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	5956017
1,4-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	5956017
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	ND	ND	1.0	5956017
1,1-Dichloroethane	ug/L	ND	ND	ND	ND	0.20	5956017
1,2-Dichloroethane	ug/L	ND	ND	ND	ND	0.50	5956017
1,1-Dichloroethylene	ug/L	ND	ND	ND	ND	0.20	5956017
cis-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	0.50	5956017
trans-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	0.50	5956017
1,2-Dichloropropane	ug/L	ND	ND	ND	ND	0.20	5956017
cis-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	0.30	5956017
trans-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	0.40	5956017
Ethylbenzene	ug/L	ND	ND	ND	ND	0.20	5956017
Ethylene Dibromide	ug/L	ND	ND	ND	ND	0.20	5956017
Hexane	ug/L	ND	ND	ND	ND	1.0	5956017
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	ND	ND	2.0	5956017
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	ND	ND	10	5956017
Methyl Isobutyl Ketone	ug/L	ND	ND	ND	ND	5.0	5956017

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Maxxam ID		IWS213	IWS214	IWS215	IWS216		
Sampling Date		2019/01/31 10:00	2019/01/31 11:30	2019/01/31 10:30	2019/01/31 10:00		
COC Number		700817-01-01	700817-01-01	700817-01-01	700817-01-01		
	UNITS	MW301	MW302	MW303	MW3011	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	ND	ND	0.50	5956017
Styrene	ug/L	ND	ND	ND	ND	0.50	5956017
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	0.50	5956017
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	0.50	5956017
Tetrachloroethylene	ug/L	ND	ND	ND	ND	0.20	5956017
Toluene	ug/L	ND	ND	ND	ND	0.20	5956017
1,1,1-Trichloroethane	ug/L	ND	ND	ND	ND	0.20	5956017
1,1,2-Trichloroethane	ug/L	ND	ND	ND	ND	0.50	5956017
Trichloroethylene	ug/L	ND	ND	ND	ND	0.20	5956017
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	ND	ND	0.50	5956017
Vinyl Chloride	ug/L	ND	ND	ND	ND	0.20	5956017
p+m-Xylene	ug/L	ND	ND	ND	ND	0.20	5956017
o-Xylene	ug/L	ND	ND	ND	ND	0.20	5956017
Total Xylenes	ug/L	ND	ND	ND	ND	0.20	5956017
F1 (C6-C10)	ug/L	ND	ND	ND	ND	25	5956017
F1 (C6-C10) - BTEX	ug/L	ND	ND	ND	ND	25	5956017
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/L	ND	ND	ND	ND	100	5957968
F3 (C16-C34 Hydrocarbons)	ug/L	ND	ND	ND	ND	200	5957968
F4 (C34-C50 Hydrocarbons)	ug/L	ND	ND	ND	ND	200	5957968
Reached Baseline at C50	ug/L	Yes	Yes	Yes	Yes		5957968
Surrogate Recovery (%)							
o-Terphenyl	%	109	108	110	109		5957968
4-Bromofluorobenzene	%	98	98	97	98		5956017
D4-1,2-Dichloroethane	%	105	108	106	107		5956017
D8-Toluene	%	99	98	99	98		5956017

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 VOCS BY HS (WATER)

Maxxam ID		IWS218		
Sampling Date		2019/01/31		
COC Number		700817-01-01		
	UNITS	TRIP BLANK LOT 3515	RDL	QC Batch
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/L	ND	0.50	5954696
Volatile Organics				
Acetone (2-Propanone)	ug/L	ND	10	5956241
Benzene	ug/L	ND	0.20	5956241
Bromodichloromethane	ug/L	ND	0.50	5956241
Bromoform	ug/L	ND	1.0	5956241
Bromomethane	ug/L	ND	0.50	5956241
Carbon Tetrachloride	ug/L	ND	0.20	5956241
Chlorobenzene	ug/L	ND	0.20	5956241
Chloroform	ug/L	ND	0.20	5956241
Dibromochloromethane	ug/L	ND	0.50	5956241
1,2-Dichlorobenzene	ug/L	ND	0.50	5956241
1,3-Dichlorobenzene	ug/L	ND	0.50	5956241
1,4-Dichlorobenzene	ug/L	ND	0.50	5956241
Dichlorodifluoromethane (FREON 12)	ug/L	ND	1.0	5956241
1,1-Dichloroethane	ug/L	ND	0.20	5956241
1,2-Dichloroethane	ug/L	ND	0.50	5956241
1,1-Dichloroethylene	ug/L	ND	0.20	5956241
cis-1,2-Dichloroethylene	ug/L	ND	0.50	5956241
trans-1,2-Dichloroethylene	ug/L	ND	0.50	5956241
1,2-Dichloropropane	ug/L	ND	0.20	5956241
cis-1,3-Dichloropropene	ug/L	ND	0.30	5956241
trans-1,3-Dichloropropene	ug/L	ND	0.40	5956241
Ethylbenzene	ug/L	ND	0.20	5956241
Ethylene Dibromide	ug/L	ND	0.20	5956241
Hexane	ug/L	ND	1.0	5956241
Methylene Chloride(Dichloromethane)	ug/L	ND	2.0	5956241
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	10	5956241
Methyl Isobutyl Ketone	ug/L	ND	5.0	5956241

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 VOCS BY HS (WATER)

Maxxam ID		IWS218		
Sampling Date		2019/01/31		
COC Number		700817-01-01		
	UNITS	**TRIP BLANK LOT 3515**	**RDL**	**QC Batch**
Methyl t-butyl ether (MTBE)	ug/L	ND	0.50	5956241
Styrene	ug/L	ND	0.50	5956241
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	5956241
1,1,2,2-Tetrachloroethane	ug/L	ND	0.50	5956241
Tetrachloroethylene	ug/L	ND	0.20	5956241
Toluene	ug/L	ND	0.20	5956241
1,1,1-Trichloroethane	ug/L	ND	0.20	5956241
1,1,2-Trichloroethane	ug/L	ND	0.50	5956241
Trichloroethylene	ug/L	ND	0.20	5956241
Trichlorofluoromethane (FREON 11)	ug/L	ND	0.50	5956241
Vinyl Chloride	ug/L	ND	0.20	5956241
p+m-Xylene	ug/L	ND	0.20	5956241
o-Xylene	ug/L	ND	0.20	5956241
Total Xylenes	ug/L	ND	0.20	5956241
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	99		5956241
D4-1,2-Dichloroethane	%	97		5956241
D8-Toluene	%	113		5956241

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

TEST SUMMARY

Maxxam ID: IWS213 **Collected:** 2019/01/31
Sample ID: MW301 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/05	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5957968	2019/02/02	2019/02/02	Prabhjot Gulati
Dissolved Metals by ICPMS	ICP/MS	5957789	N/A	2019/02/05	Thao Nguyen
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5956017	N/A	2019/02/04	Rebecca McClean

Maxxam ID: IWS213 Dup **Collected:** 2019/01/31
Sample ID: MW301 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	5957789	N/A	2019/02/05	Thao Nguyen

Maxxam ID: IWS214 **Collected:** 2019/01/31
Sample ID: MW302 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/05	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5957968	2019/02/02	2019/02/02	Prabhjot Gulati
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5956017	N/A	2019/02/04	Rebecca McClean

Maxxam ID: IWS215 **Collected:** 2019/01/31
Sample ID: MW303 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/05	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5957968	2019/02/02	2019/02/03	Prabhjot Gulati
Dissolved Metals by ICPMS	ICP/MS	5957789	N/A	2019/02/05	Thao Nguyen
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5956017	N/A	2019/02/04	Rebecca McClean

Maxxam ID: IWS216 **Collected:** 2019/01/31
Sample ID: MW3011 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/05	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5957968	2019/02/02	2019/02/03	Prabhjot Gulati
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5956017	N/A	2019/02/04	Rebecca McClean

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

TEST SUMMARY

Maxxam ID: IWS217
Sample ID: MW3033
Matrix: Water

Collected: 2019/01/31
Shipped:
Received: 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	5957789	N/A	2019/02/05	Thao Nguyen

Maxxam ID: IWS218
Sample ID: TRIP BLANK LOT 3515
Matrix: Water

Collected: 2019/01/31
Shipped:
Received: 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/04	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	5956241	N/A	2019/02/02	Anna Gabrielyan

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
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GENERAL COMMENTS

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

Package 1	2.7°C

Results relate only to the items tested.

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Maxxam
A Bureau Veritas Group Company

Maxxam Job #: B927806
Report Date: 2019/02/05

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5956017	4-Bromofluorobenzene	2019/02/04	101	70 - 130	101	70 - 130	99	%		
5956017	D4-1,2-Dichloroethane	2019/02/04	106	70 - 130	102	70 - 130	102	%		
5956017	D8-Toluene	2019/02/04	99	70 - 130	99	70 - 130	99	%		
5956241	4-Bromofluorobenzene	2019/02/01	102	70 - 130	101	70 - 130	100	%		
5956241	D4-1,2-Dichloroethane	2019/02/01	83	70 - 130	93	70 - 130	95	%		
5956241	D8-Toluene	2019/02/01	106	70 - 130	116	70 - 130	95	%		
5957968	o-Terphenyl	2019/02/02	109	60 - 130	112	60 - 130	107	%		
5956017	1,1,1,2-Tetrachloroethane	2019/02/04	99	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,1,1-Trichloroethane	2019/02/04	98	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	1,1,2,2-Tetrachloroethane	2019/02/04	103	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,1,2-Trichloroethane	2019/02/04	105	70 - 130	102	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,1-Dichloroethane	2019/02/04	99	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	1,1-Dichloroethylene	2019/02/04	100	70 - 130	101	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	1,2-Dichlorobenzene	2019/02/04	99	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,2-Dichloroethane	2019/02/04	105	70 - 130	102	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,2-Dichloropropane	2019/02/04	99	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	1,3-Dichlorobenzene	2019/02/04	102	70 - 130	102	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,4-Dichlorobenzene	2019/02/04	106	70 - 130	108	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Acetone (2-Propanone)	2019/02/04	116	60 - 140	126	60 - 140	ND, RDL=10	ug/L	NC	30
5956017	Benzene	2019/02/04	100	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Bromodichloromethane	2019/02/04	100	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Bromoform	2019/02/04	101	70 - 130	99	70 - 130	ND, RDL=1.0	ug/L	NC	30
5956017	Bromomethane	2019/02/04	100	60 - 140	104	60 - 140	ND, RDL=0.50	ug/L	NC	30
5956017	Carbon Tetrachloride	2019/02/04	97	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Chlorobenzene	2019/02/04	96	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Chloroform	2019/02/04	100	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	cis-1,2-Dichloroethylene	2019/02/04	102	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	cis-1,3-Dichloropropene	2019/02/04	100	70 - 130	99	70 - 130	ND, RDL=0.30	ug/L	NC	30
5956017	Dibromochloromethane	2019/02/04	107	70 - 130	107	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Dichlorodifluoromethane (FREON 12)	2019/02/04	103	60 - 140	107	60 - 140	ND, RDL=1.0	ug/L	NC	30
5956017	Ethylbenzene	2019/02/04	97	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5956017	Ethylene Dibromide	2019/02/04	103	70 - 130	101	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	F1 (C6-C10) - BTEX	2019/02/04					ND, RDL=25	ug/L	NC	30
5956017	F1 (C6-C10)	2019/02/04	100	60 - 140	90	60 - 140	ND, RDL=25	ug/L	NC	30
5956017	Hexane	2019/02/04	97	70 - 130	98	70 - 130	ND, RDL=1.0	ug/L	NC	30
5956017	Methyl Ethyl Ketone (2-Butanone)	2019/02/04	118	60 - 140	122	60 - 140	ND, RDL=10	ug/L	NC	30
5956017	Methyl Isobutyl Ketone	2019/02/04	112	70 - 130	111	70 - 130	ND, RDL=5.0	ug/L	NC	30
5956017	Methyl t-butyl ether (MTBE)	2019/02/04	102	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Methylene Chloride(Dichloromethane)	2019/02/04	96	70 - 130	94	70 - 130	ND, RDL=2.0	ug/L	NC	30
5956017	o-Xylene	2019/02/04	97	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	p+m-Xylene	2019/02/04	96	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Styrene	2019/02/04	100	70 - 130	100	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Tetrachloroethylene	2019/02/04	98	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Toluene	2019/02/04	94	70 - 130	94	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Total Xylenes	2019/02/04					ND, RDL=0.20	ug/L	NC	30
5956017	trans-1,2-Dichloroethylene	2019/02/04	100	70 - 130	100	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	trans-1,3-Dichloropropene	2019/02/04	103	70 - 130	102	70 - 130	ND, RDL=0.40	ug/L	NC	30
5956017	Trichloroethylene	2019/02/04	100	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Trichlorofluoromethane (FREON 11)	2019/02/04	101	70 - 130	102	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Vinyl Chloride	2019/02/04	97	70 - 130	121	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956241	1,1,1,2-Tetrachloroethane	2019/02/01	97	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,1,1-Trichloroethane	2019/02/01	94	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L		
5956241	1,1,2,2-Tetrachloroethane	2019/02/01	96	70 - 130	96	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,1,2-Trichloroethane	2019/02/01	90	70 - 130	91	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,1-Dichloroethane	2019/02/01	96	70 - 130	100	70 - 130	ND, RDL=0.20	ug/L		
5956241	1,1-Dichloroethylene	2019/02/01	93	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L		
5956241	1,2-Dichlorobenzene	2019/02/01	94	70 - 130	97	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,2-Dichloroethane	2019/02/01	92	70 - 130	92	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,2-Dichloropropane	2019/02/01	94	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L		
5956241	1,3-Dichlorobenzene	2019/02/01	95	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,4-Dichlorobenzene	2019/02/01	95	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L		
5956241	Acetone (2-Propanone)	2019/02/01	79	60 - 140	85	60 - 140	ND, RDL=10	ug/L		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5956241	Benzene	2019/02/01	87	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L		
5956241	Bromodichloromethane	2019/02/01	92	70 - 130	95	70 - 130	ND, RDL=0.50	ug/L		
5956241	Bromoform	2019/02/01	93	70 - 130	94	70 - 130	ND, RDL=1.0	ug/L		
5956241	Bromomethane	2019/02/01	97	60 - 140	104	60 - 140	ND, RDL=0.50	ug/L		
5956241	Carbon Tetrachloride	2019/02/01	91	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L		
5956241	Chlorobenzene	2019/02/01	96	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L		
5956241	Chloroform	2019/02/01	96	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L		
5956241	cis-1,2-Dichloroethylene	2019/02/01	99	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	0.16	30
5956241	cis-1,3-Dichloropropene	2019/02/01	82	70 - 130	89	70 - 130	ND, RDL=0.30	ug/L		
5956241	Dibromochloromethane	2019/02/01	95	70 - 130	97	70 - 130	ND, RDL=0.50	ug/L		
5956241	Dichlorodifluoromethane (FREON 12)	2019/02/01	93	60 - 140	98	60 - 140	ND, RDL=1.0	ug/L		
5956241	Ethylbenzene	2019/02/01	95	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L		
5956241	Ethylene Dibromide	2019/02/01	94	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L		
5956241	Hexane	2019/02/01	98	70 - 130	101	70 - 130	ND, RDL=1.0	ug/L		
5956241	Methyl Ethyl Ketone (2-Butanone)	2019/02/01	90	60 - 140	92	60 - 140	ND, RDL=10	ug/L		
5956241	Methyl Isobutyl Ketone	2019/02/01	83	70 - 130	92	70 - 130	ND, RDL=5.0	ug/L		
5956241	Methyl t-butyl ether (MTBE)	2019/02/01	95	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L		
5956241	Methylene Chloride(Dichloromethane)	2019/02/01	94	70 - 130	98	70 - 130	ND, RDL=2.0	ug/L		
5956241	o-Xylene	2019/02/01	94	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L		
5956241	p+m-Xylene	2019/02/01	93	70 - 130	95	70 - 130	ND, RDL=0.20	ug/L		
5956241	Styrene	2019/02/01	96	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L		
5956241	Tetrachloroethylene	2019/02/01	98	70 - 130	103	70 - 130	ND, RDL=0.20	ug/L		
5956241	Toluene	2019/02/01	91	70 - 130	94	70 - 130	ND, RDL=0.20	ug/L		
5956241	Total Xylenes	2019/02/01					ND, RDL=0.20	ug/L		
5956241	trans-1,2-Dichloroethylene	2019/02/01	100	70 - 130	103	70 - 130	ND, RDL=0.50	ug/L		
5956241	trans-1,3-Dichloropropene	2019/02/01	88	70 - 130	89	70 - 130	ND, RDL=0.40	ug/L		
5956241	Trichloroethylene	2019/02/01	99	70 - 130	101	70 - 130	ND, RDL=0.20	ug/L	8.2	30
5956241	Trichlorofluoromethane (FREON 11)	2019/02/01	94	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L		
5956241	Vinyl Chloride	2019/02/01	104	70 - 130	107	70 - 130	ND, RDL=0.20	ug/L		
5957789	Dissolved Antimony (Sb)	2019/02/05	113	80 - 120	106	80 - 120	ND, RDL=0.50	ug/L	NC	20
5957789	Dissolved Arsenic (As)	2019/02/05	99	80 - 120	99	80 - 120	ND, RDL=1.0	ug/L	9.1	20

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Maxxam Job #: B927806
Report Date: 2019/02/05

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5957789	Dissolved Barium (Ba)	2019/02/05	102	80 - 120	101	80 - 120	ND, RDL=2.0	ug/L	1.1	20
5957789	Dissolved Beryllium (Be)	2019/02/05	97	80 - 120	96	80 - 120	ND, RDL=0.50	ug/L	NC	20
5957789	Dissolved Boron (B)	2019/02/05	NC	80 - 120	94	80 - 120	ND, RDL=10	ug/L	0.080	20
5957789	Dissolved Cadmium (Cd)	2019/02/05	104	80 - 120	100	80 - 120	ND, RDL=0.10	ug/L	NC	20
5957789	Dissolved Chromium (Cr)	2019/02/05	93	80 - 120	93	80 - 120	ND, RDL=5.0	ug/L	NC	20
5957789	Dissolved Cobalt (Co)	2019/02/05	91	80 - 120	93	80 - 120	ND, RDL=0.50	ug/L	3.9	20
5957789	Dissolved Copper (Cu)	2019/02/05	95	80 - 120	95	80 - 120	ND, RDL=1.0	ug/L	4.2	20
5957789	Dissolved Lead (Pb)	2019/02/05	94	80 - 120	95	80 - 120	ND, RDL=0.50	ug/L	NC	20
5957789	Dissolved Molybdenum (Mo)	2019/02/05	109	80 - 120	101	80 - 120	ND, RDL=0.50	ug/L	1.8	20
5957789	Dissolved Nickel (Ni)	2019/02/05	88	80 - 120	92	80 - 120	ND, RDL=1.0	ug/L	2.7	20
5957789	Dissolved Selenium (Se)	2019/02/05	103	80 - 120	101	80 - 120	ND, RDL=2.0	ug/L	NC	20
5957789	Dissolved Silver (Ag)	2019/02/05	84	80 - 120	100	80 - 120	ND, RDL=0.10	ug/L	NC	20
5957789	Dissolved Thallium (Tl)	2019/02/05	94	80 - 120	94	80 - 120	ND, RDL=0.050	ug/L	NC	20
5957789	Dissolved Uranium (U)	2019/02/05	97	80 - 120	95	80 - 120	ND, RDL=0.10	ug/L	2.3	20
5957789	Dissolved Vanadium (V)	2019/02/05	97	80 - 120	95	80 - 120	ND, RDL=0.50	ug/L	NC	20
5957789	Dissolved Zinc (Zn)	2019/02/05	90	80 - 120	95	80 - 120	ND, RDL=5.0	ug/L	3.5	20
5957968	F2 (C10-C16 Hydrocarbons)	2019/02/02	106	50 - 130	103	60 - 130	ND, RDL=100	ug/L	NC	30
5957968	F3 (C16-C34 Hydrocarbons)	2019/02/02	104	50 - 130	107	60 - 130	ND, RDL=200	ug/L	NC	30
5957968	F4 (C34-C50 Hydrocarbons)	2019/02/02	99	50 - 130	99	60 - 130	ND, RDL=200	ug/L	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 (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

VALIDATION SIGNATURE PAGE

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



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

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Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-B0
Site Location: BLAIR
Your C.O.C. #: na

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/09/22
Report #: R4727307
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B7J4925
Received: 2017/09/07, 16:22

Sample Matrix: Soil
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	2	N/A	2017/09/13		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Soil (1)	2	2017/09/09	2017/09/10	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	6	2017/09/11	2017/09/13	CAM SOP-00447	EPA 6020B m
Moisture	2	N/A	2017/09/09	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	6	N/A	2017/09/11	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	3	N/A	2017/09/22	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (2)	1	2017/09/11	2017/09/12	CAM SOP-00307	SW846 8081, 8082
OC Pesticides (Selected) & PCB (2)	5	2017/09/11	2017/09/13	CAM SOP-00307	SW846 8081, 8082
OC Pesticides (Selected) & PCB (2)	3	2017/09/19	2017/09/22	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	6	N/A	2017/09/12	CAM SOP-00307	EPA 8081/8082 m
OC Pesticides Summed Parameters	3	N/A	2017/09/22	CAM SOP-00307	EPA 8081/8082 m
pH CaCl2 EXTRACT	2	2017/09/12	2017/09/12	CAM SOP-00413	EPA 9045 D m
Sieve, 75um	1	N/A	2017/09/11	CAM SOP-00467	Carter 2nd ed m
Volatile Organic Compounds and F1 PHCs	2	N/A	2017/09/13	CAM SOP-00230	EPA 8260C 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.

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Your Project #: HAM-00801245-B0
Site Location: BLAIR
Your C.O.C. #: na

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/09/22
Report #: R4727307
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B7J4925
Received: 2017/09/07, 16:22

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(2) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

==========

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

RESULTS OF ANALYSES OF SOIL

Maxxam ID		FBV106	FBV107		FBV108		FBV109		FBV110	
Sampling Date		2017/09/06 10:00	2017/09/06 10:15		2017/09/06 10:25		2017/09/06 01:10		2017/09/06 01:20	
COC Number		na	na		na		na		na	
	UNITS	**BH101-S2**	**BH101-S4**	**QC Batch**	**BH101-S5**	**QC Batch**	**BH102-S1**	**RDL**	**BH102-S2**	**QC Batch**
Inorganics										
Moisture	%	21		5158013	8.7	5157289	12	1.0		5158013
Available (CaCl2) pH	pH		7.93	5158335					7.88	5158335
Miscellaneous Parameters										
Grain Size	%		FINE	5158309				N/A		
Sieve - #200 (<0.075mm)	%		91	5158309				1		
Sieve - #200 (>0.075mm)	%		9	5158309				1		

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FBV111		FBV112	FBV113	FBV114	FBV115		
Sampling Date		2017/09/06 01:30		2017/09/06 02:45	2017/09/06 12:40	2017/09/06 12:10	2017/09/06 09:25		
COC Number		na		na	na	na	na		
	UNITS	**BH102-S3**	**QC Batch**	**BH103-S1**	**BH104-S1**	**BH105-S1**	**BH106-S2**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	10	5157289	9.7	14	14	26	1.0	5158013

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FDO579	FDO580	FDO581		
Sampling Date		2017/09/06 10:00	2017/09/06 10:00	2017/09/06 10:00		
COC Number		na	na	na		
	UNITS	**BH101-S2 - A**	**BH101-S2 - B**	**BH101-S2 - C**	**RDL**	**QC Batch**
Inorganics						
Moisture	%	21	21	21	1.0	5177360

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		FBV106	FBV109	FBV112	FBV113	FBV114	FBV114		
Sampling Date		2017/09/06 10:00	2017/09/06 01:10	2017/09/06 02:45	2017/09/06 12:40	2017/09/06 12:10	2017/09/06 12:10		
COC Number		na	na	na	na	na	na		
	UNITS	**BH101-S2**	**BH102-S1**	**BH103-S1**	**BH104-S1**	**BH105-S1**	**BH105-S1 Lab-Dup**	**RDL**	**QC Batch**
Metals									
Acid Extractable Antimony (Sb)	ug/g	0.23	<0.20	<0.20	<0.20	<0.20	0.20	0.20	5158189
Acid Extractable Arsenic (As)	ug/g	7.0	4.6	7.0	4.9	5.7	5.6	1.0	5158189
Acid Extractable Barium (Ba)	ug/g	89	110	78	120	100	100	0.50	5158189
Acid Extractable Beryllium (Be)	ug/g	0.66	0.65	0.67	0.80	0.86	0.86	0.20	5158189
Acid Extractable Boron (B)	ug/g	<5.0	9.4	11	9.3	10	10	5.0	5158189
Acid Extractable Cadmium (Cd)	ug/g	0.19	0.13	0.16	<0.10	0.13	0.15	0.10	5158189
Acid Extractable Chromium (Cr)	ug/g	19	19	19	23	26	25	1.0	5158189
Acid Extractable Cobalt (Co)	ug/g	11	12	11	12	13	13	0.10	5158189
Acid Extractable Copper (Cu)	ug/g	19	33	31	32	35	35	0.50	5158189
Acid Extractable Lead (Pb)	ug/g	29	9.5	17	11	14	14	1.0	5158189
Acid Extractable Molybdenum (Mo)	ug/g	0.66	<0.50	<0.50	<0.50	0.51	0.57	0.50	5158189
Acid Extractable Nickel (Ni)	ug/g	19	24	25	28	31	29	0.50	5158189
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	5158189
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	5158189
Acid Extractable Thallium (Tl)	ug/g	0.14	0.12	0.15	0.17	0.19	0.18	0.050	5158189
Acid Extractable Uranium (U)	ug/g	0.84	0.50	0.52	0.60	0.52	0.52	0.050	5158189
Acid Extractable Vanadium (V)	ug/g	31	28	27	31	35	35	5.0	5158189
Acid Extractable Zinc (Zn)	ug/g	76	57	83	62	84	80	5.0	5158189

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		FBV115		
Sampling Date		2017/09/06 09:25		
COC Number		na		
	UNITS	**BH106-S2**	**RDL**	**QC Batch**
Metals				
Acid Extractable Antimony (Sb)	ug/g	0.23	0.20	5158189
Acid Extractable Arsenic (As)	ug/g	8.6	1.0	5158189
Acid Extractable Barium (Ba)	ug/g	250	0.50	5158189
Acid Extractable Beryllium (Be)	ug/g	1.3	0.20	5158189
Acid Extractable Boron (B)	ug/g	8.2	5.0	5158189
Acid Extractable Cadmium (Cd)	ug/g	0.63	0.10	5158189
Acid Extractable Chromium (Cr)	ug/g	27	1.0	5158189
Acid Extractable Cobalt (Co)	ug/g	11	0.10	5158189
Acid Extractable Copper (Cu)	ug/g	32	0.50	5158189
Acid Extractable Lead (Pb)	ug/g	23	1.0	5158189
Acid Extractable Molybdenum (Mo)	ug/g	0.90	0.50	5158189
Acid Extractable Nickel (Ni)	ug/g	27	0.50	5158189
Acid Extractable Selenium (Se)	ug/g	0.82	0.50	5158189
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	5158189
Acid Extractable Thallium (Tl)	ug/g	0.18	0.050	5158189
Acid Extractable Uranium (U)	ug/g	7.5	0.050	5158189
Acid Extractable Vanadium (V)	ug/g	37	5.0	5158189
Acid Extractable Zinc (Zn)	ug/g	100	5.0	5158189

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		FBV108	FBV111		
Sampling Date		2017/09/06 10:25	2017/09/06 01:30		
COC Number		na	na		
	UNITS	**BH101-S5**	**BH102-S3**	**RDL**	**QC Batch**
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	5155068
Volatile Organics					
Acetone (2-Propanone)	ug/g	<0.50	<0.50	0.50	5159358
Benzene	ug/g	<0.020	<0.020	0.020	5159358
Bromodichloromethane	ug/g	<0.050	<0.050	0.050	5159358
Bromoform	ug/g	<0.050	<0.050	0.050	5159358
Bromomethane	ug/g	<0.050	<0.050	0.050	5159358
Carbon Tetrachloride	ug/g	<0.050	<0.050	0.050	5159358
Chlorobenzene	ug/g	<0.050	<0.050	0.050	5159358
Chloroform	ug/g	<0.050	<0.050	0.050	5159358
Dibromochloromethane	ug/g	<0.050	<0.050	0.050	5159358
1,2-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5159358
1,3-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5159358
1,4-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5159358
Dichlorodifluoromethane (FREON 12)	ug/g	<0.050	<0.050	0.050	5159358
1,1-Dichloroethane	ug/g	<0.050	<0.050	0.050	5159358
1,2-Dichloroethane	ug/g	<0.050	<0.050	0.050	5159358
1,1-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5159358
cis-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5159358
trans-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5159358
1,2-Dichloropropane	ug/g	<0.050	<0.050	0.050	5159358
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	5159358
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	5159358
Ethylbenzene	ug/g	<0.020	<0.020	0.020	5159358
Ethylene Dibromide	ug/g	<0.050	<0.050	0.050	5159358
Hexane	ug/g	<0.050	<0.050	0.050	5159358
Methylene Chloride(Dichloromethane)	ug/g	<0.050	<0.050	0.050	5159358
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.50	<0.50	0.50	5159358
Methyl Isobutyl Ketone	ug/g	<0.50	<0.50	0.50	5159358
Methyl t-butyl ether (MTBE)	ug/g	<0.050	<0.050	0.050	5159358
Styrene	ug/g	<0.050	<0.050	0.050	5159358
1,1,1,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	5159358
1,1,2,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	5159358

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		FBV108	FBV111		
Sampling Date		2017/09/06 10:25	2017/09/06 01:30		
COC Number		na	na		
	UNITS	**BH101-S5**	**BH102-S3**	**RDL**	**QC Batch**
Tetrachloroethylene	ug/g	<0.050	<0.050	0.050	5159358
Toluene	ug/g	<0.020	<0.020	0.020	5159358
1,1,1-Trichloroethane	ug/g	<0.050	<0.050	0.050	5159358
1,1,2-Trichloroethane	ug/g	<0.050	<0.050	0.050	5159358
Trichloroethylene	ug/g	<0.050	<0.050	0.050	5159358
Trichlorofluoromethane (FREON 11)	ug/g	<0.050	<0.050	0.050	5159358
Vinyl Chloride	ug/g	<0.020	<0.020	0.020	5159358
p+m-Xylene	ug/g	<0.020	<0.020	0.020	5159358
o-Xylene	ug/g	<0.020	<0.020	0.020	5159358
Total Xylenes	ug/g	<0.020	<0.020	0.020	5159358
F1 (C6-C10)	ug/g	<10	<10	10	5159358
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	5159358
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	93	93		5159358
D10-o-Xylene	%	96	93		5159358
D4-1,2-Dichloroethane	%	96	98		5159358
D8-Toluene	%	95	94		5159358

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		FBV108	FBV111		
Sampling Date		2017/09/06 10:25	2017/09/06 01:30		
COC Number		na	na		
	UNITS	**BH101-S5**	**BH102-S3**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	5156918
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	5156918
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	5156918
Reached Baseline at C50	ug/g	Yes	Yes		5156918
Surrogate Recovery (%)					
o-Terphenyl	%	94	94		5156918

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FBV106	FBV106		FBV109	FBV112	FBV113	FBV114		
Sampling Date		2017/09/06 10:00	2017/09/06 10:00		2017/09/06 01:10	2017/09/06 02:45	2017/09/06 12:40	2017/09/06 12:10		
COC Number		na	na		na	na	na	na		
	UNITS	**BH101-S2**	**BH101-S2 Lab-Dup**	**RDL**	**BH102-S1**	**BH103-S1**	**BH104-S1**	**BH105-S1**	**RDL**	**QC Batch**
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020		0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5155307
o,p-DDD + p,p-DDD	ug/g	0.38		0.020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5155307
o,p-DDE + p,p-DDE	ug/g	0.69		0.10	<0.0020	0.0041	<0.0020	0.0043	0.0020	5155307
o,p-DDT + p,p-DDT	ug/g	0.0096		0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5155307
Total Endosulfan	ug/g	<0.0020		0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5155307
Total PCB	ug/g	<0.015		0.015	<0.015	<0.015	<0.015	<0.015	0.015	5155307
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
a-Chlordane	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
g-Chlordane	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
o,p-DDD	ug/g	0.089	0.084	0.020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
p,p-DDD	ug/g	0.29	0.26	0.020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
o,p-DDE	ug/g	<0.010	<0.010	0.010	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
p,p-DDE	ug/g	0.69	0.64	0.10	<0.0020	0.0041	<0.0020	0.0043	0.0020	5158607
o,p-DDT	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
p,p-DDT	ug/g	0.0096	0.0094	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Dieldrin	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Lindane	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Endrin	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Heptachlor	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Heptachlor epoxide	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Hexachlorobenzene	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Hexachloroethane	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Methoxychlor	ug/g	<0.015	<0.015	0.015	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5158607
Aroclor 1242	ug/g	<0.015	<0.015	0.015	<0.015	<0.015	<0.015	<0.015	0.015	5158607
Aroclor 1248	ug/g	<0.015	<0.015	0.015	<0.015	<0.015	<0.015	<0.015	0.015	5158607
Aroclor 1254	ug/g	<0.015	<0.015	0.015	<0.015	<0.015	<0.015	<0.015	0.015	5158607
Aroclor 1260	ug/g	<0.015	<0.015	0.015	<0.015	<0.015	<0.015	<0.015	0.015	5158607

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FBV106	FBV106		FBV109	FBV112	FBV113	FBV114		
Sampling Date		2017/09/06 10:00	2017/09/06 10:00		2017/09/06 01:10	2017/09/06 02:45	2017/09/06 12:40	2017/09/06 12:10		
COC Number		na	na		na	na	na	na		
	UNITS	**BH101-S2**	**BH101-S2 Lab-Dup**	**RDL**	**BH102-S1**	**BH103-S1**	**BH104-S1**	**BH105-S1**	**RDL**	**QC Batch**
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	79	85		90	84	87	87		5158607
Decachlorobiphenyl	%	80	78		58	78	83	76		5158607

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FBV115			FDO579		FDO580	FDO581		
Sampling Date		2017/09/06 09:25			2017/09/06 10:00		2017/09/06 10:00	2017/09/06 10:00		
COC Number		na			na		na	na		
	UNITS	**BH106-S2**	**RDL**	**QC Batch**	**BH101-S2 - A**	**RDL**	**BH101-S2 - B**	**BH101-S2 - C**	**RDL**	**QC Batch**
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020	0.0020	5155307	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5171014
o,p-DDD + p,p-DDD	ug/g	0.024	0.0020	5155307	0.36	0.020	0.37	0.34	0.020	5171014
o,p-DDE + p,p-DDE	ug/g	0.054	0.010	5155307	0.75	0.10	0.88	0.86	0.10	5171014
o,p-DDT + p,p-DDT	ug/g	<0.0020	0.0020	5155307	0.019	0.0020	0.017	0.017	0.0020	5171014
Total Endosulfan	ug/g	<0.0020	0.0020	5155307	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5171014
Total PCB	ug/g	<0.015	0.015	5155307	<0.050	0.050	<0.050	<0.050	0.050	5171014
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
a-Chlordane	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
g-Chlordane	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
o,p-DDD	ug/g	0.0075	0.0020	5158607	0.081	0.020	0.076	0.071	0.020	5176135
p,p-DDD	ug/g	0.017	0.0020	5158607	0.28	0.020	0.30	0.27	0.020	5176135
o,p-DDE	ug/g	<0.0020	0.0020	5158607	<0.010	0.010	<0.010	<0.010	0.010	5176135
p,p-DDE	ug/g	0.054	0.010	5158607	0.75	0.10	0.88	0.86	0.10	5176135
o,p-DDT	ug/g	<0.0020	0.0020	5158607	0.0024	0.0020	<0.0020	<0.0020	0.0020	5176135
p,p-DDT	ug/g	<0.0020	0.0020	5158607	0.017	0.0020	0.017	0.017	0.0020	5176135
Dieldrin	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Lindane	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Endosulfan II (beta)	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Endrin	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Heptachlor	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Heptachlor epoxide	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Hexachlorobenzene	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Hexachlorobutadiene	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Hexachloroethane	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Methoxychlor	ug/g	<0.0050	0.0050	5158607	<0.0050	0.0050	<0.0050	<0.0050	0.0050	5176135
Aroclor 1242	ug/g	<0.015	0.015	5158607	<0.015	0.015	<0.015	<0.015	0.015	5176135
Aroclor 1248	ug/g	<0.015	0.015	5158607	<0.015	0.015	<0.015	<0.015	0.015	5176135
Aroclor 1254	ug/g	<0.015	0.015	5158607	<0.050	0.050	<0.050	<0.050	0.050	5176135
Aroclor 1260	ug/g	<0.015	0.015	5158607	<0.015	0.015	<0.020	<0.020	0.020	5176135

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FBV115			FDO579		FDO580	FDO581		
Sampling Date		2017/09/06 09:25			2017/09/06 10:00		2017/09/06 10:00	2017/09/06 10:00		
COC Number		na			na		na	na		
	UNITS	**BH106-S2**	**RDL**	**QC Batch**	**BH101-S2 - A**	**RDL**	**BH101-S2 - B**	**BH101-S2 - C**	**RDL**	**QC Batch**
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	73		5158607	95		102	93		5176135
Decachlorobiphenyl	%	80		5158607	124		121	119		5176135

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: FBV106 **Collected:** 2017/09/06
Sample ID: BH101-S2 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/12	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Automated Statchk

Maxxam ID: FBV106 Dup **Collected:** 2017/09/06
Sample ID: BH101-S2 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/12	Mahmudul Khan

Maxxam ID: FBV107 **Collected:** 2017/09/06
Sample ID: BH101-S4 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	5158335	2017/09/12	2017/09/12	Tahir Anwar
Sieve, 75um	SIEV	5158309	N/A	2017/09/11	Chun Yan

Maxxam ID: FBV108 **Collected:** 2017/09/06
Sample ID: BH101-S5 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5155068	N/A	2017/09/13	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5156918	2017/09/09	2017/09/10	Jeevaraj Jeevaratrnam
Moisture	BAL	5157289	N/A	2017/09/09	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5159358	N/A	2017/09/13	Manpreet Sarao

Maxxam ID: FBV109 **Collected:** 2017/09/06
Sample ID: BH102-S1 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: FBV110 **Collected:** 2017/09/06
Sample ID: BH102-S2 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	5158335	2017/09/12	2017/09/12	Tahir Anwar

Maxxam ID: FBV111 **Collected:** 2017/09/06
Sample ID: BH102-S3 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5155068	N/A	2017/09/13	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5156918	2017/09/09	2017/09/10	Jeevaraj Jeevaratrnam
Moisture	BAL	5157289	N/A	2017/09/09	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5159358	N/A	2017/09/13	Manpreet Sarao

Maxxam ID: FBV112 **Collected:** 2017/09/06
Sample ID: BH103-S1 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

Maxxam ID: FBV113 **Collected:** 2017/09/06
Sample ID: BH104-S1 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

Maxxam ID: FBV114 **Collected:** 2017/09/06
Sample ID: BH105-S1 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

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Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: FBV114 Dup
Sample ID: BH105-S1
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu

Maxxam ID: FBV115
Sample ID: BH106-S2
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

Maxxam ID: FDO579
Sample ID: BH101-S2 - A
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5177360	N/A	2017/09/22	Chun Yan
OC Pesticides (Selected) & PCB	GC/ECD	5176135	2017/09/19	2017/09/22	Joy Zhang
OC Pesticides Summed Parameters	CALC	5171014	N/A	2017/09/22	Automated Statchk

Maxxam ID: FDO580
Sample ID: BH101-S2 - B
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5177360	N/A	2017/09/22	Chun Yan
OC Pesticides (Selected) & PCB	GC/ECD	5176135	2017/09/19	2017/09/22	Joy Zhang
OC Pesticides Summed Parameters	CALC	5171014	N/A	2017/09/22	Automated Statchk

Maxxam ID: FDO581
Sample ID: BH101-S2 - C
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5177360	N/A	2017/09/22	Chun Yan
OC Pesticides (Selected) & PCB	GC/ECD	5176135	2017/09/19	2017/09/22	Joy Zhang
OC Pesticides Summed Parameters	CALC	5171014	N/A	2017/09/22	Automated Statchk

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GENERAL COMMENTS

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

Package 1	4.7°C

Revised Report[2017/09/22] - Reworked results for sample BH101-S2 included as per client request.
OC Pesticide Analysis: Due to high concentrations of the target analytes, samples required dilution. Detection limits were adjusted accordingly. Detection Limits were raised due to matrix interferences for some parameters.

Sample FBV106 [BH101-S2] : OC Pesticide Analysis: Due to high concentrations of the target analytes, sample required dilution. Detection limits were adjusted accordingly. Detection limits for some parameters were raised due to matrix interferences.

Sample FBV115 [BH106-S2] : OC Pesticide Anaysis: Due to high concentrations of the target analytes, sample required dilution. Detection limits were adjusted accordingly.

Results relate only to the items tested.

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Maxxam Job #: B7J4925
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QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5156918	o-Terphenyl	2017/09/09	88	60 - 130	89	60 - 130	98	%				
5158607	2,4,5,6-Tetrachloro-m-xylene	2017/09/12	85	50 - 130	77	50 - 130	76	%				
5158607	Decachlorobiphenyl	2017/09/12	91	50 - 130	90	50 - 130	90	%				
5159358	4-Bromofluorobenzene	2017/09/13	103	60 - 140	104	60 - 140	93	%				
5159358	D10-o-Xylene	2017/09/13	107	60 - 130	92	60 - 130	89	%				
5159358	D4-1,2-Dichloroethane	2017/09/13	95	60 - 140	93	60 - 140	100	%				
5159358	D8-Toluene	2017/09/13	102	60 - 140	103	60 - 140	95	%				
5176135	2,4,5,6-Tetrachloro-m-xylene	2017/09/22	84	50 - 130	82	50 - 130	85	%				
5176135	Decachlorobiphenyl	2017/09/22	104	50 - 130	114	50 - 130	122	%				
5156918	F2 (C10-C16 Hydrocarbons)	2017/09/10	101	50 - 130	94	80 - 120	<10	ug/g	NC	30		
5156918	F3 (C16-C34 Hydrocarbons)	2017/09/10	105	50 - 130	98	80 - 120	<50	ug/g	NC	30		
5156918	F4 (C34-C50 Hydrocarbons)	2017/09/10	105	50 - 130	97	80 - 120	<50	ug/g	NC	30		
5157289	Moisture	2017/09/09							2.5	20		
5158013	Moisture	2017/09/11							0.69	20		
5158189	Acid Extractable Antimony (Sb)	2017/09/13	92	75 - 125	101	80 - 120	<0.20	ug/g	0.16	30		
5158189	Acid Extractable Arsenic (As)	2017/09/13	99	75 - 125	102	80 - 120	<1.0	ug/g	3.0	30		
5158189	Acid Extractable Barium (Ba)	2017/09/13	NC	75 - 125	106	80 - 120	<0.50	ug/g	2.3	30		
5158189	Acid Extractable Beryllium (Be)	2017/09/13	104	75 - 125	102	80 - 120	<0.20	ug/g	0.63	30		
5158189	Acid Extractable Boron (B)	2017/09/13	96	75 - 125	98	80 - 120	<5.0	ug/g	2.2	30		
5158189	Acid Extractable Cadmium (Cd)	2017/09/13	102	75 - 125	101	80 - 120	<0.10	ug/g	15	30		
5158189	Acid Extractable Chromium (Cr)	2017/09/13	NC	75 - 125	102	80 - 120	<1.0	ug/g	3.5	30		
5158189	Acid Extractable Cobalt (Co)	2017/09/13	101	75 - 125	101	80 - 120	<0.10	ug/g	0.44	30		
5158189	Acid Extractable Copper (Cu)	2017/09/13	NC	75 - 125	101	80 - 120	<0.50	ug/g	1.0	30		
5158189	Acid Extractable Lead (Pb)	2017/09/13	102	75 - 125	102	80 - 120	<1.0	ug/g	1.1	30		
5158189	Acid Extractable Molybdenum (Mo)	2017/09/13	101	75 - 125	102	80 - 120	<0.50	ug/g	10	30		
5158189	Acid Extractable Nickel (Ni)	2017/09/13	NC	75 - 125	105	80 - 120	<0.50	ug/g	5.2	30		
5158189	Acid Extractable Selenium (Se)	2017/09/13	103	75 - 125	105	80 - 120	<0.50	ug/g	NC	30		
5158189	Acid Extractable Silver (Ag)	2017/09/13	102	75 - 125	101	80 - 120	<0.20	ug/g	NC	30		
5158189	Acid Extractable Thallium (Tl)	2017/09/13	100	75 - 125	101	80 - 120	<0.050	ug/g	0.64	30		
5158189	Acid Extractable Uranium (U)	2017/09/13	102	75 - 125	99	80 - 120	<0.050	ug/g	0.17	30		
5158189	Acid Extractable Vanadium (V)	2017/09/13	NC	75 - 125	101	80 - 120	<5.0	ug/g	0.58	30		

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A Bureau Veritas Group Company

Maxxam Job #: B7J4925
Report Date: 2017/09/22

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5158189	Acid Extractable Zinc (Zn)	2017/09/13	NC	75 - 125	113	80 - 120	<5.0	ug/g	5.8	30		
5158309	Sieve - #200 (<0.075mm)	2017/09/11							2.3	20	57	53 - 58
5158309	Sieve - #200 (>0.075mm)	2017/09/11							4.7	20	43	42 - 47
5158335	Available (CaCl2) pH	2017/09/12			99	97 - 103			0.96	N/A		
5158607	a-Chlordane	2017/09/12	109	50 - 130	95	50 - 130	<0.0020	ug/g	NC	40		
5158607	Aldrin	2017/09/12	100	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40		
5158607	Aroclor 1242	2017/09/12					<0.015	ug/g	NC	40		
5158607	Aroclor 1248	2017/09/12					<0.015	ug/g	NC	40		
5158607	Aroclor 1254	2017/09/12					<0.015	ug/g	NC	40		
5158607	Aroclor 1260	2017/09/12					<0.015	ug/g	NC	40		
5158607	Dieldrin	2017/09/12	115	50 - 130	126	50 - 130	<0.0020	ug/g	NC	40		
5158607	Endosulfan I (alpha)	2017/09/12	98	50 - 130	115	50 - 130	<0.0020	ug/g	NC	40		
5158607	Endosulfan II (beta)	2017/09/12	113	50 - 130	111	50 - 130	<0.0020	ug/g	NC	40		
5158607	Endrin	2017/09/12	97	50 - 130	124	50 - 130	<0.0020	ug/g	NC	40		
5158607	g-Chlordane	2017/09/12	111	50 - 130	101	50 - 130	<0.0020	ug/g	NC	40		
5158607	Heptachlor epoxide	2017/09/12	94	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5158607	Heptachlor	2017/09/12	86	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40		
5158607	Hexachlorobenzene	2017/09/12	97	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40		
5158607	Hexachlorobutadiene	2017/09/12	75	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40		
5158607	Hexachloroethane	2017/09/12	55	50 - 130	70	50 - 130	<0.0020	ug/g	NC	40		
5158607	Lindane	2017/09/12	105	50 - 130	102	50 - 130	<0.0020	ug/g	NC	40		
5158607	Methoxychlor	2017/09/12	161 (1)	50 - 130	132 (2)	50 - 130	<0.0050	ug/g	NC	40		
5158607	o,p-DDD	2017/09/12	NC	50 - 130	124	50 - 130	<0.0020	ug/g	5.9	40		
5158607	o,p-DDE	2017/09/12	93	50 - 130	92	50 - 130	<0.0020	ug/g	NC	40		
5158607	o,p-DDT	2017/09/12	131 (1)	50 - 130	95	50 - 130	<0.0020	ug/g	NC	40		
5158607	p,p-DDD	2017/09/12	NC	50 - 130	119	50 - 130	<0.0020	ug/g	8.2	40		
5158607	p,p-DDE	2017/09/12	NC	50 - 130	106	50 - 130	<0.0020	ug/g	6.3	40		
5158607	p,p-DDT	2017/09/12	NC	50 - 130	100	50 - 130	<0.0020	ug/g	1.8	40		
5159358	1,1,1,2-Tetrachloroethane	2017/09/13	100	60 - 140	98	60 - 130	<0.050	ug/g	NC	50		
5159358	1,1,1-Trichloroethane	2017/09/13	91	60 - 140	88	60 - 130	<0.050	ug/g	NC	50		
5159358	1,1,2,2-Tetrachloroethane	2017/09/13	107	60 - 140	108	60 - 130	<0.050	ug/g	NC	50		

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A Bureau Veritas Group Company

Maxxam Job #: B7J4925
Report Date: 2017/09/22

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5159358	1,1,2-Trichloroethane	2017/09/13	89	60 - 140	87	60 - 130	<0.050	ug/g	NC	50		
5159358	1,1-Dichloroethane	2017/09/13	95	60 - 140	91	60 - 130	<0.050	ug/g	NC	50		
5159358	1,1-Dichloroethylene	2017/09/13	100	60 - 140	95	60 - 130	<0.050	ug/g	NC	50		
5159358	1,2-Dichlorobenzene	2017/09/13	92	60 - 140	88	60 - 130	<0.050	ug/g	NC	50		
5159358	1,2-Dichloroethane	2017/09/13	102	60 - 140	100	60 - 130	<0.050	ug/g	NC	50		
5159358	1,2-Dichloropropane	2017/09/13	88	60 - 140	86	60 - 130	<0.050	ug/g	NC	50		
5159358	1,3-Dichlorobenzene	2017/09/13	96	60 - 140	92	60 - 130	<0.050	ug/g	NC	50		
5159358	1,4-Dichlorobenzene	2017/09/13	102	60 - 140	93	60 - 130	<0.050	ug/g	NC	50		
5159358	Acetone (2-Propanone)	2017/09/13	79	60 - 140	84	60 - 140	<0.50	ug/g	NC	50		
5159358	Benzene	2017/09/13	97	60 - 140	93	60 - 130	<0.020	ug/g	NC	50		
5159358	Bromodichloromethane	2017/09/13	90	60 - 140	88	60 - 130	<0.050	ug/g	NC	50		
5159358	Bromoform	2017/09/13	98	60 - 140	99	60 - 130	<0.050	ug/g	NC	50		
5159358	Bromomethane	2017/09/13	96	60 - 140	94	60 - 140	<0.050	ug/g	NC	50		
5159358	Carbon Tetrachloride	2017/09/13	93	60 - 140	89	60 - 130	<0.050	ug/g	NC	50		
5159358	Chlorobenzene	2017/09/13	94	60 - 140	91	60 - 130	<0.050	ug/g	NC	50		
5159358	Chloroform	2017/09/13	91	60 - 140	88	60 - 130	<0.050	ug/g	NC	50		
5159358	cis-1,2-Dichloroethylene	2017/09/13	95	60 - 140	92	60 - 130	<0.050	ug/g	NC	50		
5159358	cis-1,3-Dichloropropene	2017/09/13	83	60 - 140	83	60 - 130	<0.030	ug/g	NC	50		
5159358	Dibromochloromethane	2017/09/13	97	60 - 140	96	60 - 130	<0.050	ug/g	NC	50		
5159358	Dichlorodifluoromethane (FREON 12)	2017/09/13	87	60 - 140	89	60 - 140	<0.050	ug/g	NC	50		
5159358	Ethylbenzene	2017/09/13	94	60 - 140	91	60 - 130	<0.020	ug/g	NC	50		
5159358	Ethylene Dibromide	2017/09/13	99	60 - 140	99	60 - 130	<0.050	ug/g	NC	50		
5159358	F1 (C6-C10) - BTEX	2017/09/13					<10	ug/g	NC	30		
5159358	F1 (C6-C10)	2017/09/13	101	60 - 140	91	80 - 120	<10	ug/g	NC	30		
5159358	Hexane	2017/09/13	99	60 - 140	95	60 - 130	<0.050	ug/g	NC	50		
5159358	Methyl Ethyl Ketone (2-Butanone)	2017/09/13	82	60 - 140	86	60 - 140	<0.50	ug/g	NC	50		
5159358	Methyl Isobutyl Ketone	2017/09/13	85	60 - 140	87	60 - 130	<0.50	ug/g	NC	50		
5159358	Methyl t-butyl ether (MTBE)	2017/09/13	92	60 - 140	90	60 - 130	<0.050	ug/g	NC	50		
5159358	Methylene Chloride(Dichloromethane)	2017/09/13	100	60 - 140	97	60 - 130	<0.050	ug/g	NC	50		
5159358	o-Xylene	2017/09/13	94	60 - 140	92	60 - 130	<0.020	ug/g	NC	50		
5159358	p+m-Xylene	2017/09/13	97	60 - 140	94	60 - 130	<0.020	ug/g	NC	50		

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A Bureau Veritas Group Company

Maxxam Job #: B7J4925
Report Date: 2017/09/22

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5159358	Styrene	2017/09/13	96	60 - 140	94	60 - 130	<0.050	ug/g	NC	50		
5159358	Tetrachloroethylene	2017/09/13	95	60 - 140	90	60 - 130	<0.050	ug/g	NC	50		
5159358	Toluene	2017/09/13	93	60 - 140	89	60 - 130	<0.020	ug/g	NC	50		
5159358	Total Xylenes	2017/09/13					<0.020	ug/g	NC	50		
5159358	trans-1,2-Dichloroethylene	2017/09/13	98	60 - 140	92	60 - 130	<0.050	ug/g	NC	50		
5159358	trans-1,3-Dichloropropene	2017/09/13	85	60 - 140	86	60 - 130	<0.040	ug/g	NC	50		
5159358	Trichloroethylene	2017/09/13	95	60 - 140	91	60 - 130	<0.050	ug/g	NC	50		
5159358	Trichlorofluoromethane (FREON 11)	2017/09/13	97	60 - 140	93	60 - 130	<0.050	ug/g	NC	50		
5159358	Vinyl Chloride	2017/09/13	78	60 - 140	93	60 - 130	<0.020	ug/g	NC	50		
5176135	a-Chlordane	2017/09/22	100	50 - 130	102	50 - 130	<0.0020	ug/g	NC	40		
5176135	Aldrin	2017/09/22	96	50 - 130	96	50 - 130	<0.0020	ug/g	NC	40		
5176135	Aroclor 1242	2017/09/22					<0.015	ug/g	NC	40		
5176135	Aroclor 1248	2017/09/22					<0.015	ug/g	NC	40		
5176135	Aroclor 1254	2017/09/22					<0.015	ug/g	NC	40		
5176135	Aroclor 1260	2017/09/22					<0.015	ug/g	NC	40		
5176135	Dieldrin	2017/09/22	107	50 - 130	127	50 - 130	<0.0020	ug/g	NC	40		
5176135	Endosulfan I (alpha)	2017/09/22	100	50 - 130	109	50 - 130	<0.0020	ug/g	NC	40		
5176135	Endosulfan II (beta)	2017/09/22	101	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40		
5176135	Endrin	2017/09/22	104	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5176135	g-Chlordane	2017/09/22	97	50 - 130	95	50 - 130	<0.0020	ug/g	NC	40		
5176135	Heptachlor epoxide	2017/09/22	99	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5176135	Heptachlor	2017/09/22	100	50 - 130	100	50 - 130	<0.0020	ug/g	NC	40		
5176135	Hexachlorobenzene	2017/09/22	100	50 - 130	95	50 - 130	<0.0020	ug/g	NC	40		
5176135	Hexachlorobutadiene	2017/09/22	84	50 - 130	98	50 - 130	<0.0020	ug/g	NC	40		
5176135	Hexachloroethane	2017/09/22	68	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40		
5176135	Lindane	2017/09/22	97	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40		
5176135	Methoxychlor	2017/09/22	154 (3)	50 - 130	138 (3)	50 - 130	<0.0050	ug/g	NC	40		
5176135	o,p-DDD	2017/09/22	106	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5176135	o,p-DDE	2017/09/22	103	50 - 130	106	50 - 130	<0.0020	ug/g	NC	40		
5176135	o,p-DDT	2017/09/22	119	50 - 130	111	50 - 130	<0.0020	ug/g	NC	40		
5176135	p,p-DDD	2017/09/22	122	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5176135	p,p-DDE	2017/09/22	91	50 - 130	116	50 - 130	<0.0020	ug/g	0.62	40		
5176135	p,p-DDT	2017/09/22	117	50 - 130	114	50 - 130	<0.0020	ug/g	NC	40		

N/A = Not Applicable

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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 spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

(1) The 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.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(3) Surrogate recovery was above the upper control limit due to matrix interference. This may represent a high bias in some results.

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exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

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 Service 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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Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-C0
Site Location: BLAIR
Your C.O.C. #: n/a

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/11/07
Report #: R4834183
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7O6106
Received: 2017/11/02, 16:29

Sample Matrix: Soil
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Moisture	1	N/A	2017/11/06	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (1)	1	2017/11/03	2017/11/05	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	1	N/A	2017/11/07	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.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
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

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Your Project #: HAM-00801245-C0
Site Location: BLAIR
Your C.O.C. #: n/a

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/11/07
Report #: R4834183
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7O6106
Received: 2017/11/02, 16:29

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

==========

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

RESULTS OF ANALYSES OF SOIL

Maxxam ID		FLX856		
Sampling Date		2017/09/06 10:10		
COC Number		n/a		
	UNITS	**BH101-S3**	**RDL**	**QC Batch**
Inorganics				
Moisture	%	20	1.0	5250864

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FLX856		
Sampling Date		2017/09/06 10:10		
COC Number		n/a		
	UNITS	**BH101-S3**	**RDL**	**QC Batch**
Calculated Parameters				
Chlordane (Total)	ug/g	<0.0020	0.0020	5246901
o,p-DDD + p,p-DDD	ug/g	<0.0020	0.0020	5246901
o,p-DDE + p,p-DDE	ug/g	0.0073	0.0020	5246901
o,p-DDT + p,p-DDT	ug/g	<0.0020	0.0020	5246901
Total Endosulfan	ug/g	<0.0020	0.0020	5246901
Total PCB	ug/g	<0.015	0.015	5246901
Pesticides & Herbicides				
Aldrin	ug/g	<0.0020	0.0020	5248270
a-Chlordane	ug/g	<0.0020	0.0020	5248270
g-Chlordane	ug/g	<0.0020	0.0020	5248270
o,p-DDD	ug/g	<0.0020	0.0020	5248270
p,p-DDD	ug/g	<0.0020	0.0020	5248270
o,p-DDE	ug/g	<0.0020	0.0020	5248270
p,p-DDE	ug/g	0.0073	0.0020	5248270
o,p-DDT	ug/g	<0.0020	0.0020	5248270
p,p-DDT	ug/g	<0.0020	0.0020	5248270
Dieldrin	ug/g	<0.0020	0.0020	5248270
Lindane	ug/g	<0.0020	0.0020	5248270
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	5248270
Endosulfan II (beta)	ug/g	<0.0020	0.0020	5248270
Endrin	ug/g	<0.0020	0.0020	5248270
Heptachlor	ug/g	<0.0020	0.0020	5248270
Heptachlor epoxide	ug/g	<0.0020	0.0020	5248270
Hexachlorobenzene	ug/g	<0.0020	0.0020	5248270
Hexachlorobutadiene	ug/g	<0.0020	0.0020	5248270
Hexachloroethane	ug/g	<0.0020	0.0020	5248270
Methoxychlor	ug/g	<0.0050	0.0050	5248270
Aroclor 1242	ug/g	<0.015	0.015	5248270
Aroclor 1248	ug/g	<0.015	0.015	5248270
Aroclor 1254	ug/g	<0.015	0.015	5248270
Aroclor 1260	ug/g	<0.015	0.015	5248270
Surrogate Recovery (%)				
2,4,5,6-Tetrachloro-m-xylene	%	79		5248270

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FLX856		
Sampling Date		2017/09/06 10:10		
COC Number		n/a		
	UNITS	**BH101-S3**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	100		5248270

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: FLX856
Sample ID: BH101-S3
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/11/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5250864	N/A	2017/11/06	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5248270	2017/11/03	2017/11/05	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5246901	N/A	2017/11/07	Automated Statchk

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Maxxam Job #: B7O6106
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exp Services Inc
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GENERAL COMMENTS

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

Package 1	7.7°C

Results relate only to the items tested.

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5248270	2,4,5,6-Tetrachloro-m-xylene	2017/11/05	89	50 - 130	79	50 - 130	84	%		
5248270	Decachlorobiphenyl	2017/11/05	112	50 - 130	107	50 - 130	111	%		
5248270	a-Chlordane	2017/11/05	110	50 - 130	96	50 - 130	<0.0020	ug/g	NC	40
5248270	Aldrin	2017/11/05	96	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40
5248270	Aroclor 1242	2017/11/05					<0.015	ug/g	NC	40
5248270	Aroclor 1248	2017/11/05					<0.015	ug/g	NC	40
5248270	Aroclor 1254	2017/11/05					<0.015	ug/g	NC	40
5248270	Aroclor 1260	2017/11/05					<0.015	ug/g	NC	40
5248270	Dieldrin	2017/11/05	126	50 - 130	115	50 - 130	<0.0020	ug/g	NC	40
5248270	Endosulfan I (alpha)	2017/11/05	89	50 - 130	83	50 - 130	<0.0020	ug/g	NC	40
5248270	Endosulfan II (beta)	2017/11/05	111	50 - 130	98	50 - 130	<0.0020	ug/g	NC	40
5248270	Endrin	2017/11/05	105	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40
5248270	g-Chlordane	2017/11/05	101	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40
5248270	Heptachlor epoxide	2017/11/05	108	50 - 130	98	50 - 130	<0.0020	ug/g	NC	40
5248270	Heptachlor	2017/11/05	96	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
5248270	Hexachlorobenzene	2017/11/05	94	50 - 130	82	50 - 130	<0.0020	ug/g	NC	40
5248270	Hexachlorobutadiene	2017/11/05	77	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40
5248270	Hexachloroethane	2017/11/05	53	50 - 130	73	50 - 130	<0.0020	ug/g	NC	40
5248270	Lindane	2017/11/05	87	50 - 130	79	50 - 130	<0.0020	ug/g	NC	40
5248270	Methoxychlor	2017/11/05	105	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
5248270	o,p-DDD	2017/11/05	118	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40
5248270	o,p-DDE	2017/11/05	101	50 - 130	93	50 - 130	<0.0020	ug/g	NC	40
5248270	o,p-DDT	2017/11/05	97	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
5248270	p,p-DDD	2017/11/05	115	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40
5248270	p,p-DDE	2017/11/05	119	50 - 130	105	50 - 130	<0.0020	ug/g	NC	40
5248270	p,p-DDT	2017/11/05	102	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5250864	Moisture	2017/11/06							1.4	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 (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 (absolute difference <= 2x RDL).

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

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 Service 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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Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-C0
Site Location: BLAIR
Your C.O.C. #: na

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/11/16
Report #: R4861359
Version: 3 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7O8915
Received: 2017/11/06, 15:57

Sample Matrix: Soil
Samples Received: 17

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Cyanide (WAD) in Leachates	1	N/A	2017/11/10	CAM SOP-00457	OMOE 3015 m
Fluoride by ISE in Leachates	1	2017/11/10	2017/11/10	CAM SOP-00449	SM 22 4500-F- C m
Mercury (TCLP Leachable) (mg/L)	1	N/A	2017/11/10	CAM SOP-00453	EPA 7470A m
Total Metals in TCLP Leachate by ICPMS	1	2017/11/10	2017/11/10	CAM SOP-00447	EPA 6020B m
Moisture	16	N/A	2017/11/09	CAM SOP-00445	Carter 2nd ed 51.2 m
Nitrate(NO3) + Nitrite(NO2) in Leachate	1	N/A	2017/11/10	CAM SOP-00440	SM 22 4500-NO3I/NO2B
OC Pesticides (Selected) & PCB (1)	9	2017/11/14	2017/11/15	CAM SOP-00307	SW846 8081, 8082
OC Pesticides (Selected) & PCB (1)	7	2017/11/15	2017/11/16	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	16	N/A	2017/11/10	CAM SOP-00307	EPA 8081/8082 m
Polychlorinated Biphenyl in Leachate	1	2017/11/10	2017/11/10	CAM SOP-00309	EPA 8082A m
TCLP - % Solids	1	2017/11/09	2017/11/10	CAM SOP-00401	EPA 1311 Update I m
TCLP - Extraction Fluid	1	N/A	2017/11/10	CAM SOP-00401	EPA 1311 Update I m
TCLP - Initial and final pH	1	N/A	2017/11/10	CAM SOP-00401	EPA 1311 Update I m
TCLP Zero Headspace Extraction	1	2017/11/09	2017/11/10	CAM SOP-00430	EPA 1311 m
VOCs in ZHE Leachates	1	2017/11/10	2017/11/10	CAM SOP-00228	EPA 8260C 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.

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Your Project #: HAM-00801245-C0
Site Location: BLAIR
Your C.O.C. #: na

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/11/16
Report #: R4861359
Version: 3 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7O8915
Received: 2017/11/06, 15:57

Results relate to samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

==========

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

RESULTS OF ANALYSES OF SOIL

Maxxam ID		FMO340	FMO341	FMO342	FMO343	FMO344	FMO345		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na	na		
	UNITS	**BH201 S2**	**BH201 S3**	**BH202 S2**	**BH202 S3**	**BH203 S2**	**BH203 S3**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	14	20	16	16	19	10	1.0	5257005

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FMO346	FMO347	FMO348	FMO348	FMO349	FMO350		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na	na		
	UNITS	**BH204 S2**	**BH204 S3**	**BH205 S2**	**BH205 S2 Lab-Dup**	**BH205 S3**	**BH206 S2**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	18	12	15	15	11	18	1.0	5257005

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

RESULTS OF ANALYSES OF SOIL

Maxxam ID		FMO351	FMO352	FMO353	FMO354	FMO355	FMO356		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na	na		
	UNITS	**BH206 S3**	**BH207 S2**	**BH207 S3**	**BH208 S2**	**BH208 S3**	**TCLP**	**RDL**	**QC Batch**
Charge/Prep Analysis									
Amount Extracted (Wet Weight) (g)	N/A						25	N/A	5256925
Inorganics									
Final pH	pH						5.30		5257881
Leachable Fluoride (F-)	mg/L						0.27	0.10	5259512
Initial pH	pH						9.12		5257881
Moisture	%	11	19	9.3	13	12		1.0	5257005
TCLP - % Solids	%						100	0.2	5257878
TCLP Extraction Fluid	N/A						FLUID 1		5257879
Leachable WAD Cyanide (Free)	mg/L						<0.010	0.010	5259514
Leachable Nitrite (N)	mg/L						<0.10	0.10	5259516
Leachable Nitrate (N)	mg/L						<1.0	1.0	5259516
Leachable Nitrate + Nitrite (N)	mg/L						<1.0	1.0	5259516
Metals									
Leachable Mercury (Hg)	mg/L						<0.0010	0.0010	5259413

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam ID		FMO356	
Sampling Date		2017/11/06	
COC Number		na	
	UNITS	**TCLP Lab-Dup**	**QC Batch**
Charge/Prep Analysis			
Amount Extracted (Wet Weight) (g)	N/A	25	5256925

QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		FMO356		
Sampling Date		2017/11/06		
COC Number		na		
	UNITS	**TCLP**	**RDL**	**QC Batch**
Metals				
Leachable Arsenic (As)	mg/L	<0.2	0.2	5259435
Leachable Barium (Ba)	mg/L	0.6	0.2	5259435
Leachable Boron (B)	mg/L	0.2	0.1	5259435
Leachable Cadmium (Cd)	mg/L	<0.05	0.05	5259435
Leachable Chromium (Cr)	mg/L	<0.1	0.1	5259435
Leachable Lead (Pb)	mg/L	<0.1	0.1	5259435
Leachable Selenium (Se)	mg/L	<0.1	0.1	5259435
Leachable Silver (Ag)	mg/L	<0.01	0.01	5259435
Leachable Uranium (U)	mg/L	<0.01	0.01	5259435

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		FMO356	FMO356		
Sampling Date		2017/11/06	2017/11/06		
COC Number		na	na		
	UNITS	**TCLP**	**TCLP Lab-Dup**	**RDL**	**QC Batch**
Volatile Organics					
Leachable Benzene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Carbon Tetrachloride	mg/L	<0.020	<0.020	0.020	5259176
Leachable Chlorobenzene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Chloroform	mg/L	<0.020	<0.020	0.020	5259176
Leachable 1,2-Dichlorobenzene	mg/L	<0.050	<0.050	0.050	5259176
Leachable 1,4-Dichlorobenzene	mg/L	<0.050	<0.050	0.050	5259176
Leachable 1,2-Dichloroethane	mg/L	<0.050	<0.050	0.050	5259176
Leachable 1,1-Dichloroethylene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Methylene Chloride(Dichloromethane)	mg/L	<0.20	<0.20	0.20	5259176
Leachable Methyl Ethyl Ketone (2-Butanone)	mg/L	<1.0	<1.0	1.0	5259176
Leachable Tetrachloroethylene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Trichloroethylene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Vinyl Chloride	mg/L	<0.020	<0.020	0.020	5259176
Surrogate Recovery (%)					
Leachable 4-Bromofluorobenzene	%	78	90		5259176
Leachable D4-1,2-Dichloroethane	%	116	117		5259176
Leachable D8-Toluene	%	91	91		5259176

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		FMO356		
Sampling Date		2017/11/06		
COC Number		na		
	UNITS	**TCLP**	**RDL**	**QC Batch**
PCBs				
Leachable Total PCB	ug/L	<3.0	3.0	5259459
Surrogate Recovery (%)				
Leachable Decachlorobiphenyl	%	96		5259459

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO340		FMO341		FMO342		FMO343		
Sampling Date		2017/11/06		2017/11/06		2017/11/06		2017/11/06		
COC Number		na		na		na		na		
	UNITS	**BH201 S2**	**RDL**	**BH201 S3**	**RDL**	**BH202 S2**	**RDL**	**BH202 S3**	**RDL**	**QC Batch**
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5252027
o,p-DDD + p,p-DDD	ug/g	0.17	0.020	0.025	0.0020	0.12	0.020	0.11	0.020	5252027
o,p-DDE + p,p-DDE	ug/g	0.26	0.020	0.047	0.020	0.25	0.020	0.22	0.020	5252027
o,p-DDT + p,p-DDT	ug/g	<0.0060	0.0060	<0.0020	0.0020	0.0023	0.0020	<0.0030	0.0030	5252027
Total Endosulfan	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5252027
Total PCB	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5252027
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
a-Chlordane	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
g-Chlordane	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
o,p-DDD	ug/g	0.045	0.020	0.0048	0.0020	0.025	0.0020	0.028	0.0020	5267348
p,p-DDD	ug/g	0.13	0.020	0.020	0.0020	0.094	0.020	0.083	0.020	5267348
o,p-DDE	ug/g	<0.0050	0.0050	<0.0020	0.0020	<0.0050	0.0050	<0.0050	0.0050	5267348
p,p-DDE	ug/g	0.26	0.020	0.047	0.020	0.25	0.020	0.22	0.020	5267348
o,p-DDT	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
p,p-DDT	ug/g	<0.0060	0.0060	<0.0020	0.0020	0.0023	0.0020	<0.0030	0.0030	5267348
Dieldrin	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Lindane	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Endosulfan II (beta)	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Endrin	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Heptachlor	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Heptachlor epoxide	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Hexachlorobenzene	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Hexachlorobutadiene	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Hexachloroethane	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Methoxychlor	ug/g	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	5267348
Aroclor 1242	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5267348
Aroclor 1248	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5267348
Aroclor 1254	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5267348
Aroclor 1260	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5267348
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	87		88		81		84		5267348

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO340		FMO341		FMO342		FMO343		
Sampling Date		2017/11/06		2017/11/06		2017/11/06		2017/11/06		
COC Number		na		na		na		na		
	UNITS	**BH201 S2**	**RDL**	**BH201 S3**	**RDL**	**BH202 S2**	**RDL**	**BH202 S3**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	108		104		98		102		5267348

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO344		FMO345			FMO346		
Sampling Date		2017/11/06		2017/11/06			2017/11/06		
COC Number		na		na			na		
	UNITS	**BH203 S2**	**QC Batch**	**BH203 S3**	**RDL**	**QC Batch**	**BH204 S2**	**RDL**	**QC Batch**
Calculated Parameters									
Chlordane (Total)	ug/g	<0.0020	5252027	<0.0020	0.0020	5252027	<0.0020	0.0020	5252027
o,p-DDD + p,p-DDD	ug/g	0.011	5252027	<0.0020	0.0020	5252027	0.060	0.020	5252027
o,p-DDE + p,p-DDE	ug/g	0.031	5252027	<0.0020	0.0020	5252027	0.14	0.020	5252027
o,p-DDT + p,p-DDT	ug/g	<0.0020	5252027	<0.0020	0.0020	5252027	<0.0040	0.0040	5252027
Total Endosulfan	ug/g	<0.0020	5252027	<0.0020	0.0020	5252027	<0.0030	0.0030	5252027
Total PCB	ug/g	<0.015	5252027	<0.015	0.015	5252027	<0.020	0.020	5252027
Pesticides & Herbicides									
Aldrin	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
a-Chlordane	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
g-Chlordane	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
o,p-DDD	ug/g	0.0028	5267348	<0.0020	0.0020	5265061	0.018	0.0020	5267348
p,p-DDD	ug/g	0.0079	5267348	<0.0020	0.0020	5265061	0.043	0.020	5267348
o,p-DDE	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0040	0.0040	5267348
p,p-DDE	ug/g	0.031	5267348	<0.0020	0.0020	5265061	0.14	0.020	5267348
o,p-DDT	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
p,p-DDT	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0040	0.0040	5267348
Dieldrin	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Lindane	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Endosulfan I (alpha)	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0030	0.0030	5267348
Endosulfan II (beta)	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Endrin	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Heptachlor	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Heptachlor epoxide	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Hexachlorobenzene	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Hexachlorobutadiene	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Hexachloroethane	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Methoxychlor	ug/g	<0.0050	5267348	<0.0050	0.0050	5265061	0.0061	0.0050	5267348
Aroclor 1242	ug/g	<0.015	5267348	<0.015	0.015	5265061	<0.020	0.020	5267348
Aroclor 1248	ug/g	<0.015	5267348	<0.015	0.015	5265061	<0.020	0.020	5267348
Aroclor 1254	ug/g	<0.015	5267348	<0.015	0.015	5265061	<0.020	0.020	5267348
Aroclor 1260	ug/g	<0.015	5267348	<0.015	0.015	5265061	<0.020	0.020	5267348
Surrogate Recovery (%)									
2,4,5,6-Tetrachloro-m-xylene	%	82	5267348	97		5265061	87		5267348

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO344		FMO345			FMO346		
Sampling Date		2017/11/06		2017/11/06			2017/11/06		
COC Number		na		na			na		
	UNITS	**BH203 S2**	**QC Batch**	**BH203 S3**	**RDL**	**QC Batch**	**BH204 S2**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	99	5267348	130		5265061	103		5267348

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO347		FMO348		FMO349	FMO350	FMO351		
Sampling Date		2017/11/06		2017/11/06		2017/11/06	2017/11/06	2017/11/06		
COC Number		na		na		na	na	na		
	UNITS	**BH204 S3**	**QC Batch**	**BH205 S2**	**QC Batch**	**BH205 S3**	**BH206 S2**	**BH206 S3**	**RDL**	**QC Batch**
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020	5252027	<0.0020	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDD + p,p-DDD	ug/g	<0.0020	5252027	<0.0020	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDE + p,p-DDE	ug/g	<0.0020	5252027	0.0027	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDT + p,p-DDT	ug/g	<0.0020	5252027	<0.0020	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
Total Endosulfan	ug/g	<0.0020	5252027	<0.0020	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
Total PCB	ug/g	<0.015	5252027	<0.015	5252027	<0.015	<0.015	<0.015	0.015	5252027
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
a-Chlordane	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
g-Chlordane	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDD	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDD	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDE	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDE	ug/g	<0.0020	5265061	0.0027	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDT	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDT	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Dieldrin	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Lindane	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endosulfan I (alpha)	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endosulfan II (beta)	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endrin	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Heptachlor	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Heptachlor epoxide	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachlorobenzene	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachlorobutadiene	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachloroethane	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Methoxychlor	ug/g	<0.0050	5265061	<0.0050	5267348	<0.0050	<0.0050	<0.0050	0.0050	5265061
Aroclor 1242	ug/g	<0.015	5265061	<0.015	5267348	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1248	ug/g	<0.015	5265061	<0.015	5267348	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1254	ug/g	<0.015	5265061	<0.015	5267348	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1260	ug/g	<0.015	5265061	<0.015	5267348	<0.015	<0.015	<0.015	0.015	5265061
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	88	5265061	85	5267348	94	109	104		5265061

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO347		FMO348		FMO349	FMO350	FMO351		
Sampling Date		2017/11/06		2017/11/06		2017/11/06	2017/11/06	2017/11/06		
COC Number		na		na		na	na	na		
	UNITS	**BH204 S3**	**QC Batch**	**BH205 S2**	**QC Batch**	**BH205 S3**	**BH206 S2**	**BH206 S3**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	116	5265061	105	5267348	124	111	112		5265061

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO351	FMO352	FMO353	FMO354	FMO355		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na		
	UNITS	**BH206 S3 Lab-Dup**	**BH207 S2**	**BH207 S3**	**BH208 S2**	**BH208 S3**	**RDL**	**QC Batch**
Calculated Parameters								
Chlordane (Total)	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDD + p,p-DDD	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDE + p,p-DDE	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDT + p,p-DDT	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
Total Endosulfan	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
Total PCB	ug/g		<0.015	<0.015	<0.015	<0.015	0.015	5252027
Pesticides & Herbicides								
Aldrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
a-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
g-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Dieldrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Lindane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Heptachlor	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Heptachlor epoxide	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachlorobenzene	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachloroethane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Methoxychlor	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5265061
Aroclor 1242	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1248	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1254	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1260	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	5265061

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO351	FMO352	FMO353	FMO354	FMO355		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na		
	UNITS	**BH206 S3 Lab-Dup**	**BH207 S2**	**BH207 S3**	**BH208 S2**	**BH208 S3**	**RDL**	**QC Batch**
Surrogate Recovery (%)								
2,4,5,6-Tetrachloro-m-xylene	%	93	93	89	94	81		5265061
Decachlorobiphenyl	%	116	114	120	113	119		5265061

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

TEST SUMMARY

Maxxam ID: FMO340
Sample ID: BH201 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO341
Sample ID: BH201 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO342
Sample ID: BH202 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO343
Sample ID: BH202 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO344
Sample ID: BH203 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

TEST SUMMARY

Maxxam ID: FMO345 **Collected:** 2017/11/06
Sample ID: BH203 S3 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO346 **Collected:** 2017/11/06
Sample ID: BH204 S2 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO347 **Collected:** 2017/11/06
Sample ID: BH204 S3 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO348 **Collected:** 2017/11/06
Sample ID: BH205 S2 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO348 Dup **Collected:** 2017/11/06
Sample ID: BH205 S2 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang

Maxxam ID: FMO349 **Collected:** 2017/11/06
Sample ID: BH205 S3 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

TEST SUMMARY

Maxxam ID: FMO349
Sample ID: BH205 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO350
Sample ID: BH206 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO351
Sample ID: BH206 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO351 Dup
Sample ID: BH206 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang

Maxxam ID: FMO352
Sample ID: BH207 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO353
Sample ID: BH207 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

TEST SUMMARY

Maxxam ID: FMO354
Sample ID: BH208 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO355
Sample ID: BH208 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO356
Sample ID: TCLP
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide (WAD) in Leachates	SKAL/CN	5259514	N/A	2017/11/10	Xuanhong Qiu
Fluoride by ISE in Leachates	ISE	5259512	2017/11/10	2017/11/10	Surinder Rai
Mercury (TCLP Leachable) (mg/L)	CV/AA	5259413	N/A	2017/11/10	Ron Morrison
Total Metals in TCLP Leachate by ICPMS	ICP1/MS	5259435	2017/11/10	2017/11/10	Arefa Dabhad
Nitrate(NO3) + Nitrite(NO2) in Leachate	LACH	5259516	N/A	2017/11/10	Chandra Nandlal
Polychlorinated Biphenyl in Leachate	GC/ECD	5259459	2017/11/10	2017/11/10	Dawn Alarie
TCLP - % Solids	BAL	5257878	2017/11/09	2017/11/10	Jian (Ken) Wang
TCLP - Extraction Fluid		5257879	N/A	2017/11/10	Jian (Ken) Wang
TCLP - Initial and final pH	PH	5257881	N/A	2017/11/10	Jian (Ken) Wang
TCLP Zero Headspace Extraction		5256925	2017/11/09	2017/11/10	Walt Wang
VOCs in ZHE Leachates	GC/MS	5259176	2017/11/10	2017/11/10	Blair Gannon

Maxxam ID: FMO356 Dup
Sample ID: TCLP
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TCLP Zero Headspace Extraction		5256925	2017/11/09	2017/11/10	Walt Wang
VOCs in ZHE Leachates	GC/MS	5259176	2017/11/10	2017/11/10	Blair Gannon

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

GENERAL COMMENTS

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

Package 1	8.0°C

Cooler custody seal was present and intact.

OC Pesticide Analysis: Due to high concentrations of the target analytes, some samples required dilution. Detection limits were adjusted accordingly. Detection limits for some parameters were raised due to matrix interferences.

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

OC Pesticides (Selected) & PCB: Matrix spike recoveries were above the upper control limits. This may represent a high bias in some results for this specific analytes. For results that were not detected (ND), this potential bias has no impact.

Results relate only to the items tested.

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
5259176	Leachable 4-Bromofluorobenzene	2017/11/10	88	70 - 130	104	70 - 130	91	%				
5259176	Leachable D4-1,2-Dichloroethane	2017/11/10	115	70 - 130	94	70 - 130	115	%				
5259176	Leachable D8-Toluene	2017/11/10	107	70 - 130	106	70 - 130	92	%				
5259459	Leachable Decachlorobiphenyl	2017/11/10	102	30 - 130	97	30 - 130	95	%				
5265061	2,4,5,6-Tetrachloro-m-xylene	2017/11/15	110	50 - 130	102	50 - 130	91	%				
5265061	Decachlorobiphenyl	2017/11/15	127	50 - 130	116	50 - 130	124	%				
5267348	2,4,5,6-Tetrachloro-m-xylene	2017/11/16	91	50 - 130	92	50 - 130	81	%				
5267348	Decachlorobiphenyl	2017/11/16	115	50 - 130	124	50 - 130	102	%				
5257005	Moisture	2017/11/09							5.4	20		
5259176	Leachable 1,1-Dichloroethylene	2017/11/10	106	70 - 130	105	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable 1,2-Dichlorobenzene	2017/11/10	100	70 - 130	99	70 - 130	<0.050	mg/L	NC	30		
5259176	Leachable 1,2-Dichloroethane	2017/11/10	95	70 - 130	95	70 - 130	<0.050	mg/L	NC	30		
5259176	Leachable 1,4-Dichlorobenzene	2017/11/10	103	70 - 130	102	70 - 130	<0.050	mg/L	NC	30		
5259176	Leachable Benzene	2017/11/10	111	70 - 130	109	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Carbon Tetrachloride	2017/11/10	97	70 - 130	96	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Chlorobenzene	2017/11/10	101	70 - 130	99	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Chloroform	2017/11/10	97	70 - 130	96	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Methyl Ethyl Ketone (2-Butanone)	2017/11/10	97	60 - 140	97	60 - 140	<1.0	mg/L	NC	30		
5259176	Leachable Methylene Chloride(Dichloromethane)	2017/11/10	103	70 - 130	102	70 - 130	<0.20	mg/L	NC	30		
5259176	Leachable Tetrachloroethylene	2017/11/10	96	70 - 130	95	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Trichloroethylene	2017/11/10	98	70 - 130	97	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Vinyl Chloride	2017/11/10	95	70 - 130	93	70 - 130	<0.020	mg/L	NC	30		
5259413	Leachable Mercury (Hg)	2017/11/10	99	75 - 125	96	80 - 120	<0.0010	mg/L	NC	25	<0.0010	mg/L
5259435	Leachable Arsenic (As)	2017/11/10	101	80 - 120	102	80 - 120			NC	35	<0.2	mg/L
5259435	Leachable Barium (Ba)	2017/11/10	99	80 - 120	105	80 - 120			3.6	35	<0.2	mg/L
5259435	Leachable Boron (B)	2017/11/10	107	80 - 120	104	80 - 120			NC	35	<0.1	mg/L
5259435	Leachable Cadmium (Cd)	2017/11/10	105	80 - 120	105	80 - 120			NC	35	<0.05	mg/L
5259435	Leachable Chromium (Cr)	2017/11/10	100	80 - 120	103	80 - 120			NC	35	<0.1	mg/L
5259435	Leachable Lead (Pb)	2017/11/10	100	80 - 120	102	80 - 120			NC	35	<0.1	mg/L
5259435	Leachable Selenium (Se)	2017/11/10	102	80 - 120	105	80 - 120			NC	35	<0.1	mg/L

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
5259435	Leachable Silver (Ag)	2017/11/10	102	80 - 120	104	80 - 120			NC	35	<0.01	mg/L
5259435	Leachable Uranium (U)	2017/11/10	102	80 - 120	100	80 - 120			NC	35	<0.01	mg/L
5259459	Leachable Total PCB	2017/11/10	104	30 - 130	99	30 - 130	<3.0	ug/L	NC	40		
5259512	Leachable Fluoride (F-)	2017/11/10	98	80 - 120	98	80 - 120	<0.10	mg/L	24	25	<0.10	mg/L
5259514	Leachable WAD Cyanide (Free)	2017/11/10	96	80 - 120	100	80 - 120	<0.0020	mg/L	NC	20	<0.010	mg/L
5259516	Leachable Nitrate (N)	2017/11/10	112	80 - 120	106	80 - 120	<1.0	mg/L	NC	25	<1.0	mg/L
5259516	Leachable Nitrate + Nitrite (N)	2017/11/10	110	80 - 120	106	80 - 120	<1.0	mg/L	NC	25	<1.0	mg/L
5259516	Leachable Nitrite (N)	2017/11/10	105	80 - 120	102	80 - 120	<0.10	mg/L	NC	25	<0.10	mg/L
5265061	a-Chlordane	2017/11/15	137 (1)	50 - 130	100	50 - 130	<0.0020	ug/g	NC	40		
5265061	Aldrin	2017/11/15	100	50 - 130	91	50 - 130	<0.0020	ug/g	NC	40		
5265061	Aroclor 1242	2017/11/15					<0.015	ug/g	NC	40		
5265061	Aroclor 1248	2017/11/15					<0.015	ug/g	NC	40		
5265061	Aroclor 1254	2017/11/15					<0.015	ug/g	NC	40		
5265061	Aroclor 1260	2017/11/15					<0.015	ug/g	NC	40		
5265061	Dieldrin	2017/11/15	155 (1)	50 - 130	117	50 - 130	<0.0020	ug/g	NC	40		
5265061	Endosulfan I (alpha)	2017/11/15	128	50 - 130	102	50 - 130	<0.0020	ug/g	NC	40		
5265061	Endosulfan II (beta)	2017/11/15	146 (1)	50 - 130	105	50 - 130	<0.0020	ug/g	NC	40		
5265061	Endrin	2017/11/15	133 (1)	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40		
5265061	g-Chlordane	2017/11/15	129	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40		
5265061	Heptachlor epoxide	2017/11/15	129	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40		
5265061	Heptachlor	2017/11/15	93	50 - 130	93	50 - 130	<0.0020	ug/g	NC	40		
5265061	Hexachlorobenzene	2017/11/15	120	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40		
5265061	Hexachlorobutadiene	2017/11/15	85	50 - 130	96	50 - 130	<0.0020	ug/g	NC	40		
5265061	Hexachloroethane	2017/11/15	65	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40		
5265061	Lindane	2017/11/15	113	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40		
5265061	Methoxychlor	2017/11/15	172 (1)	50 - 130	105	50 - 130	<0.0050	ug/g	NC	40		
5265061	o,p-DDD	2017/11/15	148 (1)	50 - 130	110	50 - 130	<0.0020	ug/g	NC	40		
5265061	o,p-DDE	2017/11/15	102	50 - 130	99	50 - 130	<0.0020	ug/g	NC	40		
5265061	o,p-DDT	2017/11/15	126	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40		
5265061	p,p-DDD	2017/11/15	150 (1)	50 - 130	109	50 - 130	<0.0020	ug/g	NC	40		
5265061	p,p-DDE	2017/11/15	108	50 - 130	104	50 - 130	<0.0020	ug/g	NC	40		

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
5265061	p,p-DDT	2017/11/15	123	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40		
5267348	a-Chlordane	2017/11/16	117	50 - 130	114	50 - 130	<0.0020	ug/g	NC	40		
5267348	Aldrin	2017/11/16	88	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40		
5267348	Aroclor 1242	2017/11/16					<0.015	ug/g	NC	40		
5267348	Aroclor 1248	2017/11/16					<0.015	ug/g				
5267348	Aroclor 1254	2017/11/16					<0.015	ug/g				
5267348	Aroclor 1260	2017/11/16					<0.015	ug/g				
5267348	Dieldrin	2017/11/16	125	50 - 130	130 (2)	50 - 130	<0.0020	ug/g	NC	40		
5267348	Endosulfan I (alpha)	2017/11/16	124	50 - 130	133 (2)	50 - 130	<0.0020	ug/g	NC	40		
5267348	Endosulfan II (beta)	2017/11/16	125	50 - 130	122	50 - 130	<0.0020	ug/g	NC	40		
5267348	Endrin	2017/11/16	100	50 - 130	103	50 - 130	<0.0020	ug/g	NC	40		
5267348	g-Chlordane	2017/11/16	112	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5267348	Heptachlor epoxide	2017/11/16	101	50 - 130	104	50 - 130	<0.0020	ug/g	NC	40		
5267348	Heptachlor	2017/11/16	88	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40		
5267348	Hexachlorobenzene	2017/11/16	99	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40		
5267348	Hexachlorobutadiene	2017/11/16	98	50 - 130	105	50 - 130	<0.0020	ug/g	NC	40		
5267348	Hexachloroethane	2017/11/16	65	50 - 130	73	50 - 130	<0.0020	ug/g	NC	40		
5267348	Lindane	2017/11/16	86	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40		
5267348	Methoxychlor	2017/11/16	110	50 - 130	114	50 - 130	<0.0050	ug/g	NC	40		
5267348	o,p-DDD	2017/11/16	118	50 - 130	122	50 - 130	<0.0020	ug/g	NC	40		
5267348	o,p-DDE	2017/11/16	95	50 - 130	89	50 - 130	<0.0020	ug/g	NC	40		
5267348	o,p-DDT	2017/11/16	83	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40		
5267348	p,p-DDD	2017/11/16	113	50 - 130	121	50 - 130	<0.0020	ug/g	NC	40		
5267348	p,p-DDE	2017/11/16	107	50 - 130	102	50 - 130	<0.0020	ug/g	5.4	40		

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
5267348	p,p-DDT	2017/11/16	83	50 - 130	91	50 - 130	<0.0020	ug/g	1.3	40		

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.

Leachate Blank: A blank matrix containing all reagents used in the leaching procedure. Used to determine any process contamination.

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 (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) The 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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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

VALIDATION SIGNATURE PAGE

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

Cristina Carriere, Scientific Service Specialist

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

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Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-G0
Site Location: Blair
Your C.O.C. #: 39772

Attention: Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
CANADA L8E 2W5

Report Date: 2018/06/27
Report #: R5268354
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F2998
Received: 2018/06/21, 16:30

Sample Matrix: Soil
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	2	N/A	2018/06/25		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Soil (1)	2	2018/06/22	2018/06/23	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	2	2018/06/25	2018/06/26	CAM SOP-00447	EPA 6020B m
Moisture	4	N/A	2018/06/22	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (2)	2	2018/06/25	2018/06/26	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	2	N/A	2018/06/23	CAM SOP-00307	EPA 8081/8082 m
Volatile Organic Compounds and F1 PHCs	2	N/A	2018/06/24	CAM SOP-00230	EPA 8260C 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.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(2) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Your Project #: HAM-00801245-G0
Site Location: Blair
Your C.O.C. #: 39772

Attention: Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
CANADA L8E 2W5

Report Date: 2018/06/27
Report #: R5268354
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F2998
Received: 2018/06/21, 16:30

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

==========

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

RESULTS OF ANALYSES OF SOIL

Maxxam ID		HAH072		HAH073		HAH074		HAH075		
Sampling Date		2018/06/20 10:20		2018/06/20 10:40		2018/06/20 10:25		2018/06/20 10:45		
COC Number		39772		39772		39772		39772		
	UNITS	**BH107 SS1**	**QC Batch**	**BH107 SS4**	**QC Batch**	**BH701 SS1**	**QC Batch**	**BH701 SS4**	**RDL**	**QC Batch**
Inorganics										
Moisture	%	11	5594936	7.6	5594347	12	5594936	8.3	1.0	5594347

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		HAH072	HAH074		
Sampling Date		2018/06/20 10:20	2018/06/20 10:25		
COC Number		39772	39772		
	UNITS	**BH107 SS1**	**BH701 SS1**	**RDL**	**QC Batch**
Metals					
Acid Extractable Antimony (Sb)	ug/g	0.22	<0.20	0.20	5596887
Acid Extractable Arsenic (As)	ug/g	4.8	5.9	1.0	5596887
Acid Extractable Barium (Ba)	ug/g	160	130	0.50	5596887
Acid Extractable Beryllium (Be)	ug/g	0.67	0.69	0.20	5596887
Acid Extractable Boron (B)	ug/g	10	9.8	5.0	5596887
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.13	0.10	5596887
Acid Extractable Chromium (Cr)	ug/g	20	20	1.0	5596887
Acid Extractable Cobalt (Co)	ug/g	12	13	0.10	5596887
Acid Extractable Copper (Cu)	ug/g	35	35	0.50	5596887
Acid Extractable Lead (Pb)	ug/g	11	12	1.0	5596887
Acid Extractable Molybdenum (Mo)	ug/g	0.55	0.61	0.50	5596887
Acid Extractable Nickel (Ni)	ug/g	26	27	0.50	5596887
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	0.50	5596887
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	0.20	5596887
Acid Extractable Thallium (Tl)	ug/g	0.15	0.12	0.050	5596887
Acid Extractable Uranium (U)	ug/g	0.60	0.61	0.050	5596887
Acid Extractable Vanadium (V)	ug/g	28	29	5.0	5596887
Acid Extractable Zinc (Zn)	ug/g	62	62	5.0	5596887

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		HAH073	HAH075		
Sampling Date		2018/06/20 10:40	2018/06/20 10:45		
COC Number		39772	39772		
	UNITS	**BH107 SS4**	**BH701 SS4**	**RDL**	**QC Batch**
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	5592897
Volatile Organics					
Acetone (2-Propanone)	ug/g	<0.50	<0.50	0.50	5594579
Benzene	ug/g	<0.020	<0.020	0.020	5594579
Bromodichloromethane	ug/g	<0.050	<0.050	0.050	5594579
Bromoform	ug/g	<0.050	<0.050	0.050	5594579
Bromomethane	ug/g	<0.050	<0.050	0.050	5594579
Carbon Tetrachloride	ug/g	<0.050	<0.050	0.050	5594579
Chlorobenzene	ug/g	<0.050	<0.050	0.050	5594579
Chloroform	ug/g	<0.050	<0.050	0.050	5594579
Dibromochloromethane	ug/g	<0.050	<0.050	0.050	5594579
1,2-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5594579
1,3-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5594579
1,4-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5594579
Dichlorodifluoromethane (FREON 12)	ug/g	<0.050	<0.050	0.050	5594579
1,1-Dichloroethane	ug/g	<0.050	<0.050	0.050	5594579
1,2-Dichloroethane	ug/g	<0.050	<0.050	0.050	5594579
1,1-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5594579
cis-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5594579
trans-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5594579
1,2-Dichloropropane	ug/g	<0.050	<0.050	0.050	5594579
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	5594579
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	5594579
Ethylbenzene	ug/g	<0.020	<0.020	0.020	5594579
Ethylene Dibromide	ug/g	<0.050	<0.050	0.050	5594579
Hexane	ug/g	<0.050	<0.050	0.050	5594579
Methylene Chloride(Dichloromethane)	ug/g	<0.050	<0.050	0.050	5594579
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.50	<0.50	0.50	5594579
Methyl Isobutyl Ketone	ug/g	<0.50	<0.50	0.50	5594579
Methyl t-butyl ether (MTBE)	ug/g	<0.050	<0.050	0.050	5594579
Styrene	ug/g	<0.050	<0.050	0.050	5594579
1,1,1,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	5594579
1,1,2,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	5594579

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		HAH073	HAH075		
Sampling Date		2018/06/20 10:40	2018/06/20 10:45		
COC Number		39772	39772		
	UNITS	**BH107 SS4**	**BH701 SS4**	**RDL**	**QC Batch**
Tetrachloroethylene	ug/g	<0.050	<0.050	0.050	5594579
Toluene	ug/g	<0.020	<0.020	0.020	5594579
1,1,1-Trichloroethane	ug/g	<0.050	<0.050	0.050	5594579
1,1,2-Trichloroethane	ug/g	<0.050	<0.050	0.050	5594579
Trichloroethylene	ug/g	<0.050	<0.050	0.050	5594579
Trichlorofluoromethane (FREON 11)	ug/g	<0.050	<0.050	0.050	5594579
Vinyl Chloride	ug/g	<0.020	<0.020	0.020	5594579
p+m-Xylene	ug/g	<0.020	<0.020	0.020	5594579
o-Xylene	ug/g	<0.020	<0.020	0.020	5594579
Total Xylenes	ug/g	<0.020	<0.020	0.020	5594579
F1 (C6-C10)	ug/g	<10	<10	10	5594579
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	5594579
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	95	95		5594579
D10-o-Xylene	%	112	113		5594579
D4-1,2-Dichloroethane	%	96	98		5594579
D8-Toluene	%	104	103		5594579

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		HAH073	HAH075		
Sampling Date		2018/06/20 10:40	2018/06/20 10:45		
COC Number		39772	39772		
	UNITS	**BH107 SS4**	**BH701 SS4**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	5594430
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	5594430
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	5594430
Reached Baseline at C50	ug/g	Yes	Yes		5594430
Surrogate Recovery (%)					
o-Terphenyl	%	92	91		5594430

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		HAH072	HAH074		
Sampling Date		2018/06/20 10:20	2018/06/20 10:25		
COC Number		39772	39772		
	UNITS	**BH107 SS1**	**BH701 SS1**	**RDL**	**QC Batch**
Calculated Parameters					
Chlordane (Total)	ug/g	<0.0020	<0.0020	0.0020	5592217
o,p-DDD + p,p-DDD	ug/g	<0.0020	<0.0020	0.0020	5592217
o,p-DDE + p,p-DDE	ug/g	<0.0020	<0.0020	0.0020	5592217
o,p-DDT + p,p-DDT	ug/g	<0.0020	<0.0020	0.0020	5592217
Total Endosulfan	ug/g	<0.0020	<0.0020	0.0020	5592217
Total PCB	ug/g	<0.015	<0.015	0.015	5592217
Pesticides & Herbicides					
Aldrin	ug/g	<0.0020	<0.0020	0.0020	5596865
a-Chlordane	ug/g	<0.0020	<0.0020	0.0020	5596865
g-Chlordane	ug/g	<0.0020	<0.0020	0.0020	5596865
o,p-DDD	ug/g	<0.0020	<0.0020	0.0020	5596865
p,p-DDD	ug/g	<0.0020	<0.0020	0.0020	5596865
o,p-DDE	ug/g	<0.0020	<0.0020	0.0020	5596865
p,p-DDE	ug/g	<0.0020	<0.0020	0.0020	5596865
o,p-DDT	ug/g	<0.0020	<0.0020	0.0020	5596865
p,p-DDT	ug/g	<0.0020	<0.0020	0.0020	5596865
Dieldrin	ug/g	<0.0020	<0.0020	0.0020	5596865
Lindane	ug/g	<0.0020	<0.0020	0.0020	5596865
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	0.0020	5596865
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	0.0020	5596865
Endrin	ug/g	<0.0020	<0.0020	0.0020	5596865
Heptachlor	ug/g	<0.0020	<0.0020	0.0020	5596865
Heptachlor epoxide	ug/g	<0.0020	<0.0020	0.0020	5596865
Hexachlorobenzene	ug/g	<0.0020	<0.0020	0.0020	5596865
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	0.0020	5596865
Hexachloroethane	ug/g	<0.0020	<0.0020	0.0020	5596865
Methoxychlor	ug/g	<0.0050	<0.0050	0.0050	5596865
Aroclor 1242	ug/g	<0.015	<0.015	0.015	5596865
Aroclor 1248	ug/g	<0.015	<0.015	0.015	5596865
Aroclor 1254	ug/g	<0.015	<0.015	0.015	5596865
Aroclor 1260	ug/g	<0.015	<0.015	0.015	5596865
Surrogate Recovery (%)					
2,4,5,6-Tetrachloro-m-xylene	%	78	78		5596865

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		HAH072	HAH074		
Sampling Date		2018/06/20 10:20	2018/06/20 10:25		
COC Number		39772	39772		
	UNITS	**BH107 SS1**	**BH701 SS1**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	101	94		5596865

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: HAH072
Sample ID: BH107 SS1
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5596887	2018/06/25	2018/06/26	Viviana Canzonieri
Moisture	BAL	5594936	N/A	2018/06/22	Gargi Gireesh
OC Pesticides (Selected) & PCB	GC/ECD	5596865	2018/06/25	2018/06/26	Li Peng
OC Pesticides Summed Parameters	CALC	5592217	N/A	2018/06/23	Automated Statchk

Maxxam ID: HAH073
Sample ID: BH107 SS4
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5592897	N/A	2018/06/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5594430	2018/06/22	2018/06/23	Zhiyue (Frank) Zhu
Moisture	BAL	5594347	N/A	2018/06/22	Gargi Gireesh
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5594579	N/A	2018/06/24	Anna Gabrielyan

Maxxam ID: HAH074
Sample ID: BH701 SS1
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5596887	2018/06/25	2018/06/26	Viviana Canzonieri
Moisture	BAL	5594936	N/A	2018/06/22	Gargi Gireesh
OC Pesticides (Selected) & PCB	GC/ECD	5596865	2018/06/25	2018/06/26	Li Peng
OC Pesticides Summed Parameters	CALC	5592217	N/A	2018/06/23	Automated Statchk

Maxxam ID: HAH075
Sample ID: BH701 SS4
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5592897	N/A	2018/06/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5594430	2018/06/22	2018/06/23	Zhiyue (Frank) Zhu
Moisture	BAL	5594347	N/A	2018/06/22	Gargi Gireesh
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5594579	N/A	2018/06/24	Anna Gabrielyan

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

GENERAL COMMENTS

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

Package 1	1.7°C

Results relate only to the items tested.

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Maxxam Job #: B8F2998
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QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5594430	o-Terphenyl	2018/06/23	96	60 - 130	92	60 - 130	91	%		
5594579	4-Bromofluorobenzene	2018/06/23	102	60 - 140	97	60 - 140	95	%		
5594579	D10-o-Xylene	2018/06/23	112	60 - 130	89	60 - 130	109	%		
5594579	D4-1,2-Dichloroethane	2018/06/23	109	60 - 140	101	60 - 140	99	%		
5594579	D8-Toluene	2018/06/23	97	60 - 140	104	60 - 140	102	%		
5596865	2,4,5,6-Tetrachloro-m-xylene	2018/06/25	75	50 - 130	79	50 - 130	67	%		
5596865	Decachlorobiphenyl	2018/06/25	112	50 - 130	109	50 - 130	95	%		
5594347	Moisture	2018/06/22							2.2	20
5594430	F2 (C10-C16 Hydrocarbons)	2018/06/23	100	50 - 130	96	80 - 120	<10	ug/g	NC	30
5594430	F3 (C16-C34 Hydrocarbons)	2018/06/23	94	50 - 130	88	80 - 120	<50	ug/g	NC	30
5594430	F4 (C34-C50 Hydrocarbons)	2018/06/23	87	50 - 130	83	80 - 120	<50	ug/g	NC	30
5594579	1,1,1,2-Tetrachloroethane	2018/06/23	100	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	1,1,1-Trichloroethane	2018/06/23	115	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
5594579	1,1,2,2-Tetrachloroethane	2018/06/23	95	60 - 140	93	60 - 130	<0.050	ug/g	NC	50
5594579	1,1,2-Trichloroethane	2018/06/23	105	60 - 140	101	60 - 130	<0.050	ug/g	NC	50
5594579	1,1-Dichloroethane	2018/06/23	118	60 - 140	101	60 - 130	<0.050	ug/g	NC	50
5594579	1,1-Dichloroethylene	2018/06/23	120	60 - 140	101	60 - 130	<0.050	ug/g	NC	50
5594579	1,2-Dichlorobenzene	2018/06/23	93	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	1,2-Dichloroethane	2018/06/23	113	60 - 140	99	60 - 130	<0.050	ug/g	NC	50
5594579	1,2-Dichloropropane	2018/06/23	118	60 - 140	101	60 - 130	<0.050	ug/g	NC	50
5594579	1,3-Dichlorobenzene	2018/06/23	98	60 - 140	97	60 - 130	<0.050	ug/g	NC	50
5594579	1,4-Dichlorobenzene	2018/06/23	97	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
5594579	Acetone (2-Propanone)	2018/06/23	112	60 - 140	93	60 - 140	<0.50	ug/g	NC	50
5594579	Benzene	2018/06/23	118	60 - 140	99	60 - 130	<0.020	ug/g	NC	50
5594579	Bromodichloromethane	2018/06/23	107	60 - 140	93	60 - 130	<0.050	ug/g	NC	50
5594579	Bromoform	2018/06/23	86	60 - 140	83	60 - 130	<0.050	ug/g	NC	50
5594579	Bromomethane	2018/06/23	112	60 - 140	96	60 - 140	<0.050	ug/g	NC	50
5594579	Carbon Tetrachloride	2018/06/23	113	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Chlorobenzene	2018/06/23	103	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Chloroform	2018/06/23	114	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
5594579	cis-1,2-Dichloroethylene	2018/06/23	111	60 - 140	95	60 - 130	<0.050	ug/g	NC	50

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Maxxam Job #: B8F2998
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QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5594579	cis-1,3-Dichloropropene	2018/06/23	104	60 - 140	90	60 - 130	<0.030	ug/g	NC	50
5594579	Dibromochloromethane	2018/06/23	94	60 - 140	90	60 - 130	<0.050	ug/g	NC	50
5594579	Dichlorodifluoromethane (FREON 12)	2018/06/23	107	60 - 140	91	60 - 140	<0.050	ug/g	NC	50
5594579	Ethylbenzene	2018/06/23	108	60 - 140	100	60 - 130	<0.020	ug/g	NC	50
5594579	Ethylene Dibromide	2018/06/23	98	60 - 140	94	60 - 130	<0.050	ug/g	NC	50
5594579	F1 (C6-C10) - BTEX	2018/06/23					<10	ug/g	NC	30
5594579	F1 (C6-C10)	2018/06/23	100	60 - 140	85	80 - 120	<10	ug/g	NC	30
5594579	Hexane	2018/06/23	120	60 - 140	100	60 - 130	<0.050	ug/g	NC	50
5594579	Methyl Ethyl Ketone (2-Butanone)	2018/06/23	109	60 - 140	92	60 - 140	<0.50	ug/g	NC	50
5594579	Methyl Isobutyl Ketone	2018/06/23	104	60 - 140	90	60 - 130	<0.50	ug/g	NC	50
5594579	Methyl t-butyl ether (MTBE)	2018/06/23	112	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Methylene Chloride(Dichloromethane)	2018/06/23	116	60 - 140	100	60 - 130	<0.050	ug/g	NC	50
5594579	o-Xylene	2018/06/23	106	60 - 140	98	60 - 130	<0.020	ug/g	NC	50
5594579	p+m-Xylene	2018/06/23	105	60 - 140	96	60 - 130	<0.020	ug/g	NC	50
5594579	Styrene	2018/06/23	103	60 - 140	95	60 - 130	<0.050	ug/g	NC	50
5594579	Tetrachloroethylene	2018/06/23	104	60 - 140	96	60 - 130	<0.050	ug/g	3.0	50
5594579	Toluene	2018/06/23	104	60 - 140	97	60 - 130	<0.020	ug/g	NC	50
5594579	Total Xylenes	2018/06/23					<0.020	ug/g	NC	50
5594579	trans-1,2-Dichloroethylene	2018/06/23	116	60 - 140	99	60 - 130	<0.050	ug/g	NC	50
5594579	trans-1,3-Dichloropropene	2018/06/23	96	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
5594579	Trichloroethylene	2018/06/23	114	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Trichlorofluoromethane (FREON 11)	2018/06/23	112	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Vinyl Chloride	2018/06/23	119	60 - 140	100	60 - 130	<0.020	ug/g	NC	50
5594936	Moisture	2018/06/22							1.9	20
5596865	a-Chlordane	2018/06/25	76	50 - 130	77	50 - 130	<0.0020	ug/g	NC	40
5596865	Aldrin	2018/06/25	70	50 - 130	72	50 - 130	<0.0020	ug/g	NC	40
5596865	Aroclor 1242	2018/06/25					<0.015	ug/g	200 (1)	40
5596865	Aroclor 1248	2018/06/25					<0.015	ug/g		
5596865	Aroclor 1254	2018/06/25					<0.015	ug/g		
5596865	Aroclor 1260	2018/06/25					<0.015	ug/g		
5596865	Dieldrin	2018/06/25	70	50 - 130	75	50 - 130	<0.0020	ug/g	NC	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5596865	Endosulfan I (alpha)	2018/06/25	56	50 - 130	58	50 - 130	<0.0020	ug/g	NC	40
5596865	Endosulfan II (beta)	2018/06/25	63	50 - 130	66	50 - 130	<0.0020	ug/g	NC	40
5596865	Endrin	2018/06/25	61	50 - 130	67	50 - 130	<0.0020	ug/g	NC	40
5596865	g-Chlordane	2018/06/25	67	50 - 130	72	50 - 130	<0.0020	ug/g	NC	40
5596865	Heptachlor epoxide	2018/06/25	67	50 - 130	62	50 - 130	<0.0020	ug/g	NC	40
5596865	Heptachlor	2018/06/25	75	50 - 130	74	50 - 130	<0.0020	ug/g	NC	40
5596865	Hexachlorobenzene	2018/06/25	83	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40
5596865	Hexachlorobutadiene	2018/06/25	91	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40
5596865	Hexachloroethane	2018/06/25	73	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
5596865	Lindane	2018/06/25	62	50 - 130	70	50 - 130	<0.0020	ug/g	NC	40
5596865	Methoxychlor	2018/06/25	79	50 - 130	85	50 - 130	<0.0050	ug/g	NC	40
5596865	o,p-DDD	2018/06/25	80	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40
5596865	o,p-DDE	2018/06/25	94	50 - 130	69	50 - 130	<0.0020	ug/g	NC	40
5596865	o,p-DDT	2018/06/25	84	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
5596865	p,p-DDD	2018/06/25	63	50 - 130	68	50 - 130	<0.0020	ug/g	NC	40
5596865	p,p-DDE	2018/06/25	82	50 - 130	74	50 - 130	<0.0020	ug/g	NC	40
5596865	p,p-DDT	2018/06/25	80	50 - 130	81	50 - 130	<0.0020	ug/g	NC	40
5596887	Acid Extractable Antimony (Sb)	2018/06/26	88	75 - 125	103	80 - 120	<0.20	ug/g	13	30
5596887	Acid Extractable Arsenic (As)	2018/06/26	98	75 - 125	106	80 - 120	<1.0	ug/g	5.2	30
5596887	Acid Extractable Barium (Ba)	2018/06/26	NC	75 - 125	103	80 - 120	<0.50	ug/g	1.1	30
5596887	Acid Extractable Beryllium (Be)	2018/06/26	101	75 - 125	101	80 - 120	<0.20	ug/g	0.75	30
5596887	Acid Extractable Boron (B)	2018/06/26	93	75 - 125	97	80 - 120	<5.0	ug/g	2.7	30
5596887	Acid Extractable Cadmium (Cd)	2018/06/26	101	75 - 125	103	80 - 120	<0.10	ug/g	NC	30
5596887	Acid Extractable Chromium (Cr)	2018/06/26	102	75 - 125	102	80 - 120	<1.0	ug/g	1.2	30
5596887	Acid Extractable Cobalt (Co)	2018/06/26	98	75 - 125	104	80 - 120	<0.10	ug/g	0.90	30
5596887	Acid Extractable Copper (Cu)	2018/06/26	NC	75 - 125	103	80 - 120	<0.50	ug/g	4.2	30
5596887	Acid Extractable Lead (Pb)	2018/06/26	97	75 - 125	105	80 - 120	<1.0	ug/g	1.0	30
5596887	Acid Extractable Molybdenum (Mo)	2018/06/26	97	75 - 125	100	80 - 120	<0.50	ug/g	9.0	30
5596887	Acid Extractable Nickel (Ni)	2018/06/26	NC	75 - 125	104	80 - 120	<0.50	ug/g	0.45	30
5596887	Acid Extractable Selenium (Se)	2018/06/26	102	75 - 125	106	80 - 120	<0.50	ug/g	NC	30
5596887	Acid Extractable Silver (Ag)	2018/06/26	99	75 - 125	103	80 - 120	<0.20	ug/g	NC	30

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5596887	Acid Extractable Thallium (Tl)	2018/06/26	99	75 - 125	106	80 - 120	<0.050	ug/g	0.74	30
5596887	Acid Extractable Uranium (U)	2018/06/26	100	75 - 125	103	80 - 120	<0.050	ug/g	2.1	30
5596887	Acid Extractable Vanadium (V)	2018/06/26	NC	75 - 125	104	80 - 120	<5.0	ug/g	0.19	30
5596887	Acid Extractable Zinc (Zn)	2018/06/26	NC	75 - 125	104	80 - 120	<5.0	ug/g	0.78	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 (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Job #: B8F2998
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exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

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 Service 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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Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-G0
Site Location: Blair
Your C.O.C. #: 670515-01-01

Attention: Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
CANADA L8E 2W5

Report Date: 2018/07/04
Report #: R5279996
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F9367
Received: 2018/06/27, 16:25

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	4	N/A	2018/07/03		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Water (1)	4	2018/06/29	2018/07/03	CAM SOP-00316	CCME PHC-CWS m
Dissolved Metals by ICPMS	4	N/A	2018/07/03	CAM SOP-00447	EPA 6020B m
OC Pesticides (Selected) & PCB (2)	4	2018/06/29	2018/07/01	CAM SOP-00307	EPA 8081A/8082B m
OC Pesticides Summed Parameters	4	N/A	2018/07/03	CAM SOP-00307	EPA 8081A/8082B m
Volatile Organic Compounds and F1 PHCs	5	N/A	2018/06/30	CAM SOP-00230	EPA 8260C 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.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(2) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Your Project #: HAM-00801245-G0
Site Location: Blair
Your C.O.C. #: 670515-01-01

Attention: Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
CANADA L8E 2W5

Report Date: 2018/07/04
Report #: R5279996
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F9367
Received: 2018/06/27, 16:25

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

==========

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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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Metals							
Dissolved Antimony (Sb)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5603788
Dissolved Arsenic (As)	ug/L	13	1.3	3.9	13	1.0	5603788
Dissolved Barium (Ba)	ug/L	690	260	48	690	2.0	5603788
Dissolved Beryllium (Be)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5603788
Dissolved Boron (B)	ug/L	130	320	5000	130	10	5603788
Dissolved Cadmium (Cd)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	5603788
Dissolved Chromium (Cr)	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	5603788
Dissolved Cobalt (Co)	ug/L	3.6	0.55	<0.50	3.6	0.50	5603788
Dissolved Copper (Cu)	ug/L	<1.0	1.5	<1.0	<1.0	1.0	5603788
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5603788
Dissolved Molybdenum (Mo)	ug/L	1.2	22	59	1.2	0.50	5603788
Dissolved Nickel (Ni)	ug/L	3.7	3.1	2.3	3.8	1.0	5603788
Dissolved Selenium (Se)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	5603788
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	5603788
Dissolved Thallium (Tl)	ug/L	<0.050	<0.050	0.052	<0.050	0.050	5603788
Dissolved Uranium (U)	ug/L	2.5	42	5.1	2.5	0.10	5603788
Dissolved Vanadium (V)	ug/L	0.99	1.8	1.4	0.97	0.50	5603788
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	5603788

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5603227
Volatile Organics							
Acetone (2-Propanone)	ug/L	<10	<10	24	<10	10	5600881
Benzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Bromodichloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Bromoform	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	5600881
Bromomethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Carbon Tetrachloride	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Chlorobenzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Chloroform	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Dibromochloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	5600881
1,1-Dichloroethane	ug/L	<0.20	<0.20	0.22	<0.20	0.20	5600881
1,2-Dichloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	<0.30	0.30	5600881
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	5600881
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Ethylene Dibromide	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Hexane	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	5600881
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	5600881
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	<10	<10	10	5600881
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	5600881
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Styrene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Tetrachloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Toluene	ug/L	<0.20	<0.20	0.28	<0.20	0.20	5600881
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
p+m-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
o-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Total Xylenes	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
F1 (C6-C10)	ug/L	<25	<25	<25	<25	25	5600881
F1 (C6-C10) - BTEX	ug/L	<25	<25	<25	<25	25	5600881
Surrogate Recovery (%)							
4-Bromofluorobenzene	%	95	96	95	97		5600881
D4-1,2-Dichloroethane	%	100	103	102	102		5600881
D8-Toluene	%	99	100	101	99		5600881

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (WATER)

Maxxam ID		HBQ664		
Sampling Date		2018/06/26		
COC Number		670515-01-01		
	UNITS	**TRIP SPIKE**	**RDL**	**QC Batch**
Volatile Organics				
Acetone (2-Propanone)	ug/L	90	10	5600881
Benzene	ug/L	90	0.20	5600881
Bromodichloromethane	ug/L	85	0.50	5600881
Bromoform	ug/L	80	1.0	5600881
Bromomethane	ug/L	90	0.50	5600881
Carbon Tetrachloride	ug/L	90	0.20	5600881
Chlorobenzene	ug/L	85	0.20	5600881
Chloroform	ug/L	90	0.20	5600881
Dibromochloromethane	ug/L	80	0.50	5600881
1,2-Dichlorobenzene	ug/L	85	0.50	5600881
1,3-Dichlorobenzene	ug/L	80	0.50	5600881
1,4-Dichlorobenzene	ug/L	75	0.50	5600881
Dichlorodifluoromethane (FREON 12)	ug/L	90	1.0	5600881
1,1-Dichloroethane	ug/L	95	0.20	5600881
1,2-Dichloroethane	ug/L	90	0.50	5600881
1,1-Dichloroethylene	ug/L	95	0.20	5600881
cis-1,2-Dichloroethylene	ug/L	90	0.50	5600881
trans-1,2-Dichloroethylene	ug/L	90	0.50	5600881
1,2-Dichloropropane	ug/L	90	0.20	5600881
cis-1,3-Dichloropropene	ug/L	60	0.30	5600881
trans-1,3-Dichloropropene	ug/L	60	0.40	5600881
Ethylbenzene	ug/L	85	0.20	5600881
Ethylene Dibromide	ug/L	90	0.20	5600881
Hexane	ug/L	50	1.0	5600881
Methylene Chloride(Dichloromethane)	ug/L	100	2.0	5600881
Methyl Ethyl Ketone (2-Butanone)	ug/L	80	10	5600881
Methyl Isobutyl Ketone	ug/L	75	5.0	5600881
Methyl t-butyl ether (MTBE)	ug/L	95	0.50	5600881
Styrene	ug/L	80	0.50	5600881
1,1,1,2-Tetrachloroethane	ug/L	85	0.50	5600881
1,1,2,2-Tetrachloroethane	ug/L	85	0.50	5600881
Tetrachloroethylene	ug/L	85	0.20	5600881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (WATER)

Maxxam ID		HBQ664		
Sampling Date		2018/06/26		
COC Number		670515-01-01		
	UNITS	**TRIP SPIKE**	**RDL**	**QC Batch**
Toluene	ug/L	85	0.20	5600881
1,1,1-Trichloroethane	ug/L	90	0.20	5600881
1,1,2-Trichloroethane	ug/L	90	0.50	5600881
Trichloroethylene	ug/L	90	0.20	5600881
Trichlorofluoromethane (FREON 11)	ug/L	95	0.50	5600881
Vinyl Chloride	ug/L	90	0.20	5600881
p+m-Xylene	ug/L	75	0.20	5600881
o-Xylene	ug/L	85	0.20	5600881
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	97		5600881
D4-1,2-Dichloroethane	%	101		5600881
D8-Toluene	%	101		5600881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Site Location: Blair
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PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	<100	<100	100	5605863
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	<200	<200	200	5605863
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	<200	<200	200	5605863
Reached Baseline at C50	ug/L	Yes	Yes	Yes	Yes		5605863
Surrogate Recovery (%)							
o-Terphenyl	%	95	94	90	90		5605863

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

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Site Location: Blair
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Calculated Parameters							
Chlordane (Total)	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
o,p-DDD + p,p-DDD	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
o,p-DDE + p,p-DDE	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
o,p-DDT + p,p-DDT	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
Total Endosulfan	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
Total PCB	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5603187
Pesticides & Herbicides							
Aldrin	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Dieldrin	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
a-Chlordane	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
g-Chlordane	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
o,p-DDD	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
p,p-DDD	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
o,p-DDE	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
p,p-DDE	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
o,p-DDT	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
p,p-DDT	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Lindane	ug/L	<0.003	<0.003	<0.003	<0.003	0.003	5605830
Endosulfan I (alpha)	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Endosulfan II (beta)	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Endrin	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Heptachlor	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Heptachlor epoxide	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Hexachlorobenzene	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Hexachlorobutadiene	ug/L	<0.009	<0.009	<0.009	<0.009	0.009	5605830
Hexachloroethane	ug/L	<0.01	<0.01	<0.01	<0.01	0.01	5605830
Methoxychlor	ug/L	<0.01	<0.01	<0.01	<0.01	0.01	5605830
Aroclor 1242	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5605830
Aroclor 1248	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5605830
Aroclor 1254	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5605830
Aroclor 1260	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5605830
Surrogate Recovery (%)							
2,4,5,6-Tetrachloro-m-xylene	%	71	68	65	69		5605830

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	110	95	91	91		5605830

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: HBQ660
Sample ID: MW101
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5603227	N/A	2018/07/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5605863	2018/06/29	2018/07/03	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	5603788	N/A	2018/07/03	Arefa Dabhad
OC Pesticides (Selected) & PCB	GC/ECD	5605830	2018/06/29	2018/07/01	Li Peng
OC Pesticides Summed Parameters	CALC	5603187	N/A	2018/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

Maxxam ID: HBQ661
Sample ID: MW102
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5603227	N/A	2018/07/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5605863	2018/06/29	2018/07/03	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	5603788	N/A	2018/07/03	Arefa Dabhad
OC Pesticides (Selected) & PCB	GC/ECD	5605830	2018/06/29	2018/07/01	Li Peng
OC Pesticides Summed Parameters	CALC	5603187	N/A	2018/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

Maxxam ID: HBQ662
Sample ID: MW107
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5603227	N/A	2018/07/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5605863	2018/06/29	2018/07/03	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	5603788	N/A	2018/07/03	Arefa Dabhad
OC Pesticides (Selected) & PCB	GC/ECD	5605830	2018/06/29	2018/07/01	Li Peng
OC Pesticides Summed Parameters	CALC	5603187	N/A	2018/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

Maxxam ID: HBQ663
Sample ID: MW111
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5603227	N/A	2018/07/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5605863	2018/06/29	2018/07/03	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	5603788	N/A	2018/07/03	Arefa Dabhad
OC Pesticides (Selected) & PCB	GC/ECD	5605830	2018/06/29	2018/07/01	Li Peng
OC Pesticides Summed Parameters	CALC	5603187	N/A	2018/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: HBQ664
Sample ID: TRIP SPIKE
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

GENERAL COMMENTS

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

Package 1	4.3°C

Sample HBQ664 [TRIP SPIKE] : VOCF1 Analysis: Trip Spike results are expressed as percent recoveries.

Results relate only to the items tested.

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Report Date: 2018/07/04

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5600881	4-Bromofluorobenzene	2018/06/30	100	70 - 130	100	70 - 130	96	%		
5600881	D4-1,2-Dichloroethane	2018/06/30	101	70 - 130	100	70 - 130	99	%		
5600881	D8-Toluene	2018/06/30	100	70 - 130	101	70 - 130	101	%		
5605830	2,4,5,6-Tetrachloro-m-xylene	2018/06/30	62	50 - 130	51	50 - 130	50	%		
5605830	Decachlorobiphenyl	2018/06/30	104	50 - 130	95	50 - 130	100	%		
5605863	o-Terphenyl	2018/07/03	100	60 - 130	94	60 - 130	92	%		
5600881	1,1,1,2-Tetrachloroethane	2018/06/30	93	70 - 130	91	70 - 130	<0.50	ug/L	NC	30
5600881	1,1,1-Trichloroethane	2018/06/30	99	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
5600881	1,1,2,2-Tetrachloroethane	2018/06/30	92	70 - 130	93	70 - 130	<0.50	ug/L	NC	30
5600881	1,1,2-Trichloroethane	2018/06/30	95	70 - 130	94	70 - 130	<0.50	ug/L	NC	30
5600881	1,1-Dichloroethane	2018/06/30	101	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
5600881	1,1-Dichloroethylene	2018/06/30	102	70 - 130	99	70 - 130	<0.20	ug/L	NC	30
5600881	1,2-Dichlorobenzene	2018/06/30	92	70 - 130	90	70 - 130	<0.50	ug/L	NC	30
5600881	1,2-Dichloroethane	2018/06/30	99	70 - 130	97	70 - 130	<0.50	ug/L	NC	30
5600881	1,2-Dichloropropane	2018/06/30	97	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
5600881	1,3-Dichlorobenzene	2018/06/30	93	70 - 130	89	70 - 130	<0.50	ug/L	NC	30
5600881	1,4-Dichlorobenzene	2018/06/30	95	70 - 130	91	70 - 130	<0.50	ug/L	NC	30
5600881	Acetone (2-Propanone)	2018/06/30	104	60 - 140	118	60 - 140	<10	ug/L	NC	30
5600881	Benzene	2018/06/30	98	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
5600881	Bromodichloromethane	2018/06/30	95	70 - 130	92	70 - 130	<0.50	ug/L	NC	30
5600881	Bromoform	2018/06/30	92	70 - 130	91	70 - 130	<1.0	ug/L	NC	30
5600881	Bromomethane	2018/06/30	86	60 - 140	84	60 - 140	<0.50	ug/L	NC	30
5600881	Carbon Tetrachloride	2018/06/30	100	70 - 130	97	70 - 130	<0.20	ug/L	NC	30
5600881	Chlorobenzene	2018/06/30	92	70 - 130	89	70 - 130	<0.20	ug/L	NC	30
5600881	Chloroform	2018/06/30	98	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
5600881	cis-1,2-Dichloroethylene	2018/06/30	99	70 - 130	97	70 - 130	<0.50	ug/L	NC	30
5600881	cis-1,3-Dichloropropene	2018/06/30	78	70 - 130	77	70 - 130	<0.30	ug/L	NC	30
5600881	Dibromochloromethane	2018/06/30	90	70 - 130	88	70 - 130	<0.50	ug/L	NC	30
5600881	Dichlorodifluoromethane (FREON 12)	2018/06/30	94	60 - 140	93	60 - 140	<1.0	ug/L	NC	30
5600881	Ethylbenzene	2018/06/30	92	70 - 130	89	70 - 130	<0.20	ug/L	NC	30
5600881	Ethylene Dibromide	2018/06/30	96	70 - 130	96	70 - 130	<0.20	ug/L	NC	30

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5600881	F1 (C6-C10) - BTEX	2018/06/30					<25	ug/L	NC	30
5600881	F1 (C6-C10)	2018/06/30	93	60 - 140	99	60 - 140	<25	ug/L	NC	30
5600881	Hexane	2018/06/30	95	70 - 130	93	70 - 130	<1.0	ug/L	NC	30
5600881	Methyl Ethyl Ketone (2-Butanone)	2018/06/30	95	60 - 140	103	60 - 140	<10	ug/L	NC	30
5600881	Methyl Isobutyl Ketone	2018/06/30	90	70 - 130	92	70 - 130	<5.0	ug/L	NC	30
5600881	Methyl t-butyl ether (MTBE)	2018/06/30	101	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
5600881	Methylene Chloride(Dichloromethane)	2018/06/30	107	70 - 130	104	70 - 130	<2.0	ug/L	NC	30
5600881	o-Xylene	2018/06/30	93	70 - 130	90	70 - 130	<0.20	ug/L	NC	30
5600881	p+m-Xylene	2018/06/30	89	70 - 130	86	70 - 130	<0.20	ug/L	NC	30
5600881	Styrene	2018/06/30	89	70 - 130	89	70 - 130	<0.50	ug/L	NC	30
5600881	Tetrachloroethylene	2018/06/30	96	70 - 130	92	70 - 130	<0.20	ug/L	NC	30
5600881	Toluene	2018/06/30	93	70 - 130	90	70 - 130	<0.20	ug/L	NC	30
5600881	Total Xylenes	2018/06/30					<0.20	ug/L	NC	30
5600881	trans-1,2-Dichloroethylene	2018/06/30	101	70 - 130	96	70 - 130	<0.50	ug/L	NC	30
5600881	trans-1,3-Dichloropropene	2018/06/30	77	70 - 130	76	70 - 130	<0.40	ug/L	NC	30
5600881	Trichloroethylene	2018/06/30	99	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
5600881	Trichlorofluoromethane (FREON 11)	2018/06/30	105	70 - 130	103	70 - 130	<0.50	ug/L	NC	30
5600881	Vinyl Chloride	2018/06/30	100	70 - 130	93	70 - 130	<0.20	ug/L	NC	30
5603788	Dissolved Antimony (Sb)	2018/07/03	106	80 - 120	102	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Arsenic (As)	2018/07/03	102	80 - 120	100	80 - 120	<1.0	ug/L	NC	20
5603788	Dissolved Barium (Ba)	2018/07/03	105	80 - 120	99	80 - 120	<2.0	ug/L	1.8	20
5603788	Dissolved Beryllium (Be)	2018/07/03	99	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Boron (B)	2018/07/03	101	80 - 120	96	80 - 120	<10	ug/L	1.1	20
5603788	Dissolved Cadmium (Cd)	2018/07/03	97	80 - 120	101	80 - 120	<0.10	ug/L	NC	20
5603788	Dissolved Chromium (Cr)	2018/07/03	101	80 - 120	97	80 - 120	<5.0	ug/L	NC	20
5603788	Dissolved Cobalt (Co)	2018/07/03	103	80 - 120	103	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Copper (Cu)	2018/07/03	106	80 - 120	102	80 - 120	<1.0	ug/L	NC	20
5603788	Dissolved Lead (Pb)	2018/07/03	89	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Molybdenum (Mo)	2018/07/03	115	80 - 120	104	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Nickel (Ni)	2018/07/03	96	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
5603788	Dissolved Selenium (Se)	2018/07/03	98	80 - 120	102	80 - 120	<2.0	ug/L	NC	20

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5603788	Dissolved Silver (Ag)	2018/07/03	92	80 - 120	98	80 - 120	<0.10	ug/L	NC	20
5603788	Dissolved Thallium (Tl)	2018/07/03	89	80 - 120	99	80 - 120	<0.050	ug/L	NC	20
5603788	Dissolved Uranium (U)	2018/07/03	93	80 - 120	100	80 - 120	<0.10	ug/L	0	20
5603788	Dissolved Vanadium (V)	2018/07/03	107	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Zinc (Zn)	2018/07/03	90	80 - 120	101	80 - 120	<5.0	ug/L	NC	20
5605830	a-Chlordane	2018/06/30	98	50 - 130	85	50 - 130	<0.005	ug/L		
5605830	Aldrin	2018/06/30	79	50 - 130	71	50 - 130	<0.005	ug/L		
5605830	Aroclor 1242	2018/06/30					<0.05	ug/L	200 (1)	30
5605830	Aroclor 1248	2018/06/30					<0.05	ug/L		
5605830	Aroclor 1254	2018/06/30					<0.05	ug/L		
5605830	Aroclor 1260	2018/06/30					<0.05	ug/L		
5605830	Dieldrin	2018/06/30	112	50 - 130	97	50 - 130	<0.005	ug/L		
5605830	Endosulfan I (alpha)	2018/06/30	99	50 - 130	89	50 - 130	<0.005	ug/L		
5605830	Endosulfan II (beta)	2018/06/30	100	50 - 130	88	50 - 130	<0.005	ug/L		
5605830	Endrin	2018/06/30	98	50 - 130	84	50 - 130	<0.005	ug/L		
5605830	g-Chlordane	2018/06/30	94	50 - 130	82	50 - 130	<0.005	ug/L		
5605830	Heptachlor epoxide	2018/06/30	103	50 - 130	84	50 - 130	<0.005	ug/L		
5605830	Heptachlor	2018/06/30	76	50 - 130	68	50 - 130	<0.005	ug/L		
5605830	Hexachlorobenzene	2018/06/30	92	50 - 130	85	50 - 130	<0.005	ug/L		
5605830	Hexachlorobutadiene	2018/06/30	78	50 - 130	73	50 - 130	<0.009	ug/L		
5605830	Hexachloroethane	2018/06/30	65	50 - 130	61	50 - 130	<0.01	ug/L		
5605830	Lindane	2018/06/30	84	50 - 130	74	50 - 130	<0.003	ug/L		
5605830	Methoxychlor	2018/06/30	100	50 - 130	90	50 - 130	<0.01	ug/L		
5605830	o,p-DDD	2018/06/30	112	50 - 130	95	50 - 130	<0.005	ug/L		
5605830	o,p-DDE	2018/06/30	94	50 - 130	82	50 - 130	<0.005	ug/L		
5605830	o,p-DDT	2018/06/30	96	50 - 130	82	50 - 130	<0.005	ug/L	NC	30
5605830	p,p-DDD	2018/06/30	105	50 - 130	89	50 - 130	<0.005	ug/L		
5605830	p,p-DDE	2018/06/30	98	50 - 130	85	50 - 130	<0.005	ug/L		
5605830	p,p-DDT	2018/06/30	89	50 - 130	77	50 - 130	<0.005	ug/L	NC	30
5605863	F2 (C10-C16 Hydrocarbons)	2018/07/03	NC	50 - 130	92	60 - 130	<100	ug/L	NC	30
5605863	F3 (C16-C34 Hydrocarbons)	2018/07/03	NC	50 - 130	93	60 - 130	<200	ug/L	NC	30

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5605863	F4 (C34-C50 Hydrocarbons)	2018/07/03	102	50 - 130	86	60 - 130	<200	ug/L	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 (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

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 Service 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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Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your C.O.C. #: 700832-01-01

Attention: David Mably

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/01/28
Report #: R5573960
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B920220
Received: 2019/01/23, 15:15

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	4	N/A	2019/01/25		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Soil (1)	4	2019/01/24	2019/01/25	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	4	2019/01/25	2019/01/25	CAM SOP-00447	EPA 6020B m
Moisture	4	N/A	2019/01/24	CAM SOP-00445	Carter 2nd ed 51.2 m
Volatile Organic Compounds and F1 PHCs	1	N/A	2019/01/24	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds and F1 PHCs	3	N/A	2019/01/25	CAM SOP-00230	EPA 8260C 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

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. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

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Your Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your C.O.C. #: 700832-01-01

Attention: David Mably

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/01/28
Report #: R5573960
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B920220
Received: 2019/01/23, 15:15

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Tanya Fidlin, Project Manager
Email: tfidlin@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 #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

O.REG 153 ICPMS METALS (SOIL)

Maxxam ID		IVD623	IVD624	IVD626	IVD628		
Sampling Date		2019/01/22 11:00	2019/01/22 11:00	2019/01/22 13:30	2019/01/22 16:00		
COC Number		700832-01-01	700832-01-01	700832-01-01	700832-01-01		
	UNITS	BH301-SS1	BH301-SS11	BH302-SS1	BH303-SS1	RDL	QC Batch
Metals							
Acid Extractable Antimony (Sb)	ug/g	0.24	0.21	0.33	0.27	0.20	5945600
Acid Extractable Arsenic (As)	ug/g	7.8	10	13	7.7	1.0	5945600
Acid Extractable Barium (Ba)	ug/g	97	83	100	94	0.50	5945600
Acid Extractable Beryllium (Be)	ug/g	0.83	0.63	0.74	0.80	0.20	5945600
Acid Extractable Boron (B)	ug/g	7.9	6.0	6.2	6.9	5.0	5945600
Acid Extractable Cadmium (Cd)	ug/g	0.19	0.23	0.29	0.25	0.10	5945600
Acid Extractable Chromium (Cr)	ug/g	24	18	20	23	1.0	5945600
Acid Extractable Cobalt (Co)	ug/g	12	9.8	11	13	0.10	5945600
Acid Extractable Copper (Cu)	ug/g	32	25	23	26	0.50	5945600
Acid Extractable Lead (Pb)	ug/g	30	43	57	32	1.0	5945600
Acid Extractable Molybdenum (Mo)	ug/g	0.71	0.76	0.66	0.67	0.50	5945600
Acid Extractable Nickel (Ni)	ug/g	26	20	20	25	0.50	5945600
Acid Extractable Selenium (Se)	ug/g	ND	ND	ND	ND	0.50	5945600
Acid Extractable Silver (Ag)	ug/g	ND	ND	ND	ND	0.20	5945600
Acid Extractable Thallium (Tl)	ug/g	0.17	0.14	0.14	0.15	0.050	5945600
Acid Extractable Uranium (U)	ug/g	0.73	0.65	0.89	0.57	0.050	5945600
Acid Extractable Vanadium (V)	ug/g	34	29	31	33	5.0	5945600
Acid Extractable Zinc (Zn)	ug/g	72	63	78	83	5.0	5945600

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Maxxam ID		IVD625	IVD627	IVD629	IVD630		
Sampling Date		2019/01/22 11:00	2019/01/22 13:30	2019/01/22 16:00	2019/01/22 16:00		
COC Number		700832-01-01	700832-01-01	700832-01-01	700832-01-01		
	UNITS	BH301-SS4	BH302-SS4	BH303-SS4	BH303-SS44	RDL	QC Batch
Inorganics							
Moisture	%	13	11	16	18	1.0	5943826
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/g	ND	ND	ND	ND	0.050	5941727
Volatile Organics							
Acetone (2-Propanone)	ug/g	ND	ND	ND	ND	0.50	5944584
Benzene	ug/g	ND	ND	ND	ND	0.020	5944584
Bromodichloromethane	ug/g	ND	ND	ND	ND	0.050	5944584
Bromoform	ug/g	ND	ND	ND	ND	0.050	5944584
Bromomethane	ug/g	ND	ND	ND	ND	0.050	5944584
Carbon Tetrachloride	ug/g	ND	ND	ND	ND	0.050	5944584
Chlorobenzene	ug/g	ND	ND	ND	ND	0.050	5944584
Chloroform	ug/g	ND	ND	ND	ND	0.050	5944584
Dibromochloromethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,2-Dichlorobenzene	ug/g	ND	ND	ND	ND	0.050	5944584
1,3-Dichlorobenzene	ug/g	ND	ND	ND	ND	0.050	5944584
1,4-Dichlorobenzene	ug/g	ND	ND	ND	ND	0.050	5944584
Dichlorodifluoromethane (FREON 12)	ug/g	ND	ND	ND	ND	0.050	5944584
1,1-Dichloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,2-Dichloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,1-Dichloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
cis-1,2-Dichloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
trans-1,2-Dichloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
1,2-Dichloropropane	ug/g	ND	ND	ND	ND	0.050	5944584
cis-1,3-Dichloropropene	ug/g	ND	ND	ND	ND	0.030	5944584
trans-1,3-Dichloropropene	ug/g	ND	ND	ND	ND	0.040	5944584
Ethylbenzene	ug/g	ND	ND	ND	ND	0.020	5944584
Ethylene Dibromide	ug/g	ND	ND	ND	ND	0.050	5944584
Hexane	ug/g	ND	ND	ND	ND	0.050	5944584
Methylene Chloride(Dichloromethane)	ug/g	ND	ND	ND	ND	0.050	5944584
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	ND	ND	ND	0.50	5944584

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Maxxam ID		IVD625	IVD627	IVD629	IVD630		
Sampling Date		2019/01/22 11:00	2019/01/22 13:30	2019/01/22 16:00	2019/01/22 16:00		
COC Number		700832-01-01	700832-01-01	700832-01-01	700832-01-01		
	UNITS	BH301-SS4	BH302-SS4	BH303-SS4	BH303-SS44	RDL	QC Batch
Methyl Isobutyl Ketone	ug/g	ND	ND	ND	ND	0.50	5944584
Methyl t-butyl ether (MTBE)	ug/g	ND	ND	ND	ND	0.050	5944584
Styrene	ug/g	ND	ND	ND	ND	0.050	5944584
1,1,1,2-Tetrachloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,1,2,2-Tetrachloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
Tetrachloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
Toluene	ug/g	ND	ND	ND	ND	0.020	5944584
1,1,1-Trichloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,1,2-Trichloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
Trichloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
Trichlorofluoromethane (FREON 11)	ug/g	ND	ND	ND	ND	0.050	5944584
Vinyl Chloride	ug/g	ND	ND	ND	ND	0.020	5944584
p+m-Xylene	ug/g	ND	ND	ND	ND	0.020	5944584
o-Xylene	ug/g	ND	ND	ND	ND	0.020	5944584
Total Xylenes	ug/g	ND	ND	ND	ND	0.020	5944584
F1 (C6-C10)	ug/g	ND	ND	ND	ND	10	5944584
F1 (C6-C10) - BTEX	ug/g	ND	ND	ND	ND	10	5944584
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	ND	ND	10	5945270
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	ND	ND	50	5945270
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND	ND	50	5945270
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		5945270
Surrogate Recovery (%)							
o-Terphenyl	%	89	92	93	92		5945270
4-Bromofluorobenzene	%	91	92	91	89		5944584
D10-o-Xylene	%	119	113	110	119		5944584
D4-1,2-Dichloroethane	%	100	99	100	100		5944584
D8-Toluene	%	103	103	103	104		5944584

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

TEST SUMMARY

Maxxam ID: IVD623 **Collected:** 2019/01/22
Sample ID: BH301-SS1 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5945600	2019/01/25	2019/01/25	Daniel Teclu

Maxxam ID: IVD624 **Collected:** 2019/01/22
Sample ID: BH301-SS11 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5945600	2019/01/25	2019/01/25	Daniel Teclu

Maxxam ID: IVD625 **Collected:** 2019/01/22
Sample ID: BH301-SS4 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5941727	N/A	2019/01/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5945270	2019/01/24	2019/01/25	Prabhjot Gulati
Moisture	BAL	5943826	N/A	2019/01/24	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5944584	N/A	2019/01/24	Yang (Philip) Yu

Maxxam ID: IVD626 **Collected:** 2019/01/22
Sample ID: BH302-SS1 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5945600	2019/01/25	2019/01/25	Daniel Teclu

Maxxam ID: IVD627 **Collected:** 2019/01/22
Sample ID: BH302-SS4 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5941727	N/A	2019/01/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5945270	2019/01/24	2019/01/25	Prabhjot Gulati
Moisture	BAL	5943826	N/A	2019/01/24	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5944584	N/A	2019/01/25	Yang (Philip) Yu

Maxxam ID: IVD628 **Collected:** 2019/01/22
Sample ID: BH303-SS1 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5945600	2019/01/25	2019/01/25	Daniel Teclu

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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

TEST SUMMARY

Maxxam ID: IVD629
Sample ID: BH303-SS4
Matrix: Soil

Collected: 2019/01/22
Shipped:
Received: 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5941727	N/A	2019/01/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5945270	2019/01/24	2019/01/25	Prabhjot Gulati
Moisture	BAL	5943826	N/A	2019/01/24	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5944584	N/A	2019/01/25	Yang (Philip) Yu

Maxxam ID: IVD630
Sample ID: BH303-SS44
Matrix: Soil

Collected: 2019/01/22
Shipped:
Received: 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5941727	N/A	2019/01/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5945270	2019/01/24	2019/01/25	Prabhjot Gulati
Moisture	BAL	5943826	N/A	2019/01/24	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5944584	N/A	2019/01/25	Yang (Philip) Yu

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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

GENERAL COMMENTS

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

Package 1	2.0°C

Cooler custody seal was present and intact.

Results relate only to the items tested.

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Maxxam Job #: B920220
Report Date: 2019/01/28

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5944584	4-Bromofluorobenzene	2019/01/24	95	60 - 140	95	60 - 140	91	%		
5944584	D10-o-Xylene	2019/01/24	117	60 - 130	101	60 - 130	102	%		
5944584	D4-1,2-Dichloroethane	2019/01/24	98	60 - 140	98	60 - 140	99	%		
5944584	D8-Toluene	2019/01/24	107	60 - 140	106	60 - 140	104	%		
5945270	o-Terphenyl	2019/01/25	96	60 - 130	98	60 - 130	98	%		
5943826	Moisture	2019/01/24							0	20
5944584	1,1,1,2-Tetrachloroethane	2019/01/24	98	60 - 140	94	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1,1-Trichloroethane	2019/01/24	94	60 - 140	94	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1,2,2-Tetrachloroethane	2019/01/24	101	60 - 140	97	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1,2-Trichloroethane	2019/01/24	112	60 - 140	107	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1-Dichloroethane	2019/01/24	108	60 - 140	108	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1-Dichloroethylene	2019/01/24	110	60 - 140	110	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,2-Dichlorobenzene	2019/01/24	100	60 - 140	97	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,2-Dichloroethane	2019/01/24	96	60 - 140	96	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,2-Dichloropropane	2019/01/24	107	60 - 140	106	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,3-Dichlorobenzene	2019/01/24	103	60 - 140	98	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,4-Dichlorobenzene	2019/01/24	102	60 - 140	98	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Acetone (2-Propanone)	2019/01/24	99	60 - 140	90	60 - 140	ND, RDL=0.50	ug/g	NC	50
5944584	Benzene	2019/01/24	103	60 - 140	104	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	Bromodichloromethane	2019/01/24	91	60 - 140	90	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Bromoform	2019/01/24	87	60 - 140	83	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Bromomethane	2019/01/24	121	60 - 140	121	60 - 140	ND, RDL=0.050	ug/g	NC	50
5944584	Carbon Tetrachloride	2019/01/24	93	60 - 140	94	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Chlorobenzene	2019/01/24	99	60 - 140	96	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Chloroform	2019/01/24	99	60 - 140	100	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	cis-1,2-Dichloroethylene	2019/01/24	97	60 - 140	97	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	cis-1,3-Dichloropropene	2019/01/24	96	60 - 140	95	60 - 130	ND, RDL=0.030	ug/g	NC	50
5944584	Dibromochloromethane	2019/01/24	94	60 - 140	89	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Dichlorodifluoromethane (FREON 12)	2019/01/24	101	60 - 140	105	60 - 140	ND, RDL=0.050	ug/g	NC	50
5944584	Ethylbenzene	2019/01/24	104	60 - 140	101	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	Ethylene Dibromide	2019/01/24	97	60 - 140	93	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	F1 (C6-C10) - BTEX	2019/01/24					ND, RDL=10	ug/g	NC	30

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Maxxam Job #: B920220
Report Date: 2019/01/28

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5944584	F1 (C6-C10)	2019/01/24	94	60 - 140	97	80 - 120	ND, RDL=10	ug/g	NC	30
5944584	Hexane	2019/01/24	113	60 - 140	113	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Methyl Ethyl Ketone (2-Butanone)	2019/01/24	101	60 - 140	93	60 - 140	ND, RDL=0.50	ug/g	NC	50
5944584	Methyl Isobutyl Ketone	2019/01/24	95	60 - 140	89	60 - 130	ND, RDL=0.50	ug/g	NC	50
5944584	Methyl t-butyl ether (MTBE)	2019/01/24	96	60 - 140	96	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Methylene Chloride(Dichloromethane)	2019/01/24	100	60 - 140	100	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	o-Xylene	2019/01/24	102	60 - 140	98	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	p+m-Xylene	2019/01/24	100	60 - 140	96	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	Styrene	2019/01/24	97	60 - 140	93	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Tetrachloroethylene	2019/01/24	100	60 - 140	100	60 - 130	ND, RDL=0.050	ug/g	1.8	50
5944584	Toluene	2019/01/24	102	60 - 140	100	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	Total Xylenes	2019/01/24					ND, RDL=0.020	ug/g	NC	50
5944584	trans-1,2-Dichloroethylene	2019/01/24	102	60 - 140	102	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	trans-1,3-Dichloropropene	2019/01/24	104	60 - 140	98	60 - 130	ND, RDL=0.040	ug/g	NC	50
5944584	Trichloroethylene	2019/01/24	95	60 - 140	96	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Trichlorofluoromethane (FREON 11)	2019/01/24	111	60 - 140	111	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Vinyl Chloride	2019/01/24	113	60 - 140	124	60 - 130	ND, RDL=0.020	ug/g	NC	50
5945270	F2 (C10-C16 Hydrocarbons)	2019/01/25	92	50 - 130	94	80 - 120	ND, RDL=10	ug/g	NC	30
5945270	F3 (C16-C34 Hydrocarbons)	2019/01/25	91	50 - 130	92	80 - 120	ND, RDL=50	ug/g	NC	30
5945270	F4 (C34-C50 Hydrocarbons)	2019/01/25	93	50 - 130	95	80 - 120	ND, RDL=50	ug/g	NC	30
5945600	Acid Extractable Antimony (Sb)	2019/01/25	91	75 - 125	97	80 - 120	ND, RDL=0.20	ug/g	18	30
5945600	Acid Extractable Arsenic (As)	2019/01/25	102	75 - 125	101	80 - 120	ND, RDL=1.0	ug/g	0.71	30
5945600	Acid Extractable Barium (Ba)	2019/01/25	NC	75 - 125	98	80 - 120	ND, RDL=0.50	ug/g	6.4	30
5945600	Acid Extractable Beryllium (Be)	2019/01/25	105	75 - 125	96	80 - 120	ND, RDL=0.20	ug/g	1.4	30
5945600	Acid Extractable Boron (B)	2019/01/25	98	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	6.1	30
5945600	Acid Extractable Cadmium (Cd)	2019/01/25	103	75 - 125	97	80 - 120	ND, RDL=0.10	ug/g	NC	30
5945600	Acid Extractable Chromium (Cr)	2019/01/25	NC	75 - 125	100	80 - 120	ND, RDL=1.0	ug/g	4.9	30
5945600	Acid Extractable Cobalt (Co)	2019/01/25	109	75 - 125	99	80 - 120	ND, RDL=0.10	ug/g	3.0	30
5945600	Acid Extractable Copper (Cu)	2019/01/25	NC	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	6.4	30
5945600	Acid Extractable Lead (Pb)	2019/01/25	102	75 - 125	99	80 - 120	ND, RDL=1.0	ug/g	16	30
5945600	Acid Extractable Molybdenum (Mo)	2019/01/25	101	75 - 125	95	80 - 120	ND, RDL=0.50	ug/g	NC	30
5945600	Acid Extractable Nickel (Ni)	2019/01/25	NC	75 - 125	106	80 - 120	ND, RDL=0.50	ug/g	4.5	30

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Maxxam Job #: B920220
Report Date: 2019/01/28

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5945600	Acid Extractable Selenium (Se)	2019/01/25	98	75 - 125	95	80 - 120	ND, RDL=0.50	ug/g	NC	30
5945600	Acid Extractable Silver (Ag)	2019/01/25	103	75 - 125	98	80 - 120	ND, RDL=0.20	ug/g	NC	30
5945600	Acid Extractable Thallium (Tl)	2019/01/25	100	75 - 125	97	80 - 120	ND, RDL=0.050	ug/g	23	30
5945600	Acid Extractable Uranium (U)	2019/01/25	103	75 - 125	96	80 - 120	ND, RDL=0.050	ug/g	1.2	30
5945600	Acid Extractable Vanadium (V)	2019/01/25	NC	75 - 125	99	80 - 120	ND, RDL=5.0	ug/g	6.6	30
5945600	Acid Extractable Zinc (Zn)	2019/01/25	NC	75 - 125	119	80 - 120	ND, RDL=5.0	ug/g	4.4	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 (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

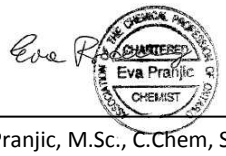
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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

VALIDATION SIGNATURE PAGE

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



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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Your P.O. #: BRM-ENV
Your Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your C.O.C. #: 700817-01-01

Attention: David Mably

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/02/05
Report #: R5583593
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B927806
Received: 2019/01/31, 16:23

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	1	N/A	2019/02/04		EPA 8260C m
1,3-Dichloropropene Sum	4	N/A	2019/02/05		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2019/02/02	2019/02/02	CAM SOP-00316	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2019/02/02	2019/02/03	CAM SOP-00316	CCME PHC-CWS m
Dissolved Metals by ICPMS	3	N/A	2019/02/05	CAM SOP-00447	EPA 6020B m
Volatile Organic Compounds and F1 PHCs	4	N/A	2019/02/04	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds in Water	1	N/A	2019/02/02	CAM SOP-00228	EPA 8260C 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

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. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

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 P.O. #: BRM-ENV
Your Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your C.O.C. #: 700817-01-01

Attention: David Mably

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/02/05
Report #: R5583593
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B927806
Received: 2019/01/31, 16:23

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Tanya Fidlin, Project Manager
Email: tfidlin@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.

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 DISSOLVED ICPMS METALS (WATER)

Maxxam ID		IWS213	IWS213	IWS215	IWS217		
Sampling Date		2019/01/31 10:00	2019/01/31 10:00	2019/01/31 10:30	2019/01/31 10:30		
COC Number		700817-01-01	700817-01-01	700817-01-01	700817-01-01		
	UNITS	MW301	MW301 Lab-Dup	MW303	MW3033	RDL	QC Batch
Metals							
Dissolved Antimony (Sb)	ug/L	ND	ND	ND	ND	0.50	5957789
Dissolved Arsenic (As)	ug/L	1.6	1.5	1.0	ND	1.0	5957789
Dissolved Barium (Ba)	ug/L	240	240	430	430	2.0	5957789
Dissolved Beryllium (Be)	ug/L	ND	ND	ND	ND	0.50	5957789
Dissolved Boron (B)	ug/L	1900	1900	260	260	10	5957789
Dissolved Cadmium (Cd)	ug/L	ND	ND	ND	ND	0.10	5957789
Dissolved Chromium (Cr)	ug/L	ND	ND	ND	ND	5.0	5957789
Dissolved Cobalt (Co)	ug/L	0.65	0.68	1.9	1.9	0.50	5957789
Dissolved Copper (Cu)	ug/L	2.8	3.0	1.0	5.1	1.0	5957789
Dissolved Lead (Pb)	ug/L	ND	ND	ND	ND	0.50	5957789
Dissolved Molybdenum (Mo)	ug/L	3.7	3.7	12	13	0.50	5957789
Dissolved Nickel (Ni)	ug/L	1.6	1.5	5.4	6.5	1.0	5957789
Dissolved Selenium (Se)	ug/L	ND	ND	ND	ND	2.0	5957789
Dissolved Silver (Ag)	ug/L	ND	ND	ND	ND	0.10	5957789
Dissolved Thallium (Tl)	ug/L	ND	ND	0.11	0.095	0.050	5957789
Dissolved Uranium (U)	ug/L	5.6	5.4	8.3	8.3	0.10	5957789
Dissolved Vanadium (V)	ug/L	ND	ND	1.8	1.6	0.50	5957789
Dissolved Zinc (Zn)	ug/L	6.3	6.1	ND	6.5	5.0	5957789

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Maxxam ID		IWS213	IWS214	IWS215	IWS216		
Sampling Date		2019/01/31 10:00	2019/01/31 11:30	2019/01/31 10:30	2019/01/31 10:00		
COC Number		700817-01-01	700817-01-01	700817-01-01	700817-01-01		
	UNITS	MW301	MW302	MW303	MW3011	RDL	QC Batch
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND	ND	ND	0.50	5954696
Volatile Organics							
Acetone (2-Propanone)	ug/L	ND	ND	25	ND	10	5956017
Benzene	ug/L	ND	ND	ND	ND	0.20	5956017
Bromodichloromethane	ug/L	ND	ND	ND	ND	0.50	5956017
Bromoform	ug/L	ND	ND	ND	ND	1.0	5956017
Bromomethane	ug/L	ND	ND	ND	ND	0.50	5956017
Carbon Tetrachloride	ug/L	ND	ND	ND	ND	0.20	5956017
Chlorobenzene	ug/L	ND	ND	ND	ND	0.20	5956017
Chloroform	ug/L	ND	ND	0.22	ND	0.20	5956017
Dibromochloromethane	ug/L	ND	ND	ND	ND	0.50	5956017
1,2-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	5956017
1,3-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	5956017
1,4-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	5956017
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	ND	ND	1.0	5956017
1,1-Dichloroethane	ug/L	ND	ND	ND	ND	0.20	5956017
1,2-Dichloroethane	ug/L	ND	ND	ND	ND	0.50	5956017
1,1-Dichloroethylene	ug/L	ND	ND	ND	ND	0.20	5956017
cis-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	0.50	5956017
trans-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	0.50	5956017
1,2-Dichloropropane	ug/L	ND	ND	ND	ND	0.20	5956017
cis-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	0.30	5956017
trans-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	0.40	5956017
Ethylbenzene	ug/L	ND	ND	ND	ND	0.20	5956017
Ethylene Dibromide	ug/L	ND	ND	ND	ND	0.20	5956017
Hexane	ug/L	ND	ND	ND	ND	1.0	5956017
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	ND	ND	2.0	5956017
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	ND	ND	10	5956017
Methyl Isobutyl Ketone	ug/L	ND	ND	ND	ND	5.0	5956017

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Maxxam ID		IWS213	IWS214	IWS215	IWS216		
Sampling Date		2019/01/31 10:00	2019/01/31 11:30	2019/01/31 10:30	2019/01/31 10:00		
COC Number		700817-01-01	700817-01-01	700817-01-01	700817-01-01		
	UNITS	MW301	MW302	MW303	MW3011	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	ND	ND	0.50	5956017
Styrene	ug/L	ND	ND	ND	ND	0.50	5956017
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	0.50	5956017
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	0.50	5956017
Tetrachloroethylene	ug/L	ND	ND	ND	ND	0.20	5956017
Toluene	ug/L	ND	ND	ND	ND	0.20	5956017
1,1,1-Trichloroethane	ug/L	ND	ND	ND	ND	0.20	5956017
1,1,2-Trichloroethane	ug/L	ND	ND	ND	ND	0.50	5956017
Trichloroethylene	ug/L	ND	ND	ND	ND	0.20	5956017
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	ND	ND	0.50	5956017
Vinyl Chloride	ug/L	ND	ND	ND	ND	0.20	5956017
p+m-Xylene	ug/L	ND	ND	ND	ND	0.20	5956017
o-Xylene	ug/L	ND	ND	ND	ND	0.20	5956017
Total Xylenes	ug/L	ND	ND	ND	ND	0.20	5956017
F1 (C6-C10)	ug/L	ND	ND	ND	ND	25	5956017
F1 (C6-C10) - BTEX	ug/L	ND	ND	ND	ND	25	5956017
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/L	ND	ND	ND	ND	100	5957968
F3 (C16-C34 Hydrocarbons)	ug/L	ND	ND	ND	ND	200	5957968
F4 (C34-C50 Hydrocarbons)	ug/L	ND	ND	ND	ND	200	5957968
Reached Baseline at C50	ug/L	Yes	Yes	Yes	Yes		5957968
Surrogate Recovery (%)							
o-Terphenyl	%	109	108	110	109		5957968
4-Bromofluorobenzene	%	98	98	97	98		5956017
D4-1,2-Dichloroethane	%	105	108	106	107		5956017
D8-Toluene	%	99	98	99	98		5956017

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 VOCS BY HS (WATER)

Maxxam ID		IWS218		
Sampling Date		2019/01/31		
COC Number		700817-01-01		
	UNITS	TRIP BLANK LOT 3515	RDL	QC Batch
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/L	ND	0.50	5954696
Volatile Organics				
Acetone (2-Propanone)	ug/L	ND	10	5956241
Benzene	ug/L	ND	0.20	5956241
Bromodichloromethane	ug/L	ND	0.50	5956241
Bromoform	ug/L	ND	1.0	5956241
Bromomethane	ug/L	ND	0.50	5956241
Carbon Tetrachloride	ug/L	ND	0.20	5956241
Chlorobenzene	ug/L	ND	0.20	5956241
Chloroform	ug/L	ND	0.20	5956241
Dibromochloromethane	ug/L	ND	0.50	5956241
1,2-Dichlorobenzene	ug/L	ND	0.50	5956241
1,3-Dichlorobenzene	ug/L	ND	0.50	5956241
1,4-Dichlorobenzene	ug/L	ND	0.50	5956241
Dichlorodifluoromethane (FREON 12)	ug/L	ND	1.0	5956241
1,1-Dichloroethane	ug/L	ND	0.20	5956241
1,2-Dichloroethane	ug/L	ND	0.50	5956241
1,1-Dichloroethylene	ug/L	ND	0.20	5956241
cis-1,2-Dichloroethylene	ug/L	ND	0.50	5956241
trans-1,2-Dichloroethylene	ug/L	ND	0.50	5956241
1,2-Dichloropropane	ug/L	ND	0.20	5956241
cis-1,3-Dichloropropene	ug/L	ND	0.30	5956241
trans-1,3-Dichloropropene	ug/L	ND	0.40	5956241
Ethylbenzene	ug/L	ND	0.20	5956241
Ethylene Dibromide	ug/L	ND	0.20	5956241
Hexane	ug/L	ND	1.0	5956241
Methylene Chloride(Dichloromethane)	ug/L	ND	2.0	5956241
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	10	5956241
Methyl Isobutyl Ketone	ug/L	ND	5.0	5956241

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 VOCS BY HS (WATER)

Maxxam ID		IWS218		
Sampling Date		2019/01/31		
COC Number		700817-01-01		
	UNITS	**TRIP BLANK LOT 3515**	**RDL**	**QC Batch**
Methyl t-butyl ether (MTBE)	ug/L	ND	0.50	5956241
Styrene	ug/L	ND	0.50	5956241
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	5956241
1,1,2,2-Tetrachloroethane	ug/L	ND	0.50	5956241
Tetrachloroethylene	ug/L	ND	0.20	5956241
Toluene	ug/L	ND	0.20	5956241
1,1,1-Trichloroethane	ug/L	ND	0.20	5956241
1,1,2-Trichloroethane	ug/L	ND	0.50	5956241
Trichloroethylene	ug/L	ND	0.20	5956241
Trichlorofluoromethane (FREON 11)	ug/L	ND	0.50	5956241
Vinyl Chloride	ug/L	ND	0.20	5956241
p+m-Xylene	ug/L	ND	0.20	5956241
o-Xylene	ug/L	ND	0.20	5956241
Total Xylenes	ug/L	ND	0.20	5956241
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	99		5956241
D4-1,2-Dichloroethane	%	97		5956241
D8-Toluene	%	113		5956241

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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 #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

TEST SUMMARY

Maxxam ID: IWS213 **Collected:** 2019/01/31
Sample ID: MW301 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/05	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5957968	2019/02/02	2019/02/02	Prabhjot Gulati
Dissolved Metals by ICPMS	ICP/MS	5957789	N/A	2019/02/05	Thao Nguyen
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5956017	N/A	2019/02/04	Rebecca McClean

Maxxam ID: IWS213 Dup **Collected:** 2019/01/31
Sample ID: MW301 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	5957789	N/A	2019/02/05	Thao Nguyen

Maxxam ID: IWS214 **Collected:** 2019/01/31
Sample ID: MW302 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/05	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5957968	2019/02/02	2019/02/02	Prabhjot Gulati
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5956017	N/A	2019/02/04	Rebecca McClean

Maxxam ID: IWS215 **Collected:** 2019/01/31
Sample ID: MW303 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/05	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5957968	2019/02/02	2019/02/03	Prabhjot Gulati
Dissolved Metals by ICPMS	ICP/MS	5957789	N/A	2019/02/05	Thao Nguyen
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5956017	N/A	2019/02/04	Rebecca McClean

Maxxam ID: IWS216 **Collected:** 2019/01/31
Sample ID: MW3011 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/05	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5957968	2019/02/02	2019/02/03	Prabhjot Gulati
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5956017	N/A	2019/02/04	Rebecca McClean

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

TEST SUMMARY

Maxxam ID: IWS217
Sample ID: MW3033
Matrix: Water

Collected: 2019/01/31
Shipped:
Received: 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	5957789	N/A	2019/02/05	Thao Nguyen

Maxxam ID: IWS218
Sample ID: TRIP BLANK LOT 3515
Matrix: Water

Collected: 2019/01/31
Shipped:
Received: 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/04	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	5956241	N/A	2019/02/02	Anna Gabrielyan

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

GENERAL COMMENTS

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

Package 1	2.7°C

Results relate only to the items tested.

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Maxxam
A Bureau Veritas Group Company

Maxxam Job #: B927806
Report Date: 2019/02/05

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5956017	4-Bromofluorobenzene	2019/02/04	101	70 - 130	101	70 - 130	99	%		
5956017	D4-1,2-Dichloroethane	2019/02/04	106	70 - 130	102	70 - 130	102	%		
5956017	D8-Toluene	2019/02/04	99	70 - 130	99	70 - 130	99	%		
5956241	4-Bromofluorobenzene	2019/02/01	102	70 - 130	101	70 - 130	100	%		
5956241	D4-1,2-Dichloroethane	2019/02/01	83	70 - 130	93	70 - 130	95	%		
5956241	D8-Toluene	2019/02/01	106	70 - 130	116	70 - 130	95	%		
5957968	o-Terphenyl	2019/02/02	109	60 - 130	112	60 - 130	107	%		
5956017	1,1,1,2-Tetrachloroethane	2019/02/04	99	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,1,1-Trichloroethane	2019/02/04	98	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	1,1,2,2-Tetrachloroethane	2019/02/04	103	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,1,2-Trichloroethane	2019/02/04	105	70 - 130	102	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,1-Dichloroethane	2019/02/04	99	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	1,1-Dichloroethylene	2019/02/04	100	70 - 130	101	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	1,2-Dichlorobenzene	2019/02/04	99	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,2-Dichloroethane	2019/02/04	105	70 - 130	102	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,2-Dichloropropane	2019/02/04	99	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	1,3-Dichlorobenzene	2019/02/04	102	70 - 130	102	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,4-Dichlorobenzene	2019/02/04	106	70 - 130	108	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Acetone (2-Propanone)	2019/02/04	116	60 - 140	126	60 - 140	ND, RDL=10	ug/L	NC	30
5956017	Benzene	2019/02/04	100	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Bromodichloromethane	2019/02/04	100	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Bromoform	2019/02/04	101	70 - 130	99	70 - 130	ND, RDL=1.0	ug/L	NC	30
5956017	Bromomethane	2019/02/04	100	60 - 140	104	60 - 140	ND, RDL=0.50	ug/L	NC	30
5956017	Carbon Tetrachloride	2019/02/04	97	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Chlorobenzene	2019/02/04	96	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Chloroform	2019/02/04	100	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	cis-1,2-Dichloroethylene	2019/02/04	102	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	cis-1,3-Dichloropropene	2019/02/04	100	70 - 130	99	70 - 130	ND, RDL=0.30	ug/L	NC	30
5956017	Dibromochloromethane	2019/02/04	107	70 - 130	107	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Dichlorodifluoromethane (FREON 12)	2019/02/04	103	60 - 140	107	60 - 140	ND, RDL=1.0	ug/L	NC	30
5956017	Ethylbenzene	2019/02/04	97	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5956017	Ethylene Dibromide	2019/02/04	103	70 - 130	101	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	F1 (C6-C10) - BTEX	2019/02/04					ND, RDL=25	ug/L	NC	30
5956017	F1 (C6-C10)	2019/02/04	100	60 - 140	90	60 - 140	ND, RDL=25	ug/L	NC	30
5956017	Hexane	2019/02/04	97	70 - 130	98	70 - 130	ND, RDL=1.0	ug/L	NC	30
5956017	Methyl Ethyl Ketone (2-Butanone)	2019/02/04	118	60 - 140	122	60 - 140	ND, RDL=10	ug/L	NC	30
5956017	Methyl Isobutyl Ketone	2019/02/04	112	70 - 130	111	70 - 130	ND, RDL=5.0	ug/L	NC	30
5956017	Methyl t-butyl ether (MTBE)	2019/02/04	102	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Methylene Chloride(Dichloromethane)	2019/02/04	96	70 - 130	94	70 - 130	ND, RDL=2.0	ug/L	NC	30
5956017	o-Xylene	2019/02/04	97	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	p+m-Xylene	2019/02/04	96	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Styrene	2019/02/04	100	70 - 130	100	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Tetrachloroethylene	2019/02/04	98	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Toluene	2019/02/04	94	70 - 130	94	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Total Xylenes	2019/02/04					ND, RDL=0.20	ug/L	NC	30
5956017	trans-1,2-Dichloroethylene	2019/02/04	100	70 - 130	100	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	trans-1,3-Dichloropropene	2019/02/04	103	70 - 130	102	70 - 130	ND, RDL=0.40	ug/L	NC	30
5956017	Trichloroethylene	2019/02/04	100	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Trichlorofluoromethane (FREON 11)	2019/02/04	101	70 - 130	102	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Vinyl Chloride	2019/02/04	97	70 - 130	121	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956241	1,1,1,2-Tetrachloroethane	2019/02/01	97	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,1,1-Trichloroethane	2019/02/01	94	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L		
5956241	1,1,2,2-Tetrachloroethane	2019/02/01	96	70 - 130	96	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,1,2-Trichloroethane	2019/02/01	90	70 - 130	91	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,1-Dichloroethane	2019/02/01	96	70 - 130	100	70 - 130	ND, RDL=0.20	ug/L		
5956241	1,1-Dichloroethylene	2019/02/01	93	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L		
5956241	1,2-Dichlorobenzene	2019/02/01	94	70 - 130	97	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,2-Dichloroethane	2019/02/01	92	70 - 130	92	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,2-Dichloropropane	2019/02/01	94	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L		
5956241	1,3-Dichlorobenzene	2019/02/01	95	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,4-Dichlorobenzene	2019/02/01	95	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L		
5956241	Acetone (2-Propanone)	2019/02/01	79	60 - 140	85	60 - 140	ND, RDL=10	ug/L		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5956241	Benzene	2019/02/01	87	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L		
5956241	Bromodichloromethane	2019/02/01	92	70 - 130	95	70 - 130	ND, RDL=0.50	ug/L		
5956241	Bromoform	2019/02/01	93	70 - 130	94	70 - 130	ND, RDL=1.0	ug/L		
5956241	Bromomethane	2019/02/01	97	60 - 140	104	60 - 140	ND, RDL=0.50	ug/L		
5956241	Carbon Tetrachloride	2019/02/01	91	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L		
5956241	Chlorobenzene	2019/02/01	96	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L		
5956241	Chloroform	2019/02/01	96	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L		
5956241	cis-1,2-Dichloroethylene	2019/02/01	99	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	0.16	30
5956241	cis-1,3-Dichloropropene	2019/02/01	82	70 - 130	89	70 - 130	ND, RDL=0.30	ug/L		
5956241	Dibromochloromethane	2019/02/01	95	70 - 130	97	70 - 130	ND, RDL=0.50	ug/L		
5956241	Dichlorodifluoromethane (FREON 12)	2019/02/01	93	60 - 140	98	60 - 140	ND, RDL=1.0	ug/L		
5956241	Ethylbenzene	2019/02/01	95	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L		
5956241	Ethylene Dibromide	2019/02/01	94	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L		
5956241	Hexane	2019/02/01	98	70 - 130	101	70 - 130	ND, RDL=1.0	ug/L		
5956241	Methyl Ethyl Ketone (2-Butanone)	2019/02/01	90	60 - 140	92	60 - 140	ND, RDL=10	ug/L		
5956241	Methyl Isobutyl Ketone	2019/02/01	83	70 - 130	92	70 - 130	ND, RDL=5.0	ug/L		
5956241	Methyl t-butyl ether (MTBE)	2019/02/01	95	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L		
5956241	Methylene Chloride(Dichloromethane)	2019/02/01	94	70 - 130	98	70 - 130	ND, RDL=2.0	ug/L		
5956241	o-Xylene	2019/02/01	94	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L		
5956241	p+m-Xylene	2019/02/01	93	70 - 130	95	70 - 130	ND, RDL=0.20	ug/L		
5956241	Styrene	2019/02/01	96	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L		
5956241	Tetrachloroethylene	2019/02/01	98	70 - 130	103	70 - 130	ND, RDL=0.20	ug/L		
5956241	Toluene	2019/02/01	91	70 - 130	94	70 - 130	ND, RDL=0.20	ug/L		
5956241	Total Xylenes	2019/02/01					ND, RDL=0.20	ug/L		
5956241	trans-1,2-Dichloroethylene	2019/02/01	100	70 - 130	103	70 - 130	ND, RDL=0.50	ug/L		
5956241	trans-1,3-Dichloropropene	2019/02/01	88	70 - 130	89	70 - 130	ND, RDL=0.40	ug/L		
5956241	Trichloroethylene	2019/02/01	99	70 - 130	101	70 - 130	ND, RDL=0.20	ug/L	8.2	30
5956241	Trichlorofluoromethane (FREON 11)	2019/02/01	94	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L		
5956241	Vinyl Chloride	2019/02/01	104	70 - 130	107	70 - 130	ND, RDL=0.20	ug/L		
5957789	Dissolved Antimony (Sb)	2019/02/05	113	80 - 120	106	80 - 120	ND, RDL=0.50	ug/L	NC	20
5957789	Dissolved Arsenic (As)	2019/02/05	99	80 - 120	99	80 - 120	ND, RDL=1.0	ug/L	9.1	20

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Maxxam Job #: B927806
Report Date: 2019/02/05

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5957789	Dissolved Barium (Ba)	2019/02/05	102	80 - 120	101	80 - 120	ND, RDL=2.0	ug/L	1.1	20
5957789	Dissolved Beryllium (Be)	2019/02/05	97	80 - 120	96	80 - 120	ND, RDL=0.50	ug/L	NC	20
5957789	Dissolved Boron (B)	2019/02/05	NC	80 - 120	94	80 - 120	ND, RDL=10	ug/L	0.080	20
5957789	Dissolved Cadmium (Cd)	2019/02/05	104	80 - 120	100	80 - 120	ND, RDL=0.10	ug/L	NC	20
5957789	Dissolved Chromium (Cr)	2019/02/05	93	80 - 120	93	80 - 120	ND, RDL=5.0	ug/L	NC	20
5957789	Dissolved Cobalt (Co)	2019/02/05	91	80 - 120	93	80 - 120	ND, RDL=0.50	ug/L	3.9	20
5957789	Dissolved Copper (Cu)	2019/02/05	95	80 - 120	95	80 - 120	ND, RDL=1.0	ug/L	4.2	20
5957789	Dissolved Lead (Pb)	2019/02/05	94	80 - 120	95	80 - 120	ND, RDL=0.50	ug/L	NC	20
5957789	Dissolved Molybdenum (Mo)	2019/02/05	109	80 - 120	101	80 - 120	ND, RDL=0.50	ug/L	1.8	20
5957789	Dissolved Nickel (Ni)	2019/02/05	88	80 - 120	92	80 - 120	ND, RDL=1.0	ug/L	2.7	20
5957789	Dissolved Selenium (Se)	2019/02/05	103	80 - 120	101	80 - 120	ND, RDL=2.0	ug/L	NC	20
5957789	Dissolved Silver (Ag)	2019/02/05	84	80 - 120	100	80 - 120	ND, RDL=0.10	ug/L	NC	20
5957789	Dissolved Thallium (Tl)	2019/02/05	94	80 - 120	94	80 - 120	ND, RDL=0.050	ug/L	NC	20
5957789	Dissolved Uranium (U)	2019/02/05	97	80 - 120	95	80 - 120	ND, RDL=0.10	ug/L	2.3	20
5957789	Dissolved Vanadium (V)	2019/02/05	97	80 - 120	95	80 - 120	ND, RDL=0.50	ug/L	NC	20
5957789	Dissolved Zinc (Zn)	2019/02/05	90	80 - 120	95	80 - 120	ND, RDL=5.0	ug/L	3.5	20
5957968	F2 (C10-C16 Hydrocarbons)	2019/02/02	106	50 - 130	103	60 - 130	ND, RDL=100	ug/L	NC	30
5957968	F3 (C16-C34 Hydrocarbons)	2019/02/02	104	50 - 130	107	60 - 130	ND, RDL=200	ug/L	NC	30
5957968	F4 (C34-C50 Hydrocarbons)	2019/02/02	99	50 - 130	99	60 - 130	ND, RDL=200	ug/L	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 (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

VALIDATION SIGNATURE PAGE

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



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

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Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-B0
Site Location: BLAIR
Your C.O.C. #: na

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/09/22
Report #: R4727307
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B7J4925
Received: 2017/09/07, 16:22

Sample Matrix: Soil
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	2	N/A	2017/09/13		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Soil (1)	2	2017/09/09	2017/09/10	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	6	2017/09/11	2017/09/13	CAM SOP-00447	EPA 6020B m
Moisture	2	N/A	2017/09/09	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	6	N/A	2017/09/11	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	3	N/A	2017/09/22	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (2)	1	2017/09/11	2017/09/12	CAM SOP-00307	SW846 8081, 8082
OC Pesticides (Selected) & PCB (2)	5	2017/09/11	2017/09/13	CAM SOP-00307	SW846 8081, 8082
OC Pesticides (Selected) & PCB (2)	3	2017/09/19	2017/09/22	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	6	N/A	2017/09/12	CAM SOP-00307	EPA 8081/8082 m
OC Pesticides Summed Parameters	3	N/A	2017/09/22	CAM SOP-00307	EPA 8081/8082 m
pH CaCl2 EXTRACT	2	2017/09/12	2017/09/12	CAM SOP-00413	EPA 9045 D m
Sieve, 75um	1	N/A	2017/09/11	CAM SOP-00467	Carter 2nd ed m
Volatile Organic Compounds and F1 PHCs	2	N/A	2017/09/13	CAM SOP-00230	EPA 8260C 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.

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Your Project #: HAM-00801245-B0
Site Location: BLAIR
Your C.O.C. #: na

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/09/22
Report #: R4727307
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B7J4925
Received: 2017/09/07, 16:22

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(2) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

==========

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 #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

RESULTS OF ANALYSES OF SOIL

Maxxam ID		FBV106	FBV107		FBV108		FBV109		FBV110	
Sampling Date		2017/09/06 10:00	2017/09/06 10:15		2017/09/06 10:25		2017/09/06 01:10		2017/09/06 01:20	
COC Number		na	na		na		na		na	
	UNITS	**BH101-S2**	**BH101-S4**	**QC Batch**	**BH101-S5**	**QC Batch**	**BH102-S1**	**RDL**	**BH102-S2**	**QC Batch**
Inorganics										
Moisture	%	21		5158013	8.7	5157289	12	1.0		5158013
Available (CaCl2) pH	pH		7.93	5158335					7.88	5158335
Miscellaneous Parameters										
Grain Size	%		FINE	5158309				N/A		
Sieve - #200 (<0.075mm)	%		91	5158309				1		
Sieve - #200 (>0.075mm)	%		9	5158309				1		

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FBV111		FBV112	FBV113	FBV114	FBV115		
Sampling Date		2017/09/06 01:30		2017/09/06 02:45	2017/09/06 12:40	2017/09/06 12:10	2017/09/06 09:25		
COC Number		na		na	na	na	na		
	UNITS	**BH102-S3**	**QC Batch**	**BH103-S1**	**BH104-S1**	**BH105-S1**	**BH106-S2**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	10	5157289	9.7	14	14	26	1.0	5158013

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FDO579	FDO580	FDO581		
Sampling Date		2017/09/06 10:00	2017/09/06 10:00	2017/09/06 10:00		
COC Number		na	na	na		
	UNITS	**BH101-S2 - A**	**BH101-S2 - B**	**BH101-S2 - C**	**RDL**	**QC Batch**
Inorganics						
Moisture	%	21	21	21	1.0	5177360

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		FBV106	FBV109	FBV112	FBV113	FBV114	FBV114		
Sampling Date		2017/09/06 10:00	2017/09/06 01:10	2017/09/06 02:45	2017/09/06 12:40	2017/09/06 12:10	2017/09/06 12:10		
COC Number		na	na	na	na	na	na		
	UNITS	**BH101-S2**	**BH102-S1**	**BH103-S1**	**BH104-S1**	**BH105-S1**	**BH105-S1 Lab-Dup**	**RDL**	**QC Batch**
Metals									
Acid Extractable Antimony (Sb)	ug/g	0.23	<0.20	<0.20	<0.20	<0.20	0.20	0.20	5158189
Acid Extractable Arsenic (As)	ug/g	7.0	4.6	7.0	4.9	5.7	5.6	1.0	5158189
Acid Extractable Barium (Ba)	ug/g	89	110	78	120	100	100	0.50	5158189
Acid Extractable Beryllium (Be)	ug/g	0.66	0.65	0.67	0.80	0.86	0.86	0.20	5158189
Acid Extractable Boron (B)	ug/g	<5.0	9.4	11	9.3	10	10	5.0	5158189
Acid Extractable Cadmium (Cd)	ug/g	0.19	0.13	0.16	<0.10	0.13	0.15	0.10	5158189
Acid Extractable Chromium (Cr)	ug/g	19	19	19	23	26	25	1.0	5158189
Acid Extractable Cobalt (Co)	ug/g	11	12	11	12	13	13	0.10	5158189
Acid Extractable Copper (Cu)	ug/g	19	33	31	32	35	35	0.50	5158189
Acid Extractable Lead (Pb)	ug/g	29	9.5	17	11	14	14	1.0	5158189
Acid Extractable Molybdenum (Mo)	ug/g	0.66	<0.50	<0.50	<0.50	0.51	0.57	0.50	5158189
Acid Extractable Nickel (Ni)	ug/g	19	24	25	28	31	29	0.50	5158189
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	5158189
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	5158189
Acid Extractable Thallium (Tl)	ug/g	0.14	0.12	0.15	0.17	0.19	0.18	0.050	5158189
Acid Extractable Uranium (U)	ug/g	0.84	0.50	0.52	0.60	0.52	0.52	0.050	5158189
Acid Extractable Vanadium (V)	ug/g	31	28	27	31	35	35	5.0	5158189
Acid Extractable Zinc (Zn)	ug/g	76	57	83	62	84	80	5.0	5158189

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		FBV115		
Sampling Date		2017/09/06 09:25		
COC Number		na		
	UNITS	**BH106-S2**	**RDL**	**QC Batch**
Metals				
Acid Extractable Antimony (Sb)	ug/g	0.23	0.20	5158189
Acid Extractable Arsenic (As)	ug/g	8.6	1.0	5158189
Acid Extractable Barium (Ba)	ug/g	250	0.50	5158189
Acid Extractable Beryllium (Be)	ug/g	1.3	0.20	5158189
Acid Extractable Boron (B)	ug/g	8.2	5.0	5158189
Acid Extractable Cadmium (Cd)	ug/g	0.63	0.10	5158189
Acid Extractable Chromium (Cr)	ug/g	27	1.0	5158189
Acid Extractable Cobalt (Co)	ug/g	11	0.10	5158189
Acid Extractable Copper (Cu)	ug/g	32	0.50	5158189
Acid Extractable Lead (Pb)	ug/g	23	1.0	5158189
Acid Extractable Molybdenum (Mo)	ug/g	0.90	0.50	5158189
Acid Extractable Nickel (Ni)	ug/g	27	0.50	5158189
Acid Extractable Selenium (Se)	ug/g	0.82	0.50	5158189
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	5158189
Acid Extractable Thallium (Tl)	ug/g	0.18	0.050	5158189
Acid Extractable Uranium (U)	ug/g	7.5	0.050	5158189
Acid Extractable Vanadium (V)	ug/g	37	5.0	5158189
Acid Extractable Zinc (Zn)	ug/g	100	5.0	5158189

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QC Batch = Quality Control Batch

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		FBV108	FBV111		
Sampling Date		2017/09/06 10:25	2017/09/06 01:30		
COC Number		na	na		
	UNITS	**BH101-S5**	**BH102-S3**	**RDL**	**QC Batch**
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	5155068
Volatile Organics					
Acetone (2-Propanone)	ug/g	<0.50	<0.50	0.50	5159358
Benzene	ug/g	<0.020	<0.020	0.020	5159358
Bromodichloromethane	ug/g	<0.050	<0.050	0.050	5159358
Bromoform	ug/g	<0.050	<0.050	0.050	5159358
Bromomethane	ug/g	<0.050	<0.050	0.050	5159358
Carbon Tetrachloride	ug/g	<0.050	<0.050	0.050	5159358
Chlorobenzene	ug/g	<0.050	<0.050	0.050	5159358
Chloroform	ug/g	<0.050	<0.050	0.050	5159358
Dibromochloromethane	ug/g	<0.050	<0.050	0.050	5159358
1,2-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5159358
1,3-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5159358
1,4-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5159358
Dichlorodifluoromethane (FREON 12)	ug/g	<0.050	<0.050	0.050	5159358
1,1-Dichloroethane	ug/g	<0.050	<0.050	0.050	5159358
1,2-Dichloroethane	ug/g	<0.050	<0.050	0.050	5159358
1,1-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5159358
cis-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5159358
trans-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5159358
1,2-Dichloropropane	ug/g	<0.050	<0.050	0.050	5159358
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	5159358
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	5159358
Ethylbenzene	ug/g	<0.020	<0.020	0.020	5159358
Ethylene Dibromide	ug/g	<0.050	<0.050	0.050	5159358
Hexane	ug/g	<0.050	<0.050	0.050	5159358
Methylene Chloride(Dichloromethane)	ug/g	<0.050	<0.050	0.050	5159358
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.50	<0.50	0.50	5159358
Methyl Isobutyl Ketone	ug/g	<0.50	<0.50	0.50	5159358
Methyl t-butyl ether (MTBE)	ug/g	<0.050	<0.050	0.050	5159358
Styrene	ug/g	<0.050	<0.050	0.050	5159358
1,1,1,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	5159358
1,1,2,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	5159358

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		FBV108	FBV111		
Sampling Date		2017/09/06 10:25	2017/09/06 01:30		
COC Number		na	na		
	UNITS	**BH101-S5**	**BH102-S3**	**RDL**	**QC Batch**
Tetrachloroethylene	ug/g	<0.050	<0.050	0.050	5159358
Toluene	ug/g	<0.020	<0.020	0.020	5159358
1,1,1-Trichloroethane	ug/g	<0.050	<0.050	0.050	5159358
1,1,2-Trichloroethane	ug/g	<0.050	<0.050	0.050	5159358
Trichloroethylene	ug/g	<0.050	<0.050	0.050	5159358
Trichlorofluoromethane (FREON 11)	ug/g	<0.050	<0.050	0.050	5159358
Vinyl Chloride	ug/g	<0.020	<0.020	0.020	5159358
p+m-Xylene	ug/g	<0.020	<0.020	0.020	5159358
o-Xylene	ug/g	<0.020	<0.020	0.020	5159358
Total Xylenes	ug/g	<0.020	<0.020	0.020	5159358
F1 (C6-C10)	ug/g	<10	<10	10	5159358
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	5159358
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	93	93		5159358
D10-o-Xylene	%	96	93		5159358
D4-1,2-Dichloroethane	%	96	98		5159358
D8-Toluene	%	95	94		5159358

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Site Location: BLAIR
Sampler Initials: KP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		FBV108	FBV111		
Sampling Date		2017/09/06 10:25	2017/09/06 01:30		
COC Number		na	na		
	UNITS	**BH101-S5**	**BH102-S3**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	5156918
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	5156918
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	5156918
Reached Baseline at C50	ug/g	Yes	Yes		5156918
Surrogate Recovery (%)					
o-Terphenyl	%	94	94		5156918

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7J4925
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exp Services Inc
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Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FBV106	FBV106		FBV109	FBV112	FBV113	FBV114		
Sampling Date		2017/09/06 10:00	2017/09/06 10:00		2017/09/06 01:10	2017/09/06 02:45	2017/09/06 12:40	2017/09/06 12:10		
COC Number		na	na		na	na	na	na		
	UNITS	**BH101-S2**	**BH101-S2 Lab-Dup**	**RDL**	**BH102-S1**	**BH103-S1**	**BH104-S1**	**BH105-S1**	**RDL**	**QC Batch**
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020		0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5155307
o,p-DDD + p,p-DDD	ug/g	0.38		0.020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5155307
o,p-DDE + p,p-DDE	ug/g	0.69		0.10	<0.0020	0.0041	<0.0020	0.0043	0.0020	5155307
o,p-DDT + p,p-DDT	ug/g	0.0096		0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5155307
Total Endosulfan	ug/g	<0.0020		0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5155307
Total PCB	ug/g	<0.015		0.015	<0.015	<0.015	<0.015	<0.015	0.015	5155307
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
a-Chlordane	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
g-Chlordane	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
o,p-DDD	ug/g	0.089	0.084	0.020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
p,p-DDD	ug/g	0.29	0.26	0.020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
o,p-DDE	ug/g	<0.010	<0.010	0.010	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
p,p-DDE	ug/g	0.69	0.64	0.10	<0.0020	0.0041	<0.0020	0.0043	0.0020	5158607
o,p-DDT	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
p,p-DDT	ug/g	0.0096	0.0094	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Dieldrin	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Lindane	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Endrin	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Heptachlor	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Heptachlor epoxide	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Hexachlorobenzene	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Hexachloroethane	ug/g	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5158607
Methoxychlor	ug/g	<0.015	<0.015	0.015	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5158607
Aroclor 1242	ug/g	<0.015	<0.015	0.015	<0.015	<0.015	<0.015	<0.015	0.015	5158607
Aroclor 1248	ug/g	<0.015	<0.015	0.015	<0.015	<0.015	<0.015	<0.015	0.015	5158607
Aroclor 1254	ug/g	<0.015	<0.015	0.015	<0.015	<0.015	<0.015	<0.015	0.015	5158607
Aroclor 1260	ug/g	<0.015	<0.015	0.015	<0.015	<0.015	<0.015	<0.015	0.015	5158607

RDL = Reportable Detection Limit
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Lab-Dup = Laboratory Initiated Duplicate

Maxxam Job #: B7J4925
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Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FBV106	FBV106		FBV109	FBV112	FBV113	FBV114		
Sampling Date		2017/09/06 10:00	2017/09/06 10:00		2017/09/06 01:10	2017/09/06 02:45	2017/09/06 12:40	2017/09/06 12:10		
COC Number		na	na		na	na	na	na		
	UNITS	**BH101-S2**	**BH101-S2 Lab-Dup**	**RDL**	**BH102-S1**	**BH103-S1**	**BH104-S1**	**BH105-S1**	**RDL**	**QC Batch**
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	79	85		90	84	87	87		5158607
Decachlorobiphenyl	%	80	78		58	78	83	76		5158607

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ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FBV115			FDO579		FDO580	FDO581		
Sampling Date		2017/09/06 09:25			2017/09/06 10:00		2017/09/06 10:00	2017/09/06 10:00		
COC Number		na			na		na	na		
	UNITS	**BH106-S2**	**RDL**	**QC Batch**	**BH101-S2 - A**	**RDL**	**BH101-S2 - B**	**BH101-S2 - C**	**RDL**	**QC Batch**
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020	0.0020	5155307	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5171014
o,p-DDD + p,p-DDD	ug/g	0.024	0.0020	5155307	0.36	0.020	0.37	0.34	0.020	5171014
o,p-DDE + p,p-DDE	ug/g	0.054	0.010	5155307	0.75	0.10	0.88	0.86	0.10	5171014
o,p-DDT + p,p-DDT	ug/g	<0.0020	0.0020	5155307	0.019	0.0020	0.017	0.017	0.0020	5171014
Total Endosulfan	ug/g	<0.0020	0.0020	5155307	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5171014
Total PCB	ug/g	<0.015	0.015	5155307	<0.050	0.050	<0.050	<0.050	0.050	5171014
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
a-Chlordane	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
g-Chlordane	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
o,p-DDD	ug/g	0.0075	0.0020	5158607	0.081	0.020	0.076	0.071	0.020	5176135
p,p-DDD	ug/g	0.017	0.0020	5158607	0.28	0.020	0.30	0.27	0.020	5176135
o,p-DDE	ug/g	<0.0020	0.0020	5158607	<0.010	0.010	<0.010	<0.010	0.010	5176135
p,p-DDE	ug/g	0.054	0.010	5158607	0.75	0.10	0.88	0.86	0.10	5176135
o,p-DDT	ug/g	<0.0020	0.0020	5158607	0.0024	0.0020	<0.0020	<0.0020	0.0020	5176135
p,p-DDT	ug/g	<0.0020	0.0020	5158607	0.017	0.0020	0.017	0.017	0.0020	5176135
Dieldrin	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Lindane	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Endosulfan II (beta)	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Endrin	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Heptachlor	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Heptachlor epoxide	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Hexachlorobenzene	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Hexachlorobutadiene	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Hexachloroethane	ug/g	<0.0020	0.0020	5158607	<0.0020	0.0020	<0.0020	<0.0020	0.0020	5176135
Methoxychlor	ug/g	<0.0050	0.0050	5158607	<0.0050	0.0050	<0.0050	<0.0050	0.0050	5176135
Aroclor 1242	ug/g	<0.015	0.015	5158607	<0.015	0.015	<0.015	<0.015	0.015	5176135
Aroclor 1248	ug/g	<0.015	0.015	5158607	<0.015	0.015	<0.015	<0.015	0.015	5176135
Aroclor 1254	ug/g	<0.015	0.015	5158607	<0.050	0.050	<0.050	<0.050	0.050	5176135
Aroclor 1260	ug/g	<0.015	0.015	5158607	<0.015	0.015	<0.020	<0.020	0.020	5176135

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B7J4925
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exp Services Inc
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Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FBV115			FDO579		FDO580	FDO581		
Sampling Date		2017/09/06 09:25			2017/09/06 10:00		2017/09/06 10:00	2017/09/06 10:00		
COC Number		na			na		na	na		
	UNITS	**BH106-S2**	**RDL**	**QC Batch**	**BH101-S2 - A**	**RDL**	**BH101-S2 - B**	**BH101-S2 - C**	**RDL**	**QC Batch**
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	73		5158607	95		102	93		5176135
Decachlorobiphenyl	%	80		5158607	124		121	119		5176135

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: FBV106 **Collected:** 2017/09/06
Sample ID: BH101-S2 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/12	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Automated Statchk

Maxxam ID: FBV106 Dup **Collected:** 2017/09/06
Sample ID: BH101-S2 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/12	Mahmudul Khan

Maxxam ID: FBV107 **Collected:** 2017/09/06
Sample ID: BH101-S4 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	5158335	2017/09/12	2017/09/12	Tahir Anwar
Sieve, 75um	SIEV	5158309	N/A	2017/09/11	Chun Yan

Maxxam ID: FBV108 **Collected:** 2017/09/06
Sample ID: BH101-S5 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5155068	N/A	2017/09/13	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5156918	2017/09/09	2017/09/10	Jeevaraj Jeevaratrnam
Moisture	BAL	5157289	N/A	2017/09/09	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5159358	N/A	2017/09/13	Manpreet Sarao

Maxxam ID: FBV109 **Collected:** 2017/09/06
Sample ID: BH102-S1 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

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Site Location: BLAIR
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: FBV110 **Collected:** 2017/09/06
Sample ID: BH102-S2 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	5158335	2017/09/12	2017/09/12	Tahir Anwar

Maxxam ID: FBV111 **Collected:** 2017/09/06
Sample ID: BH102-S3 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5155068	N/A	2017/09/13	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5156918	2017/09/09	2017/09/10	Jeevaraj Jeevaratrnam
Moisture	BAL	5157289	N/A	2017/09/09	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5159358	N/A	2017/09/13	Manpreet Sarao

Maxxam ID: FBV112 **Collected:** 2017/09/06
Sample ID: BH103-S1 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

Maxxam ID: FBV113 **Collected:** 2017/09/06
Sample ID: BH104-S1 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

Maxxam ID: FBV114 **Collected:** 2017/09/06
Sample ID: BH105-S1 **Shipped:**
Matrix: Soil **Received:** 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

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Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: FBV114 Dup
Sample ID: BH105-S1
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu

Maxxam ID: FBV115
Sample ID: BH106-S2
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5158189	2017/09/11	2017/09/13	Daniel Teclu
Moisture	BAL	5158013	N/A	2017/09/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5158607	2017/09/11	2017/09/13	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5155307	N/A	2017/09/12	Cristina Carriere

Maxxam ID: FDO579
Sample ID: BH101-S2 - A
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5177360	N/A	2017/09/22	Chun Yan
OC Pesticides (Selected) & PCB	GC/ECD	5176135	2017/09/19	2017/09/22	Joy Zhang
OC Pesticides Summed Parameters	CALC	5171014	N/A	2017/09/22	Automated Statchk

Maxxam ID: FDO580
Sample ID: BH101-S2 - B
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5177360	N/A	2017/09/22	Chun Yan
OC Pesticides (Selected) & PCB	GC/ECD	5176135	2017/09/19	2017/09/22	Joy Zhang
OC Pesticides Summed Parameters	CALC	5171014	N/A	2017/09/22	Automated Statchk

Maxxam ID: FDO581
Sample ID: BH101-S2 - C
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/09/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5177360	N/A	2017/09/22	Chun Yan
OC Pesticides (Selected) & PCB	GC/ECD	5176135	2017/09/19	2017/09/22	Joy Zhang
OC Pesticides Summed Parameters	CALC	5171014	N/A	2017/09/22	Automated Statchk

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Maxxam Job #: B7J4925
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GENERAL COMMENTS

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

Package 1	4.7°C

Revised Report[2017/09/22] - Reworked results for sample BH101-S2 included as per client request.
OC Pesticide Analysis: Due to high concentrations of the target analytes, samples required dilution. Detection limits were adjusted accordingly. Detection Limits were raised due to matrix interferences for some parameters.

Sample FBV106 [BH101-S2] : OC Pesticide Analysis: Due to high concentrations of the target analytes, sample required dilution. Detection limits were adjusted accordingly. Detection limits for some parameters were raised due to matrix interferences.

Sample FBV115 [BH106-S2] : OC Pesticide Anaysis: Due to high concentrations of the target analytes, sample required dilution. Detection limits were adjusted accordingly.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5156918	o-Terphenyl	2017/09/09	88	60 - 130	89	60 - 130	98	%				
5158607	2,4,5,6-Tetrachloro-m-xylene	2017/09/12	85	50 - 130	77	50 - 130	76	%				
5158607	Decachlorobiphenyl	2017/09/12	91	50 - 130	90	50 - 130	90	%				
5159358	4-Bromofluorobenzene	2017/09/13	103	60 - 140	104	60 - 140	93	%				
5159358	D10-o-Xylene	2017/09/13	107	60 - 130	92	60 - 130	89	%				
5159358	D4-1,2-Dichloroethane	2017/09/13	95	60 - 140	93	60 - 140	100	%				
5159358	D8-Toluene	2017/09/13	102	60 - 140	103	60 - 140	95	%				
5176135	2,4,5,6-Tetrachloro-m-xylene	2017/09/22	84	50 - 130	82	50 - 130	85	%				
5176135	Decachlorobiphenyl	2017/09/22	104	50 - 130	114	50 - 130	122	%				
5156918	F2 (C10-C16 Hydrocarbons)	2017/09/10	101	50 - 130	94	80 - 120	<10	ug/g	NC	30		
5156918	F3 (C16-C34 Hydrocarbons)	2017/09/10	105	50 - 130	98	80 - 120	<50	ug/g	NC	30		
5156918	F4 (C34-C50 Hydrocarbons)	2017/09/10	105	50 - 130	97	80 - 120	<50	ug/g	NC	30		
5157289	Moisture	2017/09/09							2.5	20		
5158013	Moisture	2017/09/11							0.69	20		
5158189	Acid Extractable Antimony (Sb)	2017/09/13	92	75 - 125	101	80 - 120	<0.20	ug/g	0.16	30		
5158189	Acid Extractable Arsenic (As)	2017/09/13	99	75 - 125	102	80 - 120	<1.0	ug/g	3.0	30		
5158189	Acid Extractable Barium (Ba)	2017/09/13	NC	75 - 125	106	80 - 120	<0.50	ug/g	2.3	30		
5158189	Acid Extractable Beryllium (Be)	2017/09/13	104	75 - 125	102	80 - 120	<0.20	ug/g	0.63	30		
5158189	Acid Extractable Boron (B)	2017/09/13	96	75 - 125	98	80 - 120	<5.0	ug/g	2.2	30		
5158189	Acid Extractable Cadmium (Cd)	2017/09/13	102	75 - 125	101	80 - 120	<0.10	ug/g	15	30		
5158189	Acid Extractable Chromium (Cr)	2017/09/13	NC	75 - 125	102	80 - 120	<1.0	ug/g	3.5	30		
5158189	Acid Extractable Cobalt (Co)	2017/09/13	101	75 - 125	101	80 - 120	<0.10	ug/g	0.44	30		
5158189	Acid Extractable Copper (Cu)	2017/09/13	NC	75 - 125	101	80 - 120	<0.50	ug/g	1.0	30		
5158189	Acid Extractable Lead (Pb)	2017/09/13	102	75 - 125	102	80 - 120	<1.0	ug/g	1.1	30		
5158189	Acid Extractable Molybdenum (Mo)	2017/09/13	101	75 - 125	102	80 - 120	<0.50	ug/g	10	30		
5158189	Acid Extractable Nickel (Ni)	2017/09/13	NC	75 - 125	105	80 - 120	<0.50	ug/g	5.2	30		
5158189	Acid Extractable Selenium (Se)	2017/09/13	103	75 - 125	105	80 - 120	<0.50	ug/g	NC	30		
5158189	Acid Extractable Silver (Ag)	2017/09/13	102	75 - 125	101	80 - 120	<0.20	ug/g	NC	30		
5158189	Acid Extractable Thallium (Tl)	2017/09/13	100	75 - 125	101	80 - 120	<0.050	ug/g	0.64	30		
5158189	Acid Extractable Uranium (U)	2017/09/13	102	75 - 125	99	80 - 120	<0.050	ug/g	0.17	30		
5158189	Acid Extractable Vanadium (V)	2017/09/13	NC	75 - 125	101	80 - 120	<5.0	ug/g	0.58	30		

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QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5158189	Acid Extractable Zinc (Zn)	2017/09/13	NC	75 - 125	113	80 - 120	<5.0	ug/g	5.8	30		
5158309	Sieve - #200 (<0.075mm)	2017/09/11							2.3	20	57	53 - 58
5158309	Sieve - #200 (>0.075mm)	2017/09/11							4.7	20	43	42 - 47
5158335	Available (CaCl2) pH	2017/09/12			99	97 - 103			0.96	N/A		
5158607	a-Chlordane	2017/09/12	109	50 - 130	95	50 - 130	<0.0020	ug/g	NC	40		
5158607	Aldrin	2017/09/12	100	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40		
5158607	Aroclor 1242	2017/09/12					<0.015	ug/g	NC	40		
5158607	Aroclor 1248	2017/09/12					<0.015	ug/g	NC	40		
5158607	Aroclor 1254	2017/09/12					<0.015	ug/g	NC	40		
5158607	Aroclor 1260	2017/09/12					<0.015	ug/g	NC	40		
5158607	Dieldrin	2017/09/12	115	50 - 130	126	50 - 130	<0.0020	ug/g	NC	40		
5158607	Endosulfan I (alpha)	2017/09/12	98	50 - 130	115	50 - 130	<0.0020	ug/g	NC	40		
5158607	Endosulfan II (beta)	2017/09/12	113	50 - 130	111	50 - 130	<0.0020	ug/g	NC	40		
5158607	Endrin	2017/09/12	97	50 - 130	124	50 - 130	<0.0020	ug/g	NC	40		
5158607	g-Chlordane	2017/09/12	111	50 - 130	101	50 - 130	<0.0020	ug/g	NC	40		
5158607	Heptachlor epoxide	2017/09/12	94	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5158607	Heptachlor	2017/09/12	86	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40		
5158607	Hexachlorobenzene	2017/09/12	97	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40		
5158607	Hexachlorobutadiene	2017/09/12	75	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40		
5158607	Hexachloroethane	2017/09/12	55	50 - 130	70	50 - 130	<0.0020	ug/g	NC	40		
5158607	Lindane	2017/09/12	105	50 - 130	102	50 - 130	<0.0020	ug/g	NC	40		
5158607	Methoxychlor	2017/09/12	161 (1)	50 - 130	132 (2)	50 - 130	<0.0050	ug/g	NC	40		
5158607	o,p-DDD	2017/09/12	NC	50 - 130	124	50 - 130	<0.0020	ug/g	5.9	40		
5158607	o,p-DDE	2017/09/12	93	50 - 130	92	50 - 130	<0.0020	ug/g	NC	40		
5158607	o,p-DDT	2017/09/12	131 (1)	50 - 130	95	50 - 130	<0.0020	ug/g	NC	40		
5158607	p,p-DDD	2017/09/12	NC	50 - 130	119	50 - 130	<0.0020	ug/g	8.2	40		
5158607	p,p-DDE	2017/09/12	NC	50 - 130	106	50 - 130	<0.0020	ug/g	6.3	40		
5158607	p,p-DDT	2017/09/12	NC	50 - 130	100	50 - 130	<0.0020	ug/g	1.8	40		
5159358	1,1,1,2-Tetrachloroethane	2017/09/13	100	60 - 140	98	60 - 130	<0.050	ug/g	NC	50		
5159358	1,1,1-Trichloroethane	2017/09/13	91	60 - 140	88	60 - 130	<0.050	ug/g	NC	50		
5159358	1,1,2,2-Tetrachloroethane	2017/09/13	107	60 - 140	108	60 - 130	<0.050	ug/g	NC	50		

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QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5159358	1,1,2-Trichloroethane	2017/09/13	89	60 - 140	87	60 - 130	<0.050	ug/g	NC	50		
5159358	1,1-Dichloroethane	2017/09/13	95	60 - 140	91	60 - 130	<0.050	ug/g	NC	50		
5159358	1,1-Dichloroethylene	2017/09/13	100	60 - 140	95	60 - 130	<0.050	ug/g	NC	50		
5159358	1,2-Dichlorobenzene	2017/09/13	92	60 - 140	88	60 - 130	<0.050	ug/g	NC	50		
5159358	1,2-Dichloroethane	2017/09/13	102	60 - 140	100	60 - 130	<0.050	ug/g	NC	50		
5159358	1,2-Dichloropropane	2017/09/13	88	60 - 140	86	60 - 130	<0.050	ug/g	NC	50		
5159358	1,3-Dichlorobenzene	2017/09/13	96	60 - 140	92	60 - 130	<0.050	ug/g	NC	50		
5159358	1,4-Dichlorobenzene	2017/09/13	102	60 - 140	93	60 - 130	<0.050	ug/g	NC	50		
5159358	Acetone (2-Propanone)	2017/09/13	79	60 - 140	84	60 - 140	<0.50	ug/g	NC	50		
5159358	Benzene	2017/09/13	97	60 - 140	93	60 - 130	<0.020	ug/g	NC	50		
5159358	Bromodichloromethane	2017/09/13	90	60 - 140	88	60 - 130	<0.050	ug/g	NC	50		
5159358	Bromoform	2017/09/13	98	60 - 140	99	60 - 130	<0.050	ug/g	NC	50		
5159358	Bromomethane	2017/09/13	96	60 - 140	94	60 - 140	<0.050	ug/g	NC	50		
5159358	Carbon Tetrachloride	2017/09/13	93	60 - 140	89	60 - 130	<0.050	ug/g	NC	50		
5159358	Chlorobenzene	2017/09/13	94	60 - 140	91	60 - 130	<0.050	ug/g	NC	50		
5159358	Chloroform	2017/09/13	91	60 - 140	88	60 - 130	<0.050	ug/g	NC	50		
5159358	cis-1,2-Dichloroethylene	2017/09/13	95	60 - 140	92	60 - 130	<0.050	ug/g	NC	50		
5159358	cis-1,3-Dichloropropene	2017/09/13	83	60 - 140	83	60 - 130	<0.030	ug/g	NC	50		
5159358	Dibromochloromethane	2017/09/13	97	60 - 140	96	60 - 130	<0.050	ug/g	NC	50		
5159358	Dichlorodifluoromethane (FREON 12)	2017/09/13	87	60 - 140	89	60 - 140	<0.050	ug/g	NC	50		
5159358	Ethylbenzene	2017/09/13	94	60 - 140	91	60 - 130	<0.020	ug/g	NC	50		
5159358	Ethylene Dibromide	2017/09/13	99	60 - 140	99	60 - 130	<0.050	ug/g	NC	50		
5159358	F1 (C6-C10) - BTEX	2017/09/13					<10	ug/g	NC	30		
5159358	F1 (C6-C10)	2017/09/13	101	60 - 140	91	80 - 120	<10	ug/g	NC	30		
5159358	Hexane	2017/09/13	99	60 - 140	95	60 - 130	<0.050	ug/g	NC	50		
5159358	Methyl Ethyl Ketone (2-Butanone)	2017/09/13	82	60 - 140	86	60 - 140	<0.50	ug/g	NC	50		
5159358	Methyl Isobutyl Ketone	2017/09/13	85	60 - 140	87	60 - 130	<0.50	ug/g	NC	50		
5159358	Methyl t-butyl ether (MTBE)	2017/09/13	92	60 - 140	90	60 - 130	<0.050	ug/g	NC	50		
5159358	Methylene Chloride(Dichloromethane)	2017/09/13	100	60 - 140	97	60 - 130	<0.050	ug/g	NC	50		
5159358	o-Xylene	2017/09/13	94	60 - 140	92	60 - 130	<0.020	ug/g	NC	50		
5159358	p+m-Xylene	2017/09/13	97	60 - 140	94	60 - 130	<0.020	ug/g	NC	50		

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Maxxam
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Maxxam Job #: B7J4925
Report Date: 2017/09/22

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5159358	Styrene	2017/09/13	96	60 - 140	94	60 - 130	<0.050	ug/g	NC	50		
5159358	Tetrachloroethylene	2017/09/13	95	60 - 140	90	60 - 130	<0.050	ug/g	NC	50		
5159358	Toluene	2017/09/13	93	60 - 140	89	60 - 130	<0.020	ug/g	NC	50		
5159358	Total Xylenes	2017/09/13					<0.020	ug/g	NC	50		
5159358	trans-1,2-Dichloroethylene	2017/09/13	98	60 - 140	92	60 - 130	<0.050	ug/g	NC	50		
5159358	trans-1,3-Dichloropropene	2017/09/13	85	60 - 140	86	60 - 130	<0.040	ug/g	NC	50		
5159358	Trichloroethylene	2017/09/13	95	60 - 140	91	60 - 130	<0.050	ug/g	NC	50		
5159358	Trichlorofluoromethane (FREON 11)	2017/09/13	97	60 - 140	93	60 - 130	<0.050	ug/g	NC	50		
5159358	Vinyl Chloride	2017/09/13	78	60 - 140	93	60 - 130	<0.020	ug/g	NC	50		
5176135	a-Chlordane	2017/09/22	100	50 - 130	102	50 - 130	<0.0020	ug/g	NC	40		
5176135	Aldrin	2017/09/22	96	50 - 130	96	50 - 130	<0.0020	ug/g	NC	40		
5176135	Aroclor 1242	2017/09/22					<0.015	ug/g	NC	40		
5176135	Aroclor 1248	2017/09/22					<0.015	ug/g	NC	40		
5176135	Aroclor 1254	2017/09/22					<0.015	ug/g	NC	40		
5176135	Aroclor 1260	2017/09/22					<0.015	ug/g	NC	40		
5176135	Dieldrin	2017/09/22	107	50 - 130	127	50 - 130	<0.0020	ug/g	NC	40		
5176135	Endosulfan I (alpha)	2017/09/22	100	50 - 130	109	50 - 130	<0.0020	ug/g	NC	40		
5176135	Endosulfan II (beta)	2017/09/22	101	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40		
5176135	Endrin	2017/09/22	104	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5176135	g-Chlordane	2017/09/22	97	50 - 130	95	50 - 130	<0.0020	ug/g	NC	40		
5176135	Heptachlor epoxide	2017/09/22	99	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5176135	Heptachlor	2017/09/22	100	50 - 130	100	50 - 130	<0.0020	ug/g	NC	40		
5176135	Hexachlorobenzene	2017/09/22	100	50 - 130	95	50 - 130	<0.0020	ug/g	NC	40		
5176135	Hexachlorobutadiene	2017/09/22	84	50 - 130	98	50 - 130	<0.0020	ug/g	NC	40		
5176135	Hexachloroethane	2017/09/22	68	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40		
5176135	Lindane	2017/09/22	97	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40		
5176135	Methoxychlor	2017/09/22	154 (3)	50 - 130	138 (3)	50 - 130	<0.0050	ug/g	NC	40		
5176135	o,p-DDD	2017/09/22	106	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5176135	o,p-DDE	2017/09/22	103	50 - 130	106	50 - 130	<0.0020	ug/g	NC	40		
5176135	o,p-DDT	2017/09/22	119	50 - 130	111	50 - 130	<0.0020	ug/g	NC	40		
5176135	p,p-DDD	2017/09/22	122	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5176135	p,p-DDE	2017/09/22	91	50 - 130	116	50 - 130	<0.0020	ug/g	0.62	40		
5176135	p,p-DDT	2017/09/22	117	50 - 130	114	50 - 130	<0.0020	ug/g	NC	40		

N/A = Not Applicable

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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 spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

(1) The 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.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(3) Surrogate recovery was above the upper control limit due to matrix interference. This may represent a high bias in some results.

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Maxxam Job #: B7J4925
Report Date: 2017/09/22

exp Services Inc
Client Project #: HAM-00801245-B0
Site Location: BLAIR
Sampler Initials: KP

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 Service 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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Your Project #: HAM-00801245-C0
Site Location: BLAIR
Your C.O.C. #: n/a

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/11/07
Report #: R4834183
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7O6106
Received: 2017/11/02, 16:29

Sample Matrix: Soil
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Moisture	1	N/A	2017/11/06	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (1)	1	2017/11/03	2017/11/05	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	1	N/A	2017/11/07	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.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
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

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Your Project #: HAM-00801245-C0
Site Location: BLAIR
Your C.O.C. #: n/a

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/11/07
Report #: R4834183
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7O6106
Received: 2017/11/02, 16:29

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

==========

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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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

RESULTS OF ANALYSES OF SOIL

Maxxam ID		FLX856		
Sampling Date		2017/09/06 10:10		
COC Number		n/a		
	UNITS	**BH101-S3**	**RDL**	**QC Batch**
Inorganics				
Moisture	%	20	1.0	5250864

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FLX856		
Sampling Date		2017/09/06 10:10		
COC Number		n/a		
	UNITS	**BH101-S3**	**RDL**	**QC Batch**
Calculated Parameters				
Chlordane (Total)	ug/g	<0.0020	0.0020	5246901
o,p-DDD + p,p-DDD	ug/g	<0.0020	0.0020	5246901
o,p-DDE + p,p-DDE	ug/g	0.0073	0.0020	5246901
o,p-DDT + p,p-DDT	ug/g	<0.0020	0.0020	5246901
Total Endosulfan	ug/g	<0.0020	0.0020	5246901
Total PCB	ug/g	<0.015	0.015	5246901
Pesticides & Herbicides				
Aldrin	ug/g	<0.0020	0.0020	5248270
a-Chlordane	ug/g	<0.0020	0.0020	5248270
g-Chlordane	ug/g	<0.0020	0.0020	5248270
o,p-DDD	ug/g	<0.0020	0.0020	5248270
p,p-DDD	ug/g	<0.0020	0.0020	5248270
o,p-DDE	ug/g	<0.0020	0.0020	5248270
p,p-DDE	ug/g	0.0073	0.0020	5248270
o,p-DDT	ug/g	<0.0020	0.0020	5248270
p,p-DDT	ug/g	<0.0020	0.0020	5248270
Dieldrin	ug/g	<0.0020	0.0020	5248270
Lindane	ug/g	<0.0020	0.0020	5248270
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	5248270
Endosulfan II (beta)	ug/g	<0.0020	0.0020	5248270
Endrin	ug/g	<0.0020	0.0020	5248270
Heptachlor	ug/g	<0.0020	0.0020	5248270
Heptachlor epoxide	ug/g	<0.0020	0.0020	5248270
Hexachlorobenzene	ug/g	<0.0020	0.0020	5248270
Hexachlorobutadiene	ug/g	<0.0020	0.0020	5248270
Hexachloroethane	ug/g	<0.0020	0.0020	5248270
Methoxychlor	ug/g	<0.0050	0.0050	5248270
Aroclor 1242	ug/g	<0.015	0.015	5248270
Aroclor 1248	ug/g	<0.015	0.015	5248270
Aroclor 1254	ug/g	<0.015	0.015	5248270
Aroclor 1260	ug/g	<0.015	0.015	5248270
Surrogate Recovery (%)				
2,4,5,6-Tetrachloro-m-xylene	%	79		5248270

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FLX856		
Sampling Date		2017/09/06 10:10		
COC Number		n/a		
	UNITS	**BH101-S3**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	100		5248270

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: FLX856
Sample ID: BH101-S3
Matrix: Soil

Collected: 2017/09/06
Shipped:
Received: 2017/11/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5250864	N/A	2017/11/06	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5248270	2017/11/03	2017/11/05	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5246901	N/A	2017/11/07	Automated Statchk

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

GENERAL COMMENTS

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

Package 1	7.7°C

Results relate only to the items tested.

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5248270	2,4,5,6-Tetrachloro-m-xylene	2017/11/05	89	50 - 130	79	50 - 130	84	%		
5248270	Decachlorobiphenyl	2017/11/05	112	50 - 130	107	50 - 130	111	%		
5248270	a-Chlordane	2017/11/05	110	50 - 130	96	50 - 130	<0.0020	ug/g	NC	40
5248270	Aldrin	2017/11/05	96	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40
5248270	Aroclor 1242	2017/11/05					<0.015	ug/g	NC	40
5248270	Aroclor 1248	2017/11/05					<0.015	ug/g	NC	40
5248270	Aroclor 1254	2017/11/05					<0.015	ug/g	NC	40
5248270	Aroclor 1260	2017/11/05					<0.015	ug/g	NC	40
5248270	Dieldrin	2017/11/05	126	50 - 130	115	50 - 130	<0.0020	ug/g	NC	40
5248270	Endosulfan I (alpha)	2017/11/05	89	50 - 130	83	50 - 130	<0.0020	ug/g	NC	40
5248270	Endosulfan II (beta)	2017/11/05	111	50 - 130	98	50 - 130	<0.0020	ug/g	NC	40
5248270	Endrin	2017/11/05	105	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40
5248270	g-Chlordane	2017/11/05	101	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40
5248270	Heptachlor epoxide	2017/11/05	108	50 - 130	98	50 - 130	<0.0020	ug/g	NC	40
5248270	Heptachlor	2017/11/05	96	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
5248270	Hexachlorobenzene	2017/11/05	94	50 - 130	82	50 - 130	<0.0020	ug/g	NC	40
5248270	Hexachlorobutadiene	2017/11/05	77	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40
5248270	Hexachloroethane	2017/11/05	53	50 - 130	73	50 - 130	<0.0020	ug/g	NC	40
5248270	Lindane	2017/11/05	87	50 - 130	79	50 - 130	<0.0020	ug/g	NC	40
5248270	Methoxychlor	2017/11/05	105	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
5248270	o,p-DDD	2017/11/05	118	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40
5248270	o,p-DDE	2017/11/05	101	50 - 130	93	50 - 130	<0.0020	ug/g	NC	40
5248270	o,p-DDT	2017/11/05	97	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
5248270	p,p-DDD	2017/11/05	115	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40
5248270	p,p-DDE	2017/11/05	119	50 - 130	105	50 - 130	<0.0020	ug/g	NC	40
5248270	p,p-DDT	2017/11/05	102	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5250864	Moisture	2017/11/06							1.4	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 (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 (absolute difference <= 2x RDL).

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Maxxam Job #: B7O6106
Report Date: 2017/11/07

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KP

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 Service Specialist

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Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-C0
Site Location: BLAIR
Your C.O.C. #: na

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/11/16
Report #: R4861359
Version: 3 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7O8915
Received: 2017/11/06, 15:57

Sample Matrix: Soil
Samples Received: 17

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Cyanide (WAD) in Leachates	1	N/A	2017/11/10	CAM SOP-00457	OMOE 3015 m
Fluoride by ISE in Leachates	1	2017/11/10	2017/11/10	CAM SOP-00449	SM 22 4500-F- C m
Mercury (TCLP Leachable) (mg/L)	1	N/A	2017/11/10	CAM SOP-00453	EPA 7470A m
Total Metals in TCLP Leachate by ICPMS	1	2017/11/10	2017/11/10	CAM SOP-00447	EPA 6020B m
Moisture	16	N/A	2017/11/09	CAM SOP-00445	Carter 2nd ed 51.2 m
Nitrate(NO3) + Nitrite(NO2) in Leachate	1	N/A	2017/11/10	CAM SOP-00440	SM 22 4500-NO3I/NO2B
OC Pesticides (Selected) & PCB (1)	9	2017/11/14	2017/11/15	CAM SOP-00307	SW846 8081, 8082
OC Pesticides (Selected) & PCB (1)	7	2017/11/15	2017/11/16	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	16	N/A	2017/11/10	CAM SOP-00307	EPA 8081/8082 m
Polychlorinated Biphenyl in Leachate	1	2017/11/10	2017/11/10	CAM SOP-00309	EPA 8082A m
TCLP - % Solids	1	2017/11/09	2017/11/10	CAM SOP-00401	EPA 1311 Update I m
TCLP - Extraction Fluid	1	N/A	2017/11/10	CAM SOP-00401	EPA 1311 Update I m
TCLP - Initial and final pH	1	N/A	2017/11/10	CAM SOP-00401	EPA 1311 Update I m
TCLP Zero Headspace Extraction	1	2017/11/09	2017/11/10	CAM SOP-00430	EPA 1311 m
VOCs in ZHE Leachates	1	2017/11/10	2017/11/10	CAM SOP-00228	EPA 8260C 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.

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Your Project #: HAM-00801245-C0
Site Location: BLAIR
Your C.O.C. #: na

Attention:Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
L8E 2W5

Report Date: 2017/11/16
Report #: R4861359
Version: 3 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7O8915
Received: 2017/11/06, 15:57

Results relate to samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

==========

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

RESULTS OF ANALYSES OF SOIL

Maxxam ID		FMO340	FMO341	FMO342	FMO343	FMO344	FMO345		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na	na		
	UNITS	**BH201 S2**	**BH201 S3**	**BH202 S2**	**BH202 S3**	**BH203 S2**	**BH203 S3**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	14	20	16	16	19	10	1.0	5257005

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FMO346	FMO347	FMO348	FMO348	FMO349	FMO350		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na	na		
	UNITS	**BH204 S2**	**BH204 S3**	**BH205 S2**	**BH205 S2 Lab-Dup**	**BH205 S3**	**BH206 S2**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	18	12	15	15	11	18	1.0	5257005

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

RESULTS OF ANALYSES OF SOIL

Maxxam ID		FMO351	FMO352	FMO353	FMO354	FMO355	FMO356		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na	na		
	UNITS	**BH206 S3**	**BH207 S2**	**BH207 S3**	**BH208 S2**	**BH208 S3**	**TCLP**	**RDL**	**QC Batch**
Charge/Prep Analysis									
Amount Extracted (Wet Weight) (g)	N/A						25	N/A	5256925
Inorganics									
Final pH	pH						5.30		5257881
Leachable Fluoride (F-)	mg/L						0.27	0.10	5259512
Initial pH	pH						9.12		5257881
Moisture	%	11	19	9.3	13	12		1.0	5257005
TCLP - % Solids	%						100	0.2	5257878
TCLP Extraction Fluid	N/A						FLUID 1		5257879
Leachable WAD Cyanide (Free)	mg/L						<0.010	0.010	5259514
Leachable Nitrite (N)	mg/L						<0.10	0.10	5259516
Leachable Nitrate (N)	mg/L						<1.0	1.0	5259516
Leachable Nitrate + Nitrite (N)	mg/L						<1.0	1.0	5259516
Metals									
Leachable Mercury (Hg)	mg/L						<0.0010	0.0010	5259413

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam ID		FMO356	
Sampling Date		2017/11/06	
COC Number		na	
	UNITS	**TCLP Lab-Dup**	**QC Batch**
Charge/Prep Analysis			
Amount Extracted (Wet Weight) (g)	N/A	25	5256925

QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7O8915
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Sampler Initials: KM

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		FMO356		
Sampling Date		2017/11/06		
COC Number		na		
	UNITS	**TCLP**	**RDL**	**QC Batch**
Metals				
Leachable Arsenic (As)	mg/L	<0.2	0.2	5259435
Leachable Barium (Ba)	mg/L	0.6	0.2	5259435
Leachable Boron (B)	mg/L	0.2	0.1	5259435
Leachable Cadmium (Cd)	mg/L	<0.05	0.05	5259435
Leachable Chromium (Cr)	mg/L	<0.1	0.1	5259435
Leachable Lead (Pb)	mg/L	<0.1	0.1	5259435
Leachable Selenium (Se)	mg/L	<0.1	0.1	5259435
Leachable Silver (Ag)	mg/L	<0.01	0.01	5259435
Leachable Uranium (U)	mg/L	<0.01	0.01	5259435

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

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Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		FMO356	FMO356		
Sampling Date		2017/11/06	2017/11/06		
COC Number		na	na		
	UNITS	**TCLP**	**TCLP Lab-Dup**	**RDL**	**QC Batch**
Volatile Organics					
Leachable Benzene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Carbon Tetrachloride	mg/L	<0.020	<0.020	0.020	5259176
Leachable Chlorobenzene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Chloroform	mg/L	<0.020	<0.020	0.020	5259176
Leachable 1,2-Dichlorobenzene	mg/L	<0.050	<0.050	0.050	5259176
Leachable 1,4-Dichlorobenzene	mg/L	<0.050	<0.050	0.050	5259176
Leachable 1,2-Dichloroethane	mg/L	<0.050	<0.050	0.050	5259176
Leachable 1,1-Dichloroethylene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Methylene Chloride(Dichloromethane)	mg/L	<0.20	<0.20	0.20	5259176
Leachable Methyl Ethyl Ketone (2-Butanone)	mg/L	<1.0	<1.0	1.0	5259176
Leachable Tetrachloroethylene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Trichloroethylene	mg/L	<0.020	<0.020	0.020	5259176
Leachable Vinyl Chloride	mg/L	<0.020	<0.020	0.020	5259176
Surrogate Recovery (%)					
Leachable 4-Bromofluorobenzene	%	78	90		5259176
Leachable D4-1,2-Dichloroethane	%	116	117		5259176
Leachable D8-Toluene	%	91	91		5259176

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		FMO356		
Sampling Date		2017/11/06		
COC Number		na		
	UNITS	**TCLP**	**RDL**	**QC Batch**
PCBs				
Leachable Total PCB	ug/L	<3.0	3.0	5259459
Surrogate Recovery (%)				
Leachable Decachlorobiphenyl	%	96		5259459

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO340		FMO341		FMO342		FMO343		
Sampling Date		2017/11/06		2017/11/06		2017/11/06		2017/11/06		
COC Number		na		na		na		na		
	UNITS	**BH201 S2**	**RDL**	**BH201 S3**	**RDL**	**BH202 S2**	**RDL**	**BH202 S3**	**RDL**	**QC Batch**
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5252027
o,p-DDD + p,p-DDD	ug/g	0.17	0.020	0.025	0.0020	0.12	0.020	0.11	0.020	5252027
o,p-DDE + p,p-DDE	ug/g	0.26	0.020	0.047	0.020	0.25	0.020	0.22	0.020	5252027
o,p-DDT + p,p-DDT	ug/g	<0.0060	0.0060	<0.0020	0.0020	0.0023	0.0020	<0.0030	0.0030	5252027
Total Endosulfan	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5252027
Total PCB	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5252027
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
a-Chlordane	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
g-Chlordane	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
o,p-DDD	ug/g	0.045	0.020	0.0048	0.0020	0.025	0.0020	0.028	0.0020	5267348
p,p-DDD	ug/g	0.13	0.020	0.020	0.0020	0.094	0.020	0.083	0.020	5267348
o,p-DDE	ug/g	<0.0050	0.0050	<0.0020	0.0020	<0.0050	0.0050	<0.0050	0.0050	5267348
p,p-DDE	ug/g	0.26	0.020	0.047	0.020	0.25	0.020	0.22	0.020	5267348
o,p-DDT	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
p,p-DDT	ug/g	<0.0060	0.0060	<0.0020	0.0020	0.0023	0.0020	<0.0030	0.0030	5267348
Dieldrin	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Lindane	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Endosulfan II (beta)	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Endrin	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Heptachlor	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Heptachlor epoxide	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Hexachlorobenzene	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Hexachlorobutadiene	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Hexachloroethane	ug/g	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	5267348
Methoxychlor	ug/g	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	5267348
Aroclor 1242	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5267348
Aroclor 1248	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5267348
Aroclor 1254	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5267348
Aroclor 1260	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	5267348
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	87		88		81		84		5267348

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO340		FMO341		FMO342		FMO343		
Sampling Date		2017/11/06		2017/11/06		2017/11/06		2017/11/06		
COC Number		na		na		na		na		
	UNITS	**BH201 S2**	**RDL**	**BH201 S3**	**RDL**	**BH202 S2**	**RDL**	**BH202 S3**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	108		104		98		102		5267348

RDL = Reportable Detection Limit
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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO344		FMO345			FMO346		
Sampling Date		2017/11/06		2017/11/06			2017/11/06		
COC Number		na		na			na		
	UNITS	**BH203 S2**	**QC Batch**	**BH203 S3**	**RDL**	**QC Batch**	**BH204 S2**	**RDL**	**QC Batch**
Calculated Parameters									
Chlordane (Total)	ug/g	<0.0020	5252027	<0.0020	0.0020	5252027	<0.0020	0.0020	5252027
o,p-DDD + p,p-DDD	ug/g	0.011	5252027	<0.0020	0.0020	5252027	0.060	0.020	5252027
o,p-DDE + p,p-DDE	ug/g	0.031	5252027	<0.0020	0.0020	5252027	0.14	0.020	5252027
o,p-DDT + p,p-DDT	ug/g	<0.0020	5252027	<0.0020	0.0020	5252027	<0.0040	0.0040	5252027
Total Endosulfan	ug/g	<0.0020	5252027	<0.0020	0.0020	5252027	<0.0030	0.0030	5252027
Total PCB	ug/g	<0.015	5252027	<0.015	0.015	5252027	<0.020	0.020	5252027
Pesticides & Herbicides									
Aldrin	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
a-Chlordane	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
g-Chlordane	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
o,p-DDD	ug/g	0.0028	5267348	<0.0020	0.0020	5265061	0.018	0.0020	5267348
p,p-DDD	ug/g	0.0079	5267348	<0.0020	0.0020	5265061	0.043	0.020	5267348
o,p-DDE	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0040	0.0040	5267348
p,p-DDE	ug/g	0.031	5267348	<0.0020	0.0020	5265061	0.14	0.020	5267348
o,p-DDT	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
p,p-DDT	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0040	0.0040	5267348
Dieldrin	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Lindane	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Endosulfan I (alpha)	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0030	0.0030	5267348
Endosulfan II (beta)	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Endrin	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Heptachlor	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Heptachlor epoxide	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Hexachlorobenzene	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Hexachlorobutadiene	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Hexachloroethane	ug/g	<0.0020	5267348	<0.0020	0.0020	5265061	<0.0020	0.0020	5267348
Methoxychlor	ug/g	<0.0050	5267348	<0.0050	0.0050	5265061	0.0061	0.0050	5267348
Aroclor 1242	ug/g	<0.015	5267348	<0.015	0.015	5265061	<0.020	0.020	5267348
Aroclor 1248	ug/g	<0.015	5267348	<0.015	0.015	5265061	<0.020	0.020	5267348
Aroclor 1254	ug/g	<0.015	5267348	<0.015	0.015	5265061	<0.020	0.020	5267348
Aroclor 1260	ug/g	<0.015	5267348	<0.015	0.015	5265061	<0.020	0.020	5267348
Surrogate Recovery (%)									
2,4,5,6-Tetrachloro-m-xylene	%	82	5267348	97		5265061	87		5267348

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO344		FMO345			FMO346		
Sampling Date		2017/11/06		2017/11/06			2017/11/06		
COC Number		na		na			na		
	UNITS	**BH203 S2**	**QC Batch**	**BH203 S3**	**RDL**	**QC Batch**	**BH204 S2**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	99	5267348	130		5265061	103		5267348

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO347		FMO348		FMO349	FMO350	FMO351		
Sampling Date		2017/11/06		2017/11/06		2017/11/06	2017/11/06	2017/11/06		
COC Number		na		na		na	na	na		
	UNITS	**BH204 S3**	**QC Batch**	**BH205 S2**	**QC Batch**	**BH205 S3**	**BH206 S2**	**BH206 S3**	**RDL**	**QC Batch**
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020	5252027	<0.0020	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDD + p,p-DDD	ug/g	<0.0020	5252027	<0.0020	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDE + p,p-DDE	ug/g	<0.0020	5252027	0.0027	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDT + p,p-DDT	ug/g	<0.0020	5252027	<0.0020	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
Total Endosulfan	ug/g	<0.0020	5252027	<0.0020	5252027	<0.0020	<0.0020	<0.0020	0.0020	5252027
Total PCB	ug/g	<0.015	5252027	<0.015	5252027	<0.015	<0.015	<0.015	0.015	5252027
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
a-Chlordane	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
g-Chlordane	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDD	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDD	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDE	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDE	ug/g	<0.0020	5265061	0.0027	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDT	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDT	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Dieldrin	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Lindane	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endosulfan I (alpha)	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endosulfan II (beta)	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endrin	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Heptachlor	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Heptachlor epoxide	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachlorobenzene	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachlorobutadiene	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachloroethane	ug/g	<0.0020	5265061	<0.0020	5267348	<0.0020	<0.0020	<0.0020	0.0020	5265061
Methoxychlor	ug/g	<0.0050	5265061	<0.0050	5267348	<0.0050	<0.0050	<0.0050	0.0050	5265061
Aroclor 1242	ug/g	<0.015	5265061	<0.015	5267348	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1248	ug/g	<0.015	5265061	<0.015	5267348	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1254	ug/g	<0.015	5265061	<0.015	5267348	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1260	ug/g	<0.015	5265061	<0.015	5267348	<0.015	<0.015	<0.015	0.015	5265061
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	88	5265061	85	5267348	94	109	104		5265061

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO347		FMO348		FMO349	FMO350	FMO351		
Sampling Date		2017/11/06		2017/11/06		2017/11/06	2017/11/06	2017/11/06		
COC Number		na		na		na	na	na		
	UNITS	**BH204 S3**	**QC Batch**	**BH205 S2**	**QC Batch**	**BH205 S3**	**BH206 S2**	**BH206 S3**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	116	5265061	105	5267348	124	111	112		5265061

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO351	FMO352	FMO353	FMO354	FMO355		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na		
	UNITS	**BH206 S3 Lab-Dup**	**BH207 S2**	**BH207 S3**	**BH208 S2**	**BH208 S3**	**RDL**	**QC Batch**
Calculated Parameters								
Chlordane (Total)	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDD + p,p-DDD	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDE + p,p-DDE	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
o,p-DDT + p,p-DDT	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
Total Endosulfan	ug/g		<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5252027
Total PCB	ug/g		<0.015	<0.015	<0.015	<0.015	0.015	5252027
Pesticides & Herbicides								
Aldrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
a-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
g-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
o,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
p,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Dieldrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Lindane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Endrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Heptachlor	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Heptachlor epoxide	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachlorobenzene	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Hexachloroethane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	5265061
Methoxychlor	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5265061
Aroclor 1242	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1248	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1254	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	5265061
Aroclor 1260	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	5265061

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		FMO351	FMO352	FMO353	FMO354	FMO355		
Sampling Date		2017/11/06	2017/11/06	2017/11/06	2017/11/06	2017/11/06		
COC Number		na	na	na	na	na		
	UNITS	**BH206 S3 Lab-Dup**	**BH207 S2**	**BH207 S3**	**BH208 S2**	**BH208 S3**	**RDL**	**QC Batch**
Surrogate Recovery (%)								
2,4,5,6-Tetrachloro-m-xylene	%	93	93	89	94	81		5265061
Decachlorobiphenyl	%	116	114	120	113	119		5265061

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

TEST SUMMARY

Maxxam ID: FMO340
Sample ID: BH201 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO341
Sample ID: BH201 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO342
Sample ID: BH202 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO343
Sample ID: BH202 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO344
Sample ID: BH203 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

TEST SUMMARY

Maxxam ID: FMO345 **Collected:** 2017/11/06
Sample ID: BH203 S3 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO346 **Collected:** 2017/11/06
Sample ID: BH204 S2 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO347 **Collected:** 2017/11/06
Sample ID: BH204 S3 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO348 **Collected:** 2017/11/06
Sample ID: BH205 S2 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5267348	2017/11/15	2017/11/16	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Cristina Carriere

Maxxam ID: FMO348 Dup **Collected:** 2017/11/06
Sample ID: BH205 S2 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang

Maxxam ID: FMO349 **Collected:** 2017/11/06
Sample ID: BH205 S3 **Shipped:**
Matrix: Soil **Received:** 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

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Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

TEST SUMMARY

Maxxam ID: FMO349
Sample ID: BH205 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO350
Sample ID: BH206 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO351
Sample ID: BH206 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO351 Dup
Sample ID: BH206 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang

Maxxam ID: FMO352
Sample ID: BH207 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO353
Sample ID: BH207 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

TEST SUMMARY

Maxxam ID: FMO354
Sample ID: BH208 S2
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO355
Sample ID: BH208 S3
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5257005	N/A	2017/11/09	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	5265061	2017/11/14	2017/11/15	Joy Zhang
OC Pesticides Summed Parameters	CALC	5252027	N/A	2017/11/10	Automated Statchk

Maxxam ID: FMO356
Sample ID: TCLP
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide (WAD) in Leachates	SKAL/CN	5259514	N/A	2017/11/10	Xuanhong Qiu
Fluoride by ISE in Leachates	ISE	5259512	2017/11/10	2017/11/10	Surinder Rai
Mercury (TCLP Leachable) (mg/L)	CV/AA	5259413	N/A	2017/11/10	Ron Morrison
Total Metals in TCLP Leachate by ICPMS	ICP1/MS	5259435	2017/11/10	2017/11/10	Arefa Dabhad
Nitrate(NO3) + Nitrite(NO2) in Leachate	LACH	5259516	N/A	2017/11/10	Chandra Nandlal
Polychlorinated Biphenyl in Leachate	GC/ECD	5259459	2017/11/10	2017/11/10	Dawn Alarie
TCLP - % Solids	BAL	5257878	2017/11/09	2017/11/10	Jian (Ken) Wang
TCLP - Extraction Fluid		5257879	N/A	2017/11/10	Jian (Ken) Wang
TCLP - Initial and final pH	PH	5257881	N/A	2017/11/10	Jian (Ken) Wang
TCLP Zero Headspace Extraction		5256925	2017/11/09	2017/11/10	Walt Wang
VOCs in ZHE Leachates	GC/MS	5259176	2017/11/10	2017/11/10	Blair Gannon

Maxxam ID: FMO356 Dup
Sample ID: TCLP
Matrix: Soil

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TCLP Zero Headspace Extraction		5256925	2017/11/09	2017/11/10	Walt Wang
VOCs in ZHE Leachates	GC/MS	5259176	2017/11/10	2017/11/10	Blair Gannon

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

GENERAL COMMENTS

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

Package 1	8.0°C

Cooler custody seal was present and intact.

OC Pesticide Analysis: Due to high concentrations of the target analytes, some samples required dilution. Detection limits were adjusted accordingly. Detection limits for some parameters were raised due to matrix interferences.

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

OC Pesticides (Selected) & PCB: Matrix spike recoveries were above the upper control limits. This may represent a high bias in some results for this specific analytes. For results that were not detected (ND), this potential bias has no impact.

Results relate only to the items tested.

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Maxxam
A Bureau Veritas Group Company

Maxxam Job #: B7O8915
Report Date: 2017/11/16

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
5259176	Leachable 4-Bromofluorobenzene	2017/11/10	88	70 - 130	104	70 - 130	91	%				
5259176	Leachable D4-1,2-Dichloroethane	2017/11/10	115	70 - 130	94	70 - 130	115	%				
5259176	Leachable D8-Toluene	2017/11/10	107	70 - 130	106	70 - 130	92	%				
5259459	Leachable Decachlorobiphenyl	2017/11/10	102	30 - 130	97	30 - 130	95	%				
5265061	2,4,5,6-Tetrachloro-m-xylene	2017/11/15	110	50 - 130	102	50 - 130	91	%				
5265061	Decachlorobiphenyl	2017/11/15	127	50 - 130	116	50 - 130	124	%				
5267348	2,4,5,6-Tetrachloro-m-xylene	2017/11/16	91	50 - 130	92	50 - 130	81	%				
5267348	Decachlorobiphenyl	2017/11/16	115	50 - 130	124	50 - 130	102	%				
5257005	Moisture	2017/11/09							5.4	20		
5259176	Leachable 1,1-Dichloroethylene	2017/11/10	106	70 - 130	105	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable 1,2-Dichlorobenzene	2017/11/10	100	70 - 130	99	70 - 130	<0.050	mg/L	NC	30		
5259176	Leachable 1,2-Dichloroethane	2017/11/10	95	70 - 130	95	70 - 130	<0.050	mg/L	NC	30		
5259176	Leachable 1,4-Dichlorobenzene	2017/11/10	103	70 - 130	102	70 - 130	<0.050	mg/L	NC	30		
5259176	Leachable Benzene	2017/11/10	111	70 - 130	109	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Carbon Tetrachloride	2017/11/10	97	70 - 130	96	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Chlorobenzene	2017/11/10	101	70 - 130	99	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Chloroform	2017/11/10	97	70 - 130	96	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Methyl Ethyl Ketone (2-Butanone)	2017/11/10	97	60 - 140	97	60 - 140	<1.0	mg/L	NC	30		
5259176	Leachable Methylene Chloride(Dichloromethane)	2017/11/10	103	70 - 130	102	70 - 130	<0.20	mg/L	NC	30		
5259176	Leachable Tetrachloroethylene	2017/11/10	96	70 - 130	95	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Trichloroethylene	2017/11/10	98	70 - 130	97	70 - 130	<0.020	mg/L	NC	30		
5259176	Leachable Vinyl Chloride	2017/11/10	95	70 - 130	93	70 - 130	<0.020	mg/L	NC	30		
5259413	Leachable Mercury (Hg)	2017/11/10	99	75 - 125	96	80 - 120	<0.0010	mg/L	NC	25	<0.0010	mg/L
5259435	Leachable Arsenic (As)	2017/11/10	101	80 - 120	102	80 - 120			NC	35	<0.2	mg/L
5259435	Leachable Barium (Ba)	2017/11/10	99	80 - 120	105	80 - 120			3.6	35	<0.2	mg/L
5259435	Leachable Boron (B)	2017/11/10	107	80 - 120	104	80 - 120			NC	35	<0.1	mg/L
5259435	Leachable Cadmium (Cd)	2017/11/10	105	80 - 120	105	80 - 120			NC	35	<0.05	mg/L
5259435	Leachable Chromium (Cr)	2017/11/10	100	80 - 120	103	80 - 120			NC	35	<0.1	mg/L
5259435	Leachable Lead (Pb)	2017/11/10	100	80 - 120	102	80 - 120			NC	35	<0.1	mg/L
5259435	Leachable Selenium (Se)	2017/11/10	102	80 - 120	105	80 - 120			NC	35	<0.1	mg/L

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
5259435	Leachable Silver (Ag)	2017/11/10	102	80 - 120	104	80 - 120			NC	35	<0.01	mg/L
5259435	Leachable Uranium (U)	2017/11/10	102	80 - 120	100	80 - 120			NC	35	<0.01	mg/L
5259459	Leachable Total PCB	2017/11/10	104	30 - 130	99	30 - 130	<3.0	ug/L	NC	40		
5259512	Leachable Fluoride (F-)	2017/11/10	98	80 - 120	98	80 - 120	<0.10	mg/L	24	25	<0.10	mg/L
5259514	Leachable WAD Cyanide (Free)	2017/11/10	96	80 - 120	100	80 - 120	<0.0020	mg/L	NC	20	<0.010	mg/L
5259516	Leachable Nitrate (N)	2017/11/10	112	80 - 120	106	80 - 120	<1.0	mg/L	NC	25	<1.0	mg/L
5259516	Leachable Nitrate + Nitrite (N)	2017/11/10	110	80 - 120	106	80 - 120	<1.0	mg/L	NC	25	<1.0	mg/L
5259516	Leachable Nitrite (N)	2017/11/10	105	80 - 120	102	80 - 120	<0.10	mg/L	NC	25	<0.10	mg/L
5265061	a-Chlordane	2017/11/15	137 (1)	50 - 130	100	50 - 130	<0.0020	ug/g	NC	40		
5265061	Aldrin	2017/11/15	100	50 - 130	91	50 - 130	<0.0020	ug/g	NC	40		
5265061	Aroclor 1242	2017/11/15					<0.015	ug/g	NC	40		
5265061	Aroclor 1248	2017/11/15					<0.015	ug/g	NC	40		
5265061	Aroclor 1254	2017/11/15					<0.015	ug/g	NC	40		
5265061	Aroclor 1260	2017/11/15					<0.015	ug/g	NC	40		
5265061	Dieldrin	2017/11/15	155 (1)	50 - 130	117	50 - 130	<0.0020	ug/g	NC	40		
5265061	Endosulfan I (alpha)	2017/11/15	128	50 - 130	102	50 - 130	<0.0020	ug/g	NC	40		
5265061	Endosulfan II (beta)	2017/11/15	146 (1)	50 - 130	105	50 - 130	<0.0020	ug/g	NC	40		
5265061	Endrin	2017/11/15	133 (1)	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40		
5265061	g-Chlordane	2017/11/15	129	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40		
5265061	Heptachlor epoxide	2017/11/15	129	50 - 130	94	50 - 130	<0.0020	ug/g	NC	40		
5265061	Heptachlor	2017/11/15	93	50 - 130	93	50 - 130	<0.0020	ug/g	NC	40		
5265061	Hexachlorobenzene	2017/11/15	120	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40		
5265061	Hexachlorobutadiene	2017/11/15	85	50 - 130	96	50 - 130	<0.0020	ug/g	NC	40		
5265061	Hexachloroethane	2017/11/15	65	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40		
5265061	Lindane	2017/11/15	113	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40		
5265061	Methoxychlor	2017/11/15	172 (1)	50 - 130	105	50 - 130	<0.0050	ug/g	NC	40		
5265061	o,p-DDD	2017/11/15	148 (1)	50 - 130	110	50 - 130	<0.0020	ug/g	NC	40		
5265061	o,p-DDE	2017/11/15	102	50 - 130	99	50 - 130	<0.0020	ug/g	NC	40		
5265061	o,p-DDT	2017/11/15	126	50 - 130	107	50 - 130	<0.0020	ug/g	NC	40		
5265061	p,p-DDD	2017/11/15	150 (1)	50 - 130	109	50 - 130	<0.0020	ug/g	NC	40		
5265061	p,p-DDE	2017/11/15	108	50 - 130	104	50 - 130	<0.0020	ug/g	NC	40		

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
5265061	p,p-DDT	2017/11/15	123	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40		
5267348	a-Chlordane	2017/11/16	117	50 - 130	114	50 - 130	<0.0020	ug/g	NC	40		
5267348	Aldrin	2017/11/16	88	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40		
5267348	Aroclor 1242	2017/11/16					<0.015	ug/g	NC	40		
5267348	Aroclor 1248	2017/11/16					<0.015	ug/g				
5267348	Aroclor 1254	2017/11/16					<0.015	ug/g				
5267348	Aroclor 1260	2017/11/16					<0.015	ug/g				
5267348	Dieldrin	2017/11/16	125	50 - 130	130 (2)	50 - 130	<0.0020	ug/g	NC	40		
5267348	Endosulfan I (alpha)	2017/11/16	124	50 - 130	133 (2)	50 - 130	<0.0020	ug/g	NC	40		
5267348	Endosulfan II (beta)	2017/11/16	125	50 - 130	122	50 - 130	<0.0020	ug/g	NC	40		
5267348	Endrin	2017/11/16	100	50 - 130	103	50 - 130	<0.0020	ug/g	NC	40		
5267348	g-Chlordane	2017/11/16	112	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40		
5267348	Heptachlor epoxide	2017/11/16	101	50 - 130	104	50 - 130	<0.0020	ug/g	NC	40		
5267348	Heptachlor	2017/11/16	88	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40		
5267348	Hexachlorobenzene	2017/11/16	99	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40		
5267348	Hexachlorobutadiene	2017/11/16	98	50 - 130	105	50 - 130	<0.0020	ug/g	NC	40		
5267348	Hexachloroethane	2017/11/16	65	50 - 130	73	50 - 130	<0.0020	ug/g	NC	40		
5267348	Lindane	2017/11/16	86	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40		
5267348	Methoxychlor	2017/11/16	110	50 - 130	114	50 - 130	<0.0050	ug/g	NC	40		
5267348	o,p-DDD	2017/11/16	118	50 - 130	122	50 - 130	<0.0020	ug/g	NC	40		
5267348	o,p-DDE	2017/11/16	95	50 - 130	89	50 - 130	<0.0020	ug/g	NC	40		
5267348	o,p-DDT	2017/11/16	83	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40		
5267348	p,p-DDD	2017/11/16	113	50 - 130	121	50 - 130	<0.0020	ug/g	NC	40		
5267348	p,p-DDE	2017/11/16	107	50 - 130	102	50 - 130	<0.0020	ug/g	5.4	40		

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Maxxam Job #: B7O8915
Report Date: 2017/11/16

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
5267348	p,p-DDT	2017/11/16	83	50 - 130	91	50 - 130	<0.0020	ug/g	1.3	40		

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.

Leachate Blank: A blank matrix containing all reagents used in the leaching procedure. Used to determine any process contamination.

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 (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) The 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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Maxxam Job #: B7O8915
Report Date: 2017/11/16

exp Services Inc
Client Project #: HAM-00801245-C0
Site Location: BLAIR
Sampler Initials: KM

VALIDATION SIGNATURE PAGE

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

Cristina Carriere, Scientific Service 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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Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-G0
Site Location: Blair
Your C.O.C. #: 39772

Attention: Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
CANADA L8E 2W5

Report Date: 2018/06/27
Report #: R5268354
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F2998
Received: 2018/06/21, 16:30

Sample Matrix: Soil
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	2	N/A	2018/06/25		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Soil (1)	2	2018/06/22	2018/06/23	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	2	2018/06/25	2018/06/26	CAM SOP-00447	EPA 6020B m
Moisture	4	N/A	2018/06/22	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (2)	2	2018/06/25	2018/06/26	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	2	N/A	2018/06/23	CAM SOP-00307	EPA 8081/8082 m
Volatile Organic Compounds and F1 PHCs	2	N/A	2018/06/24	CAM SOP-00230	EPA 8260C 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.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(2) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Your Project #: HAM-00801245-G0
Site Location: Blair
Your C.O.C. #: 39772

Attention: Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
CANADA L8E 2W5

Report Date: 2018/06/27
Report #: R5268354
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F2998
Received: 2018/06/21, 16:30

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

==========

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

RESULTS OF ANALYSES OF SOIL

Maxxam ID		HAH072		HAH073		HAH074		HAH075		
Sampling Date		2018/06/20 10:20		2018/06/20 10:40		2018/06/20 10:25		2018/06/20 10:45		
COC Number		39772		39772		39772		39772		
	UNITS	**BH107 SS1**	**QC Batch**	**BH107 SS4**	**QC Batch**	**BH701 SS1**	**QC Batch**	**BH701 SS4**	**RDL**	**QC Batch**
Inorganics										
Moisture	%	11	5594936	7.6	5594347	12	5594936	8.3	1.0	5594347

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		HAH072	HAH074		
Sampling Date		2018/06/20 10:20	2018/06/20 10:25		
COC Number		39772	39772		
	UNITS	**BH107 SS1**	**BH701 SS1**	**RDL**	**QC Batch**
Metals					
Acid Extractable Antimony (Sb)	ug/g	0.22	<0.20	0.20	5596887
Acid Extractable Arsenic (As)	ug/g	4.8	5.9	1.0	5596887
Acid Extractable Barium (Ba)	ug/g	160	130	0.50	5596887
Acid Extractable Beryllium (Be)	ug/g	0.67	0.69	0.20	5596887
Acid Extractable Boron (B)	ug/g	10	9.8	5.0	5596887
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.13	0.10	5596887
Acid Extractable Chromium (Cr)	ug/g	20	20	1.0	5596887
Acid Extractable Cobalt (Co)	ug/g	12	13	0.10	5596887
Acid Extractable Copper (Cu)	ug/g	35	35	0.50	5596887
Acid Extractable Lead (Pb)	ug/g	11	12	1.0	5596887
Acid Extractable Molybdenum (Mo)	ug/g	0.55	0.61	0.50	5596887
Acid Extractable Nickel (Ni)	ug/g	26	27	0.50	5596887
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	0.50	5596887
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	0.20	5596887
Acid Extractable Thallium (Tl)	ug/g	0.15	0.12	0.050	5596887
Acid Extractable Uranium (U)	ug/g	0.60	0.61	0.050	5596887
Acid Extractable Vanadium (V)	ug/g	28	29	5.0	5596887
Acid Extractable Zinc (Zn)	ug/g	62	62	5.0	5596887

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		HAH073	HAH075		
Sampling Date		2018/06/20 10:40	2018/06/20 10:45		
COC Number		39772	39772		
	UNITS	**BH107 SS4**	**BH701 SS4**	**RDL**	**QC Batch**
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	5592897
Volatile Organics					
Acetone (2-Propanone)	ug/g	<0.50	<0.50	0.50	5594579
Benzene	ug/g	<0.020	<0.020	0.020	5594579
Bromodichloromethane	ug/g	<0.050	<0.050	0.050	5594579
Bromoform	ug/g	<0.050	<0.050	0.050	5594579
Bromomethane	ug/g	<0.050	<0.050	0.050	5594579
Carbon Tetrachloride	ug/g	<0.050	<0.050	0.050	5594579
Chlorobenzene	ug/g	<0.050	<0.050	0.050	5594579
Chloroform	ug/g	<0.050	<0.050	0.050	5594579
Dibromochloromethane	ug/g	<0.050	<0.050	0.050	5594579
1,2-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5594579
1,3-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5594579
1,4-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5594579
Dichlorodifluoromethane (FREON 12)	ug/g	<0.050	<0.050	0.050	5594579
1,1-Dichloroethane	ug/g	<0.050	<0.050	0.050	5594579
1,2-Dichloroethane	ug/g	<0.050	<0.050	0.050	5594579
1,1-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5594579
cis-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5594579
trans-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5594579
1,2-Dichloropropane	ug/g	<0.050	<0.050	0.050	5594579
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	5594579
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	5594579
Ethylbenzene	ug/g	<0.020	<0.020	0.020	5594579
Ethylene Dibromide	ug/g	<0.050	<0.050	0.050	5594579
Hexane	ug/g	<0.050	<0.050	0.050	5594579
Methylene Chloride(Dichloromethane)	ug/g	<0.050	<0.050	0.050	5594579
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.50	<0.50	0.50	5594579
Methyl Isobutyl Ketone	ug/g	<0.50	<0.50	0.50	5594579
Methyl t-butyl ether (MTBE)	ug/g	<0.050	<0.050	0.050	5594579
Styrene	ug/g	<0.050	<0.050	0.050	5594579
1,1,1,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	5594579
1,1,2,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	5594579

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (SOIL)

Maxxam ID		HAH073	HAH075		
Sampling Date		2018/06/20 10:40	2018/06/20 10:45		
COC Number		39772	39772		
	UNITS	**BH107 SS4**	**BH701 SS4**	**RDL**	**QC Batch**
Tetrachloroethylene	ug/g	<0.050	<0.050	0.050	5594579
Toluene	ug/g	<0.020	<0.020	0.020	5594579
1,1,1-Trichloroethane	ug/g	<0.050	<0.050	0.050	5594579
1,1,2-Trichloroethane	ug/g	<0.050	<0.050	0.050	5594579
Trichloroethylene	ug/g	<0.050	<0.050	0.050	5594579
Trichlorofluoromethane (FREON 11)	ug/g	<0.050	<0.050	0.050	5594579
Vinyl Chloride	ug/g	<0.020	<0.020	0.020	5594579
p+m-Xylene	ug/g	<0.020	<0.020	0.020	5594579
o-Xylene	ug/g	<0.020	<0.020	0.020	5594579
Total Xylenes	ug/g	<0.020	<0.020	0.020	5594579
F1 (C6-C10)	ug/g	<10	<10	10	5594579
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	5594579
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	95	95		5594579
D10-o-Xylene	%	112	113		5594579
D4-1,2-Dichloroethane	%	96	98		5594579
D8-Toluene	%	104	103		5594579

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		HAH073	HAH075		
Sampling Date		2018/06/20 10:40	2018/06/20 10:45		
COC Number		39772	39772		
	UNITS	**BH107 SS4**	**BH701 SS4**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	5594430
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	5594430
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	5594430
Reached Baseline at C50	ug/g	Yes	Yes		5594430
Surrogate Recovery (%)					
o-Terphenyl	%	92	91		5594430

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F2998
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exp Services Inc
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Site Location: Blair
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		HAH072	HAH074		
Sampling Date		2018/06/20 10:20	2018/06/20 10:25		
COC Number		39772	39772		
	UNITS	**BH107 SS1**	**BH701 SS1**	**RDL**	**QC Batch**
Calculated Parameters					
Chlordane (Total)	ug/g	<0.0020	<0.0020	0.0020	5592217
o,p-DDD + p,p-DDD	ug/g	<0.0020	<0.0020	0.0020	5592217
o,p-DDE + p,p-DDE	ug/g	<0.0020	<0.0020	0.0020	5592217
o,p-DDT + p,p-DDT	ug/g	<0.0020	<0.0020	0.0020	5592217
Total Endosulfan	ug/g	<0.0020	<0.0020	0.0020	5592217
Total PCB	ug/g	<0.015	<0.015	0.015	5592217
Pesticides & Herbicides					
Aldrin	ug/g	<0.0020	<0.0020	0.0020	5596865
a-Chlordane	ug/g	<0.0020	<0.0020	0.0020	5596865
g-Chlordane	ug/g	<0.0020	<0.0020	0.0020	5596865
o,p-DDD	ug/g	<0.0020	<0.0020	0.0020	5596865
p,p-DDD	ug/g	<0.0020	<0.0020	0.0020	5596865
o,p-DDE	ug/g	<0.0020	<0.0020	0.0020	5596865
p,p-DDE	ug/g	<0.0020	<0.0020	0.0020	5596865
o,p-DDT	ug/g	<0.0020	<0.0020	0.0020	5596865
p,p-DDT	ug/g	<0.0020	<0.0020	0.0020	5596865
Dieldrin	ug/g	<0.0020	<0.0020	0.0020	5596865
Lindane	ug/g	<0.0020	<0.0020	0.0020	5596865
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	0.0020	5596865
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	0.0020	5596865
Endrin	ug/g	<0.0020	<0.0020	0.0020	5596865
Heptachlor	ug/g	<0.0020	<0.0020	0.0020	5596865
Heptachlor epoxide	ug/g	<0.0020	<0.0020	0.0020	5596865
Hexachlorobenzene	ug/g	<0.0020	<0.0020	0.0020	5596865
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	0.0020	5596865
Hexachloroethane	ug/g	<0.0020	<0.0020	0.0020	5596865
Methoxychlor	ug/g	<0.0050	<0.0050	0.0050	5596865
Aroclor 1242	ug/g	<0.015	<0.015	0.015	5596865
Aroclor 1248	ug/g	<0.015	<0.015	0.015	5596865
Aroclor 1254	ug/g	<0.015	<0.015	0.015	5596865
Aroclor 1260	ug/g	<0.015	<0.015	0.015	5596865
Surrogate Recovery (%)					
2,4,5,6-Tetrachloro-m-xylene	%	78	78		5596865

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (SOIL)

Maxxam ID		HAH072	HAH074		
Sampling Date		2018/06/20 10:20	2018/06/20 10:25		
COC Number		39772	39772		
	UNITS	**BH107 SS1**	**BH701 SS1**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	101	94		5596865

RDL = Reportable Detection Limit
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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: HAH072
Sample ID: BH107 SS1
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5596887	2018/06/25	2018/06/26	Viviana Canzonieri
Moisture	BAL	5594936	N/A	2018/06/22	Gargi Gireesh
OC Pesticides (Selected) & PCB	GC/ECD	5596865	2018/06/25	2018/06/26	Li Peng
OC Pesticides Summed Parameters	CALC	5592217	N/A	2018/06/23	Automated Statchk

Maxxam ID: HAH073
Sample ID: BH107 SS4
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5592897	N/A	2018/06/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5594430	2018/06/22	2018/06/23	Zhiyue (Frank) Zhu
Moisture	BAL	5594347	N/A	2018/06/22	Gargi Gireesh
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5594579	N/A	2018/06/24	Anna Gabrielyan

Maxxam ID: HAH074
Sample ID: BH701 SS1
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5596887	2018/06/25	2018/06/26	Viviana Canzonieri
Moisture	BAL	5594936	N/A	2018/06/22	Gargi Gireesh
OC Pesticides (Selected) & PCB	GC/ECD	5596865	2018/06/25	2018/06/26	Li Peng
OC Pesticides Summed Parameters	CALC	5592217	N/A	2018/06/23	Automated Statchk

Maxxam ID: HAH075
Sample ID: BH701 SS4
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5592897	N/A	2018/06/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5594430	2018/06/22	2018/06/23	Zhiyue (Frank) Zhu
Moisture	BAL	5594347	N/A	2018/06/22	Gargi Gireesh
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5594579	N/A	2018/06/24	Anna Gabrielyan

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
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GENERAL COMMENTS

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

Package 1	1.7°C

Results relate only to the items tested.

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5594430	o-Terphenyl	2018/06/23	96	60 - 130	92	60 - 130	91	%		
5594579	4-Bromofluorobenzene	2018/06/23	102	60 - 140	97	60 - 140	95	%		
5594579	D10-o-Xylene	2018/06/23	112	60 - 130	89	60 - 130	109	%		
5594579	D4-1,2-Dichloroethane	2018/06/23	109	60 - 140	101	60 - 140	99	%		
5594579	D8-Toluene	2018/06/23	97	60 - 140	104	60 - 140	102	%		
5596865	2,4,5,6-Tetrachloro-m-xylene	2018/06/25	75	50 - 130	79	50 - 130	67	%		
5596865	Decachlorobiphenyl	2018/06/25	112	50 - 130	109	50 - 130	95	%		
5594347	Moisture	2018/06/22							2.2	20
5594430	F2 (C10-C16 Hydrocarbons)	2018/06/23	100	50 - 130	96	80 - 120	<10	ug/g	NC	30
5594430	F3 (C16-C34 Hydrocarbons)	2018/06/23	94	50 - 130	88	80 - 120	<50	ug/g	NC	30
5594430	F4 (C34-C50 Hydrocarbons)	2018/06/23	87	50 - 130	83	80 - 120	<50	ug/g	NC	30
5594579	1,1,1,2-Tetrachloroethane	2018/06/23	100	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	1,1,1-Trichloroethane	2018/06/23	115	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
5594579	1,1,2,2-Tetrachloroethane	2018/06/23	95	60 - 140	93	60 - 130	<0.050	ug/g	NC	50
5594579	1,1,2-Trichloroethane	2018/06/23	105	60 - 140	101	60 - 130	<0.050	ug/g	NC	50
5594579	1,1-Dichloroethane	2018/06/23	118	60 - 140	101	60 - 130	<0.050	ug/g	NC	50
5594579	1,1-Dichloroethylene	2018/06/23	120	60 - 140	101	60 - 130	<0.050	ug/g	NC	50
5594579	1,2-Dichlorobenzene	2018/06/23	93	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	1,2-Dichloroethane	2018/06/23	113	60 - 140	99	60 - 130	<0.050	ug/g	NC	50
5594579	1,2-Dichloropropane	2018/06/23	118	60 - 140	101	60 - 130	<0.050	ug/g	NC	50
5594579	1,3-Dichlorobenzene	2018/06/23	98	60 - 140	97	60 - 130	<0.050	ug/g	NC	50
5594579	1,4-Dichlorobenzene	2018/06/23	97	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
5594579	Acetone (2-Propanone)	2018/06/23	112	60 - 140	93	60 - 140	<0.50	ug/g	NC	50
5594579	Benzene	2018/06/23	118	60 - 140	99	60 - 130	<0.020	ug/g	NC	50
5594579	Bromodichloromethane	2018/06/23	107	60 - 140	93	60 - 130	<0.050	ug/g	NC	50
5594579	Bromoform	2018/06/23	86	60 - 140	83	60 - 130	<0.050	ug/g	NC	50
5594579	Bromomethane	2018/06/23	112	60 - 140	96	60 - 140	<0.050	ug/g	NC	50
5594579	Carbon Tetrachloride	2018/06/23	113	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Chlorobenzene	2018/06/23	103	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Chloroform	2018/06/23	114	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
5594579	cis-1,2-Dichloroethylene	2018/06/23	111	60 - 140	95	60 - 130	<0.050	ug/g	NC	50

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5594579	cis-1,3-Dichloropropene	2018/06/23	104	60 - 140	90	60 - 130	<0.030	ug/g	NC	50
5594579	Dibromochloromethane	2018/06/23	94	60 - 140	90	60 - 130	<0.050	ug/g	NC	50
5594579	Dichlorodifluoromethane (FREON 12)	2018/06/23	107	60 - 140	91	60 - 140	<0.050	ug/g	NC	50
5594579	Ethylbenzene	2018/06/23	108	60 - 140	100	60 - 130	<0.020	ug/g	NC	50
5594579	Ethylene Dibromide	2018/06/23	98	60 - 140	94	60 - 130	<0.050	ug/g	NC	50
5594579	F1 (C6-C10) - BTEX	2018/06/23					<10	ug/g	NC	30
5594579	F1 (C6-C10)	2018/06/23	100	60 - 140	85	80 - 120	<10	ug/g	NC	30
5594579	Hexane	2018/06/23	120	60 - 140	100	60 - 130	<0.050	ug/g	NC	50
5594579	Methyl Ethyl Ketone (2-Butanone)	2018/06/23	109	60 - 140	92	60 - 140	<0.50	ug/g	NC	50
5594579	Methyl Isobutyl Ketone	2018/06/23	104	60 - 140	90	60 - 130	<0.50	ug/g	NC	50
5594579	Methyl t-butyl ether (MTBE)	2018/06/23	112	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Methylene Chloride(Dichloromethane)	2018/06/23	116	60 - 140	100	60 - 130	<0.050	ug/g	NC	50
5594579	o-Xylene	2018/06/23	106	60 - 140	98	60 - 130	<0.020	ug/g	NC	50
5594579	p+m-Xylene	2018/06/23	105	60 - 140	96	60 - 130	<0.020	ug/g	NC	50
5594579	Styrene	2018/06/23	103	60 - 140	95	60 - 130	<0.050	ug/g	NC	50
5594579	Tetrachloroethylene	2018/06/23	104	60 - 140	96	60 - 130	<0.050	ug/g	3.0	50
5594579	Toluene	2018/06/23	104	60 - 140	97	60 - 130	<0.020	ug/g	NC	50
5594579	Total Xylenes	2018/06/23					<0.020	ug/g	NC	50
5594579	trans-1,2-Dichloroethylene	2018/06/23	116	60 - 140	99	60 - 130	<0.050	ug/g	NC	50
5594579	trans-1,3-Dichloropropene	2018/06/23	96	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
5594579	Trichloroethylene	2018/06/23	114	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Trichlorofluoromethane (FREON 11)	2018/06/23	112	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
5594579	Vinyl Chloride	2018/06/23	119	60 - 140	100	60 - 130	<0.020	ug/g	NC	50
5594936	Moisture	2018/06/22							1.9	20
5596865	a-Chlordane	2018/06/25	76	50 - 130	77	50 - 130	<0.0020	ug/g	NC	40
5596865	Aldrin	2018/06/25	70	50 - 130	72	50 - 130	<0.0020	ug/g	NC	40
5596865	Aroclor 1242	2018/06/25					<0.015	ug/g	200 (1)	40
5596865	Aroclor 1248	2018/06/25					<0.015	ug/g		
5596865	Aroclor 1254	2018/06/25					<0.015	ug/g		
5596865	Aroclor 1260	2018/06/25					<0.015	ug/g		
5596865	Dieldrin	2018/06/25	70	50 - 130	75	50 - 130	<0.0020	ug/g	NC	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5596865	Endosulfan I (alpha)	2018/06/25	56	50 - 130	58	50 - 130	<0.0020	ug/g	NC	40
5596865	Endosulfan II (beta)	2018/06/25	63	50 - 130	66	50 - 130	<0.0020	ug/g	NC	40
5596865	Endrin	2018/06/25	61	50 - 130	67	50 - 130	<0.0020	ug/g	NC	40
5596865	g-Chlordane	2018/06/25	67	50 - 130	72	50 - 130	<0.0020	ug/g	NC	40
5596865	Heptachlor epoxide	2018/06/25	67	50 - 130	62	50 - 130	<0.0020	ug/g	NC	40
5596865	Heptachlor	2018/06/25	75	50 - 130	74	50 - 130	<0.0020	ug/g	NC	40
5596865	Hexachlorobenzene	2018/06/25	83	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40
5596865	Hexachlorobutadiene	2018/06/25	91	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40
5596865	Hexachloroethane	2018/06/25	73	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
5596865	Lindane	2018/06/25	62	50 - 130	70	50 - 130	<0.0020	ug/g	NC	40
5596865	Methoxychlor	2018/06/25	79	50 - 130	85	50 - 130	<0.0050	ug/g	NC	40
5596865	o,p-DDD	2018/06/25	80	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40
5596865	o,p-DDE	2018/06/25	94	50 - 130	69	50 - 130	<0.0020	ug/g	NC	40
5596865	o,p-DDT	2018/06/25	84	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
5596865	p,p-DDD	2018/06/25	63	50 - 130	68	50 - 130	<0.0020	ug/g	NC	40
5596865	p,p-DDE	2018/06/25	82	50 - 130	74	50 - 130	<0.0020	ug/g	NC	40
5596865	p,p-DDT	2018/06/25	80	50 - 130	81	50 - 130	<0.0020	ug/g	NC	40
5596887	Acid Extractable Antimony (Sb)	2018/06/26	88	75 - 125	103	80 - 120	<0.20	ug/g	13	30
5596887	Acid Extractable Arsenic (As)	2018/06/26	98	75 - 125	106	80 - 120	<1.0	ug/g	5.2	30
5596887	Acid Extractable Barium (Ba)	2018/06/26	NC	75 - 125	103	80 - 120	<0.50	ug/g	1.1	30
5596887	Acid Extractable Beryllium (Be)	2018/06/26	101	75 - 125	101	80 - 120	<0.20	ug/g	0.75	30
5596887	Acid Extractable Boron (B)	2018/06/26	93	75 - 125	97	80 - 120	<5.0	ug/g	2.7	30
5596887	Acid Extractable Cadmium (Cd)	2018/06/26	101	75 - 125	103	80 - 120	<0.10	ug/g	NC	30
5596887	Acid Extractable Chromium (Cr)	2018/06/26	102	75 - 125	102	80 - 120	<1.0	ug/g	1.2	30
5596887	Acid Extractable Cobalt (Co)	2018/06/26	98	75 - 125	104	80 - 120	<0.10	ug/g	0.90	30
5596887	Acid Extractable Copper (Cu)	2018/06/26	NC	75 - 125	103	80 - 120	<0.50	ug/g	4.2	30
5596887	Acid Extractable Lead (Pb)	2018/06/26	97	75 - 125	105	80 - 120	<1.0	ug/g	1.0	30
5596887	Acid Extractable Molybdenum (Mo)	2018/06/26	97	75 - 125	100	80 - 120	<0.50	ug/g	9.0	30
5596887	Acid Extractable Nickel (Ni)	2018/06/26	NC	75 - 125	104	80 - 120	<0.50	ug/g	0.45	30
5596887	Acid Extractable Selenium (Se)	2018/06/26	102	75 - 125	106	80 - 120	<0.50	ug/g	NC	30
5596887	Acid Extractable Silver (Ag)	2018/06/26	99	75 - 125	103	80 - 120	<0.20	ug/g	NC	30

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5596887	Acid Extractable Thallium (Tl)	2018/06/26	99	75 - 125	106	80 - 120	<0.050	ug/g	0.74	30
5596887	Acid Extractable Uranium (U)	2018/06/26	100	75 - 125	103	80 - 120	<0.050	ug/g	2.1	30
5596887	Acid Extractable Vanadium (V)	2018/06/26	NC	75 - 125	104	80 - 120	<5.0	ug/g	0.19	30
5596887	Acid Extractable Zinc (Zn)	2018/06/26	NC	75 - 125	104	80 - 120	<5.0	ug/g	0.78	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 (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Job #: B8F2998
Report Date: 2018/06/27

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

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 Service 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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Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-G0
Site Location: Blair
Your C.O.C. #: 670515-01-01

Attention: Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
CANADA L8E 2W5

Report Date: 2018/07/04
Report #: R5279996
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F9367
Received: 2018/06/27, 16:25

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	4	N/A	2018/07/03		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Water (1)	4	2018/06/29	2018/07/03	CAM SOP-00316	CCME PHC-CWS m
Dissolved Metals by ICPMS	4	N/A	2018/07/03	CAM SOP-00447	EPA 6020B m
OC Pesticides (Selected) & PCB (2)	4	2018/06/29	2018/07/01	CAM SOP-00307	EPA 8081A/8082B m
OC Pesticides Summed Parameters	4	N/A	2018/07/03	CAM SOP-00307	EPA 8081A/8082B m
Volatile Organic Compounds and F1 PHCs	5	N/A	2018/06/30	CAM SOP-00230	EPA 8260C 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.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(2) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Your Project #: HAM-00801245-G0
Site Location: Blair
Your C.O.C. #: 670515-01-01

Attention: Erik Enders

exp Services Inc
Hamilton Branch
80 Bancroft St
Hamilton, ON
CANADA L8E 2W5

Report Date: 2018/07/04
Report #: R5279996
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F9367
Received: 2018/06/27, 16:25

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Deepthi Shaji, Project Manager
Email: dshaji@maxxam.ca
Phone# (905)817-5700 Ext:5807

==========

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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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Metals							
Dissolved Antimony (Sb)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5603788
Dissolved Arsenic (As)	ug/L	13	1.3	3.9	13	1.0	5603788
Dissolved Barium (Ba)	ug/L	690	260	48	690	2.0	5603788
Dissolved Beryllium (Be)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5603788
Dissolved Boron (B)	ug/L	130	320	5000	130	10	5603788
Dissolved Cadmium (Cd)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	5603788
Dissolved Chromium (Cr)	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	5603788
Dissolved Cobalt (Co)	ug/L	3.6	0.55	<0.50	3.6	0.50	5603788
Dissolved Copper (Cu)	ug/L	<1.0	1.5	<1.0	<1.0	1.0	5603788
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5603788
Dissolved Molybdenum (Mo)	ug/L	1.2	22	59	1.2	0.50	5603788
Dissolved Nickel (Ni)	ug/L	3.7	3.1	2.3	3.8	1.0	5603788
Dissolved Selenium (Se)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	5603788
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	5603788
Dissolved Thallium (Tl)	ug/L	<0.050	<0.050	0.052	<0.050	0.050	5603788
Dissolved Uranium (U)	ug/L	2.5	42	5.1	2.5	0.10	5603788
Dissolved Vanadium (V)	ug/L	0.99	1.8	1.4	0.97	0.50	5603788
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	5603788

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5603227
Volatile Organics							
Acetone (2-Propanone)	ug/L	<10	<10	24	<10	10	5600881
Benzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Bromodichloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Bromoform	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	5600881
Bromomethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Carbon Tetrachloride	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Chlorobenzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Chloroform	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Dibromochloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	5600881
1,1-Dichloroethane	ug/L	<0.20	<0.20	0.22	<0.20	0.20	5600881
1,2-Dichloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	<0.30	0.30	5600881
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	5600881
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Ethylene Dibromide	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Hexane	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	5600881
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	5600881
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	<10	<10	10	5600881
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	5600881
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Styrene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Tetrachloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Toluene	ug/L	<0.20	<0.20	0.28	<0.20	0.20	5600881
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	5600881
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
p+m-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
o-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
Total Xylenes	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	5600881
F1 (C6-C10)	ug/L	<25	<25	<25	<25	25	5600881
F1 (C6-C10) - BTEX	ug/L	<25	<25	<25	<25	25	5600881
Surrogate Recovery (%)							
4-Bromofluorobenzene	%	95	96	95	97		5600881
D4-1,2-Dichloroethane	%	100	103	102	102		5600881
D8-Toluene	%	99	100	101	99		5600881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (WATER)

Maxxam ID		HBQ664		
Sampling Date		2018/06/26		
COC Number		670515-01-01		
	UNITS	**TRIP SPIKE**	**RDL**	**QC Batch**
Volatile Organics				
Acetone (2-Propanone)	ug/L	90	10	5600881
Benzene	ug/L	90	0.20	5600881
Bromodichloromethane	ug/L	85	0.50	5600881
Bromoform	ug/L	80	1.0	5600881
Bromomethane	ug/L	90	0.50	5600881
Carbon Tetrachloride	ug/L	90	0.20	5600881
Chlorobenzene	ug/L	85	0.20	5600881
Chloroform	ug/L	90	0.20	5600881
Dibromochloromethane	ug/L	80	0.50	5600881
1,2-Dichlorobenzene	ug/L	85	0.50	5600881
1,3-Dichlorobenzene	ug/L	80	0.50	5600881
1,4-Dichlorobenzene	ug/L	75	0.50	5600881
Dichlorodifluoromethane (FREON 12)	ug/L	90	1.0	5600881
1,1-Dichloroethane	ug/L	95	0.20	5600881
1,2-Dichloroethane	ug/L	90	0.50	5600881
1,1-Dichloroethylene	ug/L	95	0.20	5600881
cis-1,2-Dichloroethylene	ug/L	90	0.50	5600881
trans-1,2-Dichloroethylene	ug/L	90	0.50	5600881
1,2-Dichloropropane	ug/L	90	0.20	5600881
cis-1,3-Dichloropropene	ug/L	60	0.30	5600881
trans-1,3-Dichloropropene	ug/L	60	0.40	5600881
Ethylbenzene	ug/L	85	0.20	5600881
Ethylene Dibromide	ug/L	90	0.20	5600881
Hexane	ug/L	50	1.0	5600881
Methylene Chloride(Dichloromethane)	ug/L	100	2.0	5600881
Methyl Ethyl Ketone (2-Butanone)	ug/L	80	10	5600881
Methyl Isobutyl Ketone	ug/L	75	5.0	5600881
Methyl t-butyl ether (MTBE)	ug/L	95	0.50	5600881
Styrene	ug/L	80	0.50	5600881
1,1,1,2-Tetrachloroethane	ug/L	85	0.50	5600881
1,1,2,2-Tetrachloroethane	ug/L	85	0.50	5600881
Tetrachloroethylene	ug/L	85	0.20	5600881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

VOLATILE ORGANICS BY GC/MS (WATER)

Maxxam ID		HBQ664		
Sampling Date		2018/06/26		
COC Number		670515-01-01		
	UNITS	**TRIP SPIKE**	**RDL**	**QC Batch**
Toluene	ug/L	85	0.20	5600881
1,1,1-Trichloroethane	ug/L	90	0.20	5600881
1,1,2-Trichloroethane	ug/L	90	0.50	5600881
Trichloroethylene	ug/L	90	0.20	5600881
Trichlorofluoromethane (FREON 11)	ug/L	95	0.50	5600881
Vinyl Chloride	ug/L	90	0.20	5600881
p+m-Xylene	ug/L	75	0.20	5600881
o-Xylene	ug/L	85	0.20	5600881
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	97		5600881
D4-1,2-Dichloroethane	%	101		5600881
D8-Toluene	%	101		5600881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Site Location: Blair
Sampler Initials: KP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	<100	<100	100	5605863
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	<200	<200	200	5605863
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	<200	<200	200	5605863
Reached Baseline at C50	ug/L	Yes	Yes	Yes	Yes		5605863
Surrogate Recovery (%)							
o-Terphenyl	%	95	94	90	90		5605863

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Calculated Parameters							
Chlordane (Total)	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
o,p-DDD + p,p-DDD	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
o,p-DDE + p,p-DDE	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
o,p-DDT + p,p-DDT	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
Total Endosulfan	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5603187
Total PCB	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5603187
Pesticides & Herbicides							
Aldrin	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Dieldrin	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
a-Chlordane	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
g-Chlordane	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
o,p-DDD	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
p,p-DDD	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
o,p-DDE	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
p,p-DDE	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
o,p-DDT	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
p,p-DDT	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Lindane	ug/L	<0.003	<0.003	<0.003	<0.003	0.003	5605830
Endosulfan I (alpha)	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Endosulfan II (beta)	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Endrin	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Heptachlor	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Heptachlor epoxide	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Hexachlorobenzene	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	5605830
Hexachlorobutadiene	ug/L	<0.009	<0.009	<0.009	<0.009	0.009	5605830
Hexachloroethane	ug/L	<0.01	<0.01	<0.01	<0.01	0.01	5605830
Methoxychlor	ug/L	<0.01	<0.01	<0.01	<0.01	0.01	5605830
Aroclor 1242	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5605830
Aroclor 1248	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5605830
Aroclor 1254	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5605830
Aroclor 1260	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5605830
Surrogate Recovery (%)							
2,4,5,6-Tetrachloro-m-xylene	%	71	68	65	69		5605830

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

ORGANOCHLORINATED PESTICIDES BY GC-ECD (WATER)

Maxxam ID		HBQ660	HBQ661	HBQ662	HBQ663		
Sampling Date		2018/06/26 11:45	2018/06/26 13:20	2018/06/26 14:50	2018/06/26 11:45		
COC Number		670515-01-01	670515-01-01	670515-01-01	670515-01-01		
	UNITS	**MW101**	**MW102**	**MW107**	**MW111**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	110	95	91	91		5605830

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: HBQ660
Sample ID: MW101
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5603227	N/A	2018/07/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5605863	2018/06/29	2018/07/03	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	5603788	N/A	2018/07/03	Arefa Dabhad
OC Pesticides (Selected) & PCB	GC/ECD	5605830	2018/06/29	2018/07/01	Li Peng
OC Pesticides Summed Parameters	CALC	5603187	N/A	2018/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

Maxxam ID: HBQ661
Sample ID: MW102
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5603227	N/A	2018/07/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5605863	2018/06/29	2018/07/03	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	5603788	N/A	2018/07/03	Arefa Dabhad
OC Pesticides (Selected) & PCB	GC/ECD	5605830	2018/06/29	2018/07/01	Li Peng
OC Pesticides Summed Parameters	CALC	5603187	N/A	2018/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

Maxxam ID: HBQ662
Sample ID: MW107
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5603227	N/A	2018/07/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5605863	2018/06/29	2018/07/03	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	5603788	N/A	2018/07/03	Arefa Dabhad
OC Pesticides (Selected) & PCB	GC/ECD	5605830	2018/06/29	2018/07/01	Li Peng
OC Pesticides Summed Parameters	CALC	5603187	N/A	2018/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

Maxxam ID: HBQ663
Sample ID: MW111
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5603227	N/A	2018/07/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5605863	2018/06/29	2018/07/03	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	5603788	N/A	2018/07/03	Arefa Dabhad
OC Pesticides (Selected) & PCB	GC/ECD	5605830	2018/06/29	2018/07/01	Li Peng
OC Pesticides Summed Parameters	CALC	5603187	N/A	2018/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

TEST SUMMARY

Maxxam ID: HBQ664
Sample ID: TRIP SPIKE
Matrix: Water

Collected: 2018/06/26
Shipped:
Received: 2018/06/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5600881	N/A	2018/06/30	Xueming Jiang

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

GENERAL COMMENTS

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

Package 1	4.3°C

Sample HBQ664 [TRIP SPIKE] : VOCF1 Analysis: Trip Spike results are expressed as percent recoveries.

Results relate only to the items tested.

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5600881	4-Bromofluorobenzene	2018/06/30	100	70 - 130	100	70 - 130	96	%		
5600881	D4-1,2-Dichloroethane	2018/06/30	101	70 - 130	100	70 - 130	99	%		
5600881	D8-Toluene	2018/06/30	100	70 - 130	101	70 - 130	101	%		
5605830	2,4,5,6-Tetrachloro-m-xylene	2018/06/30	62	50 - 130	51	50 - 130	50	%		
5605830	Decachlorobiphenyl	2018/06/30	104	50 - 130	95	50 - 130	100	%		
5605863	o-Terphenyl	2018/07/03	100	60 - 130	94	60 - 130	92	%		
5600881	1,1,1,2-Tetrachloroethane	2018/06/30	93	70 - 130	91	70 - 130	<0.50	ug/L	NC	30
5600881	1,1,1-Trichloroethane	2018/06/30	99	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
5600881	1,1,2,2-Tetrachloroethane	2018/06/30	92	70 - 130	93	70 - 130	<0.50	ug/L	NC	30
5600881	1,1,2-Trichloroethane	2018/06/30	95	70 - 130	94	70 - 130	<0.50	ug/L	NC	30
5600881	1,1-Dichloroethane	2018/06/30	101	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
5600881	1,1-Dichloroethylene	2018/06/30	102	70 - 130	99	70 - 130	<0.20	ug/L	NC	30
5600881	1,2-Dichlorobenzene	2018/06/30	92	70 - 130	90	70 - 130	<0.50	ug/L	NC	30
5600881	1,2-Dichloroethane	2018/06/30	99	70 - 130	97	70 - 130	<0.50	ug/L	NC	30
5600881	1,2-Dichloropropane	2018/06/30	97	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
5600881	1,3-Dichlorobenzene	2018/06/30	93	70 - 130	89	70 - 130	<0.50	ug/L	NC	30
5600881	1,4-Dichlorobenzene	2018/06/30	95	70 - 130	91	70 - 130	<0.50	ug/L	NC	30
5600881	Acetone (2-Propanone)	2018/06/30	104	60 - 140	118	60 - 140	<10	ug/L	NC	30
5600881	Benzene	2018/06/30	98	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
5600881	Bromodichloromethane	2018/06/30	95	70 - 130	92	70 - 130	<0.50	ug/L	NC	30
5600881	Bromoform	2018/06/30	92	70 - 130	91	70 - 130	<1.0	ug/L	NC	30
5600881	Bromomethane	2018/06/30	86	60 - 140	84	60 - 140	<0.50	ug/L	NC	30
5600881	Carbon Tetrachloride	2018/06/30	100	70 - 130	97	70 - 130	<0.20	ug/L	NC	30
5600881	Chlorobenzene	2018/06/30	92	70 - 130	89	70 - 130	<0.20	ug/L	NC	30
5600881	Chloroform	2018/06/30	98	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
5600881	cis-1,2-Dichloroethylene	2018/06/30	99	70 - 130	97	70 - 130	<0.50	ug/L	NC	30
5600881	cis-1,3-Dichloropropene	2018/06/30	78	70 - 130	77	70 - 130	<0.30	ug/L	NC	30
5600881	Dibromochloromethane	2018/06/30	90	70 - 130	88	70 - 130	<0.50	ug/L	NC	30
5600881	Dichlorodifluoromethane (FREON 12)	2018/06/30	94	60 - 140	93	60 - 140	<1.0	ug/L	NC	30
5600881	Ethylbenzene	2018/06/30	92	70 - 130	89	70 - 130	<0.20	ug/L	NC	30
5600881	Ethylene Dibromide	2018/06/30	96	70 - 130	96	70 - 130	<0.20	ug/L	NC	30

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5600881	F1 (C6-C10) - BTEX	2018/06/30					<25	ug/L	NC	30
5600881	F1 (C6-C10)	2018/06/30	93	60 - 140	99	60 - 140	<25	ug/L	NC	30
5600881	Hexane	2018/06/30	95	70 - 130	93	70 - 130	<1.0	ug/L	NC	30
5600881	Methyl Ethyl Ketone (2-Butanone)	2018/06/30	95	60 - 140	103	60 - 140	<10	ug/L	NC	30
5600881	Methyl Isobutyl Ketone	2018/06/30	90	70 - 130	92	70 - 130	<5.0	ug/L	NC	30
5600881	Methyl t-butyl ether (MTBE)	2018/06/30	101	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
5600881	Methylene Chloride(Dichloromethane)	2018/06/30	107	70 - 130	104	70 - 130	<2.0	ug/L	NC	30
5600881	o-Xylene	2018/06/30	93	70 - 130	90	70 - 130	<0.20	ug/L	NC	30
5600881	p+m-Xylene	2018/06/30	89	70 - 130	86	70 - 130	<0.20	ug/L	NC	30
5600881	Styrene	2018/06/30	89	70 - 130	89	70 - 130	<0.50	ug/L	NC	30
5600881	Tetrachloroethylene	2018/06/30	96	70 - 130	92	70 - 130	<0.20	ug/L	NC	30
5600881	Toluene	2018/06/30	93	70 - 130	90	70 - 130	<0.20	ug/L	NC	30
5600881	Total Xylenes	2018/06/30					<0.20	ug/L	NC	30
5600881	trans-1,2-Dichloroethylene	2018/06/30	101	70 - 130	96	70 - 130	<0.50	ug/L	NC	30
5600881	trans-1,3-Dichloropropene	2018/06/30	77	70 - 130	76	70 - 130	<0.40	ug/L	NC	30
5600881	Trichloroethylene	2018/06/30	99	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
5600881	Trichlorofluoromethane (FREON 11)	2018/06/30	105	70 - 130	103	70 - 130	<0.50	ug/L	NC	30
5600881	Vinyl Chloride	2018/06/30	100	70 - 130	93	70 - 130	<0.20	ug/L	NC	30
5603788	Dissolved Antimony (Sb)	2018/07/03	106	80 - 120	102	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Arsenic (As)	2018/07/03	102	80 - 120	100	80 - 120	<1.0	ug/L	NC	20
5603788	Dissolved Barium (Ba)	2018/07/03	105	80 - 120	99	80 - 120	<2.0	ug/L	1.8	20
5603788	Dissolved Beryllium (Be)	2018/07/03	99	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Boron (B)	2018/07/03	101	80 - 120	96	80 - 120	<10	ug/L	1.1	20
5603788	Dissolved Cadmium (Cd)	2018/07/03	97	80 - 120	101	80 - 120	<0.10	ug/L	NC	20
5603788	Dissolved Chromium (Cr)	2018/07/03	101	80 - 120	97	80 - 120	<5.0	ug/L	NC	20
5603788	Dissolved Cobalt (Co)	2018/07/03	103	80 - 120	103	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Copper (Cu)	2018/07/03	106	80 - 120	102	80 - 120	<1.0	ug/L	NC	20
5603788	Dissolved Lead (Pb)	2018/07/03	89	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Molybdenum (Mo)	2018/07/03	115	80 - 120	104	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Nickel (Ni)	2018/07/03	96	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
5603788	Dissolved Selenium (Se)	2018/07/03	98	80 - 120	102	80 - 120	<2.0	ug/L	NC	20

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5603788	Dissolved Silver (Ag)	2018/07/03	92	80 - 120	98	80 - 120	<0.10	ug/L	NC	20
5603788	Dissolved Thallium (Tl)	2018/07/03	89	80 - 120	99	80 - 120	<0.050	ug/L	NC	20
5603788	Dissolved Uranium (U)	2018/07/03	93	80 - 120	100	80 - 120	<0.10	ug/L	0	20
5603788	Dissolved Vanadium (V)	2018/07/03	107	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
5603788	Dissolved Zinc (Zn)	2018/07/03	90	80 - 120	101	80 - 120	<5.0	ug/L	NC	20
5605830	a-Chlordane	2018/06/30	98	50 - 130	85	50 - 130	<0.005	ug/L		
5605830	Aldrin	2018/06/30	79	50 - 130	71	50 - 130	<0.005	ug/L		
5605830	Aroclor 1242	2018/06/30					<0.05	ug/L	200 (1)	30
5605830	Aroclor 1248	2018/06/30					<0.05	ug/L		
5605830	Aroclor 1254	2018/06/30					<0.05	ug/L		
5605830	Aroclor 1260	2018/06/30					<0.05	ug/L		
5605830	Dieldrin	2018/06/30	112	50 - 130	97	50 - 130	<0.005	ug/L		
5605830	Endosulfan I (alpha)	2018/06/30	99	50 - 130	89	50 - 130	<0.005	ug/L		
5605830	Endosulfan II (beta)	2018/06/30	100	50 - 130	88	50 - 130	<0.005	ug/L		
5605830	Endrin	2018/06/30	98	50 - 130	84	50 - 130	<0.005	ug/L		
5605830	g-Chlordane	2018/06/30	94	50 - 130	82	50 - 130	<0.005	ug/L		
5605830	Heptachlor epoxide	2018/06/30	103	50 - 130	84	50 - 130	<0.005	ug/L		
5605830	Heptachlor	2018/06/30	76	50 - 130	68	50 - 130	<0.005	ug/L		
5605830	Hexachlorobenzene	2018/06/30	92	50 - 130	85	50 - 130	<0.005	ug/L		
5605830	Hexachlorobutadiene	2018/06/30	78	50 - 130	73	50 - 130	<0.009	ug/L		
5605830	Hexachloroethane	2018/06/30	65	50 - 130	61	50 - 130	<0.01	ug/L		
5605830	Lindane	2018/06/30	84	50 - 130	74	50 - 130	<0.003	ug/L		
5605830	Methoxychlor	2018/06/30	100	50 - 130	90	50 - 130	<0.01	ug/L		
5605830	o,p-DDD	2018/06/30	112	50 - 130	95	50 - 130	<0.005	ug/L		
5605830	o,p-DDE	2018/06/30	94	50 - 130	82	50 - 130	<0.005	ug/L		
5605830	o,p-DDT	2018/06/30	96	50 - 130	82	50 - 130	<0.005	ug/L	NC	30
5605830	p,p-DDD	2018/06/30	105	50 - 130	89	50 - 130	<0.005	ug/L		
5605830	p,p-DDE	2018/06/30	98	50 - 130	85	50 - 130	<0.005	ug/L		
5605830	p,p-DDT	2018/06/30	89	50 - 130	77	50 - 130	<0.005	ug/L	NC	30
5605863	F2 (C10-C16 Hydrocarbons)	2018/07/03	NC	50 - 130	92	60 - 130	<100	ug/L	NC	30
5605863	F3 (C16-C34 Hydrocarbons)	2018/07/03	NC	50 - 130	93	60 - 130	<200	ug/L	NC	30

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5605863	F4 (C34-C50 Hydrocarbons)	2018/07/03	102	50 - 130	86	60 - 130	<200	ug/L	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 (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Job #: B8F9367
Report Date: 2018/07/04

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair
Sampler Initials: KP

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 Service 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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Maxxam
A Bureau Veritas Group Company

Your Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your C.O.C. #: 700832-01-01

Attention: David Mably

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/01/28
Report #: R5573960
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B920220
Received: 2019/01/23, 15:15

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	4	N/A	2019/01/25		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Soil (1)	4	2019/01/24	2019/01/25	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	4	2019/01/25	2019/01/25	CAM SOP-00447	EPA 6020B m
Moisture	4	N/A	2019/01/24	CAM SOP-00445	Carter 2nd ed 51.2 m
Volatile Organic Compounds and F1 PHCs	1	N/A	2019/01/24	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds and F1 PHCs	3	N/A	2019/01/25	CAM SOP-00230	EPA 8260C 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

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. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

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Your Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your C.O.C. #: 700832-01-01

Attention: David Mably

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/01/28
Report #: R5573960
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B920220
Received: 2019/01/23, 15:15

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Tanya Fidlin, Project Manager
Email: tfidlin@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 #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

O.REG 153 ICPMS METALS (SOIL)

Maxxam ID		IVD623	IVD624	IVD626	IVD628		
Sampling Date		2019/01/22 11:00	2019/01/22 11:00	2019/01/22 13:30	2019/01/22 16:00		
COC Number		700832-01-01	700832-01-01	700832-01-01	700832-01-01		
	UNITS	BH301-SS1	BH301-SS11	BH302-SS1	BH303-SS1	RDL	QC Batch
Metals							
Acid Extractable Antimony (Sb)	ug/g	0.24	0.21	0.33	0.27	0.20	5945600
Acid Extractable Arsenic (As)	ug/g	7.8	10	13	7.7	1.0	5945600
Acid Extractable Barium (Ba)	ug/g	97	83	100	94	0.50	5945600
Acid Extractable Beryllium (Be)	ug/g	0.83	0.63	0.74	0.80	0.20	5945600
Acid Extractable Boron (B)	ug/g	7.9	6.0	6.2	6.9	5.0	5945600
Acid Extractable Cadmium (Cd)	ug/g	0.19	0.23	0.29	0.25	0.10	5945600
Acid Extractable Chromium (Cr)	ug/g	24	18	20	23	1.0	5945600
Acid Extractable Cobalt (Co)	ug/g	12	9.8	11	13	0.10	5945600
Acid Extractable Copper (Cu)	ug/g	32	25	23	26	0.50	5945600
Acid Extractable Lead (Pb)	ug/g	30	43	57	32	1.0	5945600
Acid Extractable Molybdenum (Mo)	ug/g	0.71	0.76	0.66	0.67	0.50	5945600
Acid Extractable Nickel (Ni)	ug/g	26	20	20	25	0.50	5945600
Acid Extractable Selenium (Se)	ug/g	ND	ND	ND	ND	0.50	5945600
Acid Extractable Silver (Ag)	ug/g	ND	ND	ND	ND	0.20	5945600
Acid Extractable Thallium (Tl)	ug/g	0.17	0.14	0.14	0.15	0.050	5945600
Acid Extractable Uranium (U)	ug/g	0.73	0.65	0.89	0.57	0.050	5945600
Acid Extractable Vanadium (V)	ug/g	34	29	31	33	5.0	5945600
Acid Extractable Zinc (Zn)	ug/g	72	63	78	83	5.0	5945600

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Maxxam ID		IVD625	IVD627	IVD629	IVD630		
Sampling Date		2019/01/22 11:00	2019/01/22 13:30	2019/01/22 16:00	2019/01/22 16:00		
COC Number		700832-01-01	700832-01-01	700832-01-01	700832-01-01		
	UNITS	BH301-SS4	BH302-SS4	BH303-SS4	BH303-SS44	RDL	QC Batch
Inorganics							
Moisture	%	13	11	16	18	1.0	5943826
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/g	ND	ND	ND	ND	0.050	5941727
Volatile Organics							
Acetone (2-Propanone)	ug/g	ND	ND	ND	ND	0.50	5944584
Benzene	ug/g	ND	ND	ND	ND	0.020	5944584
Bromodichloromethane	ug/g	ND	ND	ND	ND	0.050	5944584
Bromoform	ug/g	ND	ND	ND	ND	0.050	5944584
Bromomethane	ug/g	ND	ND	ND	ND	0.050	5944584
Carbon Tetrachloride	ug/g	ND	ND	ND	ND	0.050	5944584
Chlorobenzene	ug/g	ND	ND	ND	ND	0.050	5944584
Chloroform	ug/g	ND	ND	ND	ND	0.050	5944584
Dibromochloromethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,2-Dichlorobenzene	ug/g	ND	ND	ND	ND	0.050	5944584
1,3-Dichlorobenzene	ug/g	ND	ND	ND	ND	0.050	5944584
1,4-Dichlorobenzene	ug/g	ND	ND	ND	ND	0.050	5944584
Dichlorodifluoromethane (FREON 12)	ug/g	ND	ND	ND	ND	0.050	5944584
1,1-Dichloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,2-Dichloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,1-Dichloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
cis-1,2-Dichloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
trans-1,2-Dichloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
1,2-Dichloropropane	ug/g	ND	ND	ND	ND	0.050	5944584
cis-1,3-Dichloropropene	ug/g	ND	ND	ND	ND	0.030	5944584
trans-1,3-Dichloropropene	ug/g	ND	ND	ND	ND	0.040	5944584
Ethylbenzene	ug/g	ND	ND	ND	ND	0.020	5944584
Ethylene Dibromide	ug/g	ND	ND	ND	ND	0.050	5944584
Hexane	ug/g	ND	ND	ND	ND	0.050	5944584
Methylene Chloride(Dichloromethane)	ug/g	ND	ND	ND	ND	0.050	5944584
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	ND	ND	ND	0.50	5944584

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Maxxam ID		IVD625	IVD627	IVD629	IVD630		
Sampling Date		2019/01/22 11:00	2019/01/22 13:30	2019/01/22 16:00	2019/01/22 16:00		
COC Number		700832-01-01	700832-01-01	700832-01-01	700832-01-01		
	UNITS	BH301-SS4	BH302-SS4	BH303-SS4	BH303-SS44	RDL	QC Batch
Methyl Isobutyl Ketone	ug/g	ND	ND	ND	ND	0.50	5944584
Methyl t-butyl ether (MTBE)	ug/g	ND	ND	ND	ND	0.050	5944584
Styrene	ug/g	ND	ND	ND	ND	0.050	5944584
1,1,1,2-Tetrachloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,1,2,2-Tetrachloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
Tetrachloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
Toluene	ug/g	ND	ND	ND	ND	0.020	5944584
1,1,1-Trichloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
1,1,2-Trichloroethane	ug/g	ND	ND	ND	ND	0.050	5944584
Trichloroethylene	ug/g	ND	ND	ND	ND	0.050	5944584
Trichlorofluoromethane (FREON 11)	ug/g	ND	ND	ND	ND	0.050	5944584
Vinyl Chloride	ug/g	ND	ND	ND	ND	0.020	5944584
p+m-Xylene	ug/g	ND	ND	ND	ND	0.020	5944584
o-Xylene	ug/g	ND	ND	ND	ND	0.020	5944584
Total Xylenes	ug/g	ND	ND	ND	ND	0.020	5944584
F1 (C6-C10)	ug/g	ND	ND	ND	ND	10	5944584
F1 (C6-C10) - BTEX	ug/g	ND	ND	ND	ND	10	5944584
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	ND	ND	10	5945270
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	ND	ND	50	5945270
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND	ND	50	5945270
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		5945270
Surrogate Recovery (%)							
o-Terphenyl	%	89	92	93	92		5945270
4-Bromofluorobenzene	%	91	92	91	89		5944584
D10-o-Xylene	%	119	113	110	119		5944584
D4-1,2-Dichloroethane	%	100	99	100	100		5944584
D8-Toluene	%	103	103	103	104		5944584

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

TEST SUMMARY

Maxxam ID: IVD623 **Collected:** 2019/01/22
Sample ID: BH301-SS1 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5945600	2019/01/25	2019/01/25	Daniel Teclu

Maxxam ID: IVD624 **Collected:** 2019/01/22
Sample ID: BH301-SS11 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5945600	2019/01/25	2019/01/25	Daniel Teclu

Maxxam ID: IVD625 **Collected:** 2019/01/22
Sample ID: BH301-SS4 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5941727	N/A	2019/01/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5945270	2019/01/24	2019/01/25	Prabhjot Gulati
Moisture	BAL	5943826	N/A	2019/01/24	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5944584	N/A	2019/01/24	Yang (Philip) Yu

Maxxam ID: IVD626 **Collected:** 2019/01/22
Sample ID: BH302-SS1 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5945600	2019/01/25	2019/01/25	Daniel Teclu

Maxxam ID: IVD627 **Collected:** 2019/01/22
Sample ID: BH302-SS4 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5941727	N/A	2019/01/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5945270	2019/01/24	2019/01/25	Prabhjot Gulati
Moisture	BAL	5943826	N/A	2019/01/24	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5944584	N/A	2019/01/25	Yang (Philip) Yu

Maxxam ID: IVD628 **Collected:** 2019/01/22
Sample ID: BH303-SS1 **Shipped:**
Matrix: Soil **Received:** 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5945600	2019/01/25	2019/01/25	Daniel Teclu

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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

TEST SUMMARY

Maxxam ID: IVD629
Sample ID: BH303-SS4
Matrix: Soil

Collected: 2019/01/22
Shipped:
Received: 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5941727	N/A	2019/01/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5945270	2019/01/24	2019/01/25	Prabhjot Gulati
Moisture	BAL	5943826	N/A	2019/01/24	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5944584	N/A	2019/01/25	Yang (Philip) Yu

Maxxam ID: IVD630
Sample ID: BH303-SS44
Matrix: Soil

Collected: 2019/01/22
Shipped:
Received: 2019/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5941727	N/A	2019/01/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5945270	2019/01/24	2019/01/25	Prabhjot Gulati
Moisture	BAL	5943826	N/A	2019/01/24	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5944584	N/A	2019/01/25	Yang (Philip) Yu

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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

GENERAL COMMENTS

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

Package 1	2.0°C

Cooler custody seal was present and intact.

Results relate only to the items tested.

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Maxxam Job #: B920220
Report Date: 2019/01/28

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5944584	4-Bromofluorobenzene	2019/01/24	95	60 - 140	95	60 - 140	91	%		
5944584	D10-o-Xylene	2019/01/24	117	60 - 130	101	60 - 130	102	%		
5944584	D4-1,2-Dichloroethane	2019/01/24	98	60 - 140	98	60 - 140	99	%		
5944584	D8-Toluene	2019/01/24	107	60 - 140	106	60 - 140	104	%		
5945270	o-Terphenyl	2019/01/25	96	60 - 130	98	60 - 130	98	%		
5943826	Moisture	2019/01/24							0	20
5944584	1,1,1,2-Tetrachloroethane	2019/01/24	98	60 - 140	94	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1,1-Trichloroethane	2019/01/24	94	60 - 140	94	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1,2,2-Tetrachloroethane	2019/01/24	101	60 - 140	97	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1,2-Trichloroethane	2019/01/24	112	60 - 140	107	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1-Dichloroethane	2019/01/24	108	60 - 140	108	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,1-Dichloroethylene	2019/01/24	110	60 - 140	110	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,2-Dichlorobenzene	2019/01/24	100	60 - 140	97	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,2-Dichloroethane	2019/01/24	96	60 - 140	96	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,2-Dichloropropane	2019/01/24	107	60 - 140	106	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,3-Dichlorobenzene	2019/01/24	103	60 - 140	98	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	1,4-Dichlorobenzene	2019/01/24	102	60 - 140	98	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Acetone (2-Propanone)	2019/01/24	99	60 - 140	90	60 - 140	ND, RDL=0.50	ug/g	NC	50
5944584	Benzene	2019/01/24	103	60 - 140	104	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	Bromodichloromethane	2019/01/24	91	60 - 140	90	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Bromoform	2019/01/24	87	60 - 140	83	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Bromomethane	2019/01/24	121	60 - 140	121	60 - 140	ND, RDL=0.050	ug/g	NC	50
5944584	Carbon Tetrachloride	2019/01/24	93	60 - 140	94	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Chlorobenzene	2019/01/24	99	60 - 140	96	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Chloroform	2019/01/24	99	60 - 140	100	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	cis-1,2-Dichloroethylene	2019/01/24	97	60 - 140	97	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	cis-1,3-Dichloropropene	2019/01/24	96	60 - 140	95	60 - 130	ND, RDL=0.030	ug/g	NC	50
5944584	Dibromochloromethane	2019/01/24	94	60 - 140	89	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Dichlorodifluoromethane (FREON 12)	2019/01/24	101	60 - 140	105	60 - 140	ND, RDL=0.050	ug/g	NC	50
5944584	Ethylbenzene	2019/01/24	104	60 - 140	101	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	Ethylene Dibromide	2019/01/24	97	60 - 140	93	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	F1 (C6-C10) - BTEX	2019/01/24					ND, RDL=10	ug/g	NC	30

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Maxxam Job #: B920220
Report Date: 2019/01/28

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5944584	F1 (C6-C10)	2019/01/24	94	60 - 140	97	80 - 120	ND, RDL=10	ug/g	NC	30
5944584	Hexane	2019/01/24	113	60 - 140	113	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Methyl Ethyl Ketone (2-Butanone)	2019/01/24	101	60 - 140	93	60 - 140	ND, RDL=0.50	ug/g	NC	50
5944584	Methyl Isobutyl Ketone	2019/01/24	95	60 - 140	89	60 - 130	ND, RDL=0.50	ug/g	NC	50
5944584	Methyl t-butyl ether (MTBE)	2019/01/24	96	60 - 140	96	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Methylene Chloride(Dichloromethane)	2019/01/24	100	60 - 140	100	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	o-Xylene	2019/01/24	102	60 - 140	98	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	p+m-Xylene	2019/01/24	100	60 - 140	96	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	Styrene	2019/01/24	97	60 - 140	93	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Tetrachloroethylene	2019/01/24	100	60 - 140	100	60 - 130	ND, RDL=0.050	ug/g	1.8	50
5944584	Toluene	2019/01/24	102	60 - 140	100	60 - 130	ND, RDL=0.020	ug/g	NC	50
5944584	Total Xylenes	2019/01/24					ND, RDL=0.020	ug/g	NC	50
5944584	trans-1,2-Dichloroethylene	2019/01/24	102	60 - 140	102	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	trans-1,3-Dichloropropene	2019/01/24	104	60 - 140	98	60 - 130	ND, RDL=0.040	ug/g	NC	50
5944584	Trichloroethylene	2019/01/24	95	60 - 140	96	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Trichlorofluoromethane (FREON 11)	2019/01/24	111	60 - 140	111	60 - 130	ND, RDL=0.050	ug/g	NC	50
5944584	Vinyl Chloride	2019/01/24	113	60 - 140	124	60 - 130	ND, RDL=0.020	ug/g	NC	50
5945270	F2 (C10-C16 Hydrocarbons)	2019/01/25	92	50 - 130	94	80 - 120	ND, RDL=10	ug/g	NC	30
5945270	F3 (C16-C34 Hydrocarbons)	2019/01/25	91	50 - 130	92	80 - 120	ND, RDL=50	ug/g	NC	30
5945270	F4 (C34-C50 Hydrocarbons)	2019/01/25	93	50 - 130	95	80 - 120	ND, RDL=50	ug/g	NC	30
5945600	Acid Extractable Antimony (Sb)	2019/01/25	91	75 - 125	97	80 - 120	ND, RDL=0.20	ug/g	18	30
5945600	Acid Extractable Arsenic (As)	2019/01/25	102	75 - 125	101	80 - 120	ND, RDL=1.0	ug/g	0.71	30
5945600	Acid Extractable Barium (Ba)	2019/01/25	NC	75 - 125	98	80 - 120	ND, RDL=0.50	ug/g	6.4	30
5945600	Acid Extractable Beryllium (Be)	2019/01/25	105	75 - 125	96	80 - 120	ND, RDL=0.20	ug/g	1.4	30
5945600	Acid Extractable Boron (B)	2019/01/25	98	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	6.1	30
5945600	Acid Extractable Cadmium (Cd)	2019/01/25	103	75 - 125	97	80 - 120	ND, RDL=0.10	ug/g	NC	30
5945600	Acid Extractable Chromium (Cr)	2019/01/25	NC	75 - 125	100	80 - 120	ND, RDL=1.0	ug/g	4.9	30
5945600	Acid Extractable Cobalt (Co)	2019/01/25	109	75 - 125	99	80 - 120	ND, RDL=0.10	ug/g	3.0	30
5945600	Acid Extractable Copper (Cu)	2019/01/25	NC	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	6.4	30
5945600	Acid Extractable Lead (Pb)	2019/01/25	102	75 - 125	99	80 - 120	ND, RDL=1.0	ug/g	16	30
5945600	Acid Extractable Molybdenum (Mo)	2019/01/25	101	75 - 125	95	80 - 120	ND, RDL=0.50	ug/g	NC	30
5945600	Acid Extractable Nickel (Ni)	2019/01/25	NC	75 - 125	106	80 - 120	ND, RDL=0.50	ug/g	4.5	30

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Maxxam Job #: B920220
Report Date: 2019/01/28

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5945600	Acid Extractable Selenium (Se)	2019/01/25	98	75 - 125	95	80 - 120	ND, RDL=0.50	ug/g	NC	30
5945600	Acid Extractable Silver (Ag)	2019/01/25	103	75 - 125	98	80 - 120	ND, RDL=0.20	ug/g	NC	30
5945600	Acid Extractable Thallium (Tl)	2019/01/25	100	75 - 125	97	80 - 120	ND, RDL=0.050	ug/g	23	30
5945600	Acid Extractable Uranium (U)	2019/01/25	103	75 - 125	96	80 - 120	ND, RDL=0.050	ug/g	1.2	30
5945600	Acid Extractable Vanadium (V)	2019/01/25	NC	75 - 125	99	80 - 120	ND, RDL=5.0	ug/g	6.6	30
5945600	Acid Extractable Zinc (Zn)	2019/01/25	NC	75 - 125	119	80 - 120	ND, RDL=5.0	ug/g	4.4	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 (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

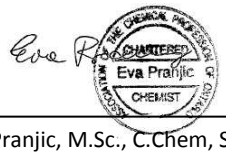
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Maxxam Job #: B920220
Report Date: 2019/01/28

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Sampler Initials: PM

VALIDATION SIGNATURE PAGE

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



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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Your P.O. #: BRM-ENV
Your Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your C.O.C. #: 700817-01-01

Attention: David Mably

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/02/05
Report #: R5583593
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B927806
Received: 2019/01/31, 16:23

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	1	N/A	2019/02/04		EPA 8260C m
1,3-Dichloropropene Sum	4	N/A	2019/02/05		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2019/02/02	2019/02/02	CAM SOP-00316	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2019/02/02	2019/02/03	CAM SOP-00316	CCME PHC-CWS m
Dissolved Metals by ICPMS	3	N/A	2019/02/05	CAM SOP-00447	EPA 6020B m
Volatile Organic Compounds and F1 PHCs	4	N/A	2019/02/04	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds in Water	1	N/A	2019/02/02	CAM SOP-00228	EPA 8260C 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

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. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
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) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

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Your P.O. #: BRM-ENV
Your Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your C.O.C. #: 700817-01-01

Attention: David Mably

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/02/05
Report #: R5583593
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B927806
Received: 2019/01/31, 16:23

Encryption Key

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

==========

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 DISSOLVED ICPMS METALS (WATER)

Maxxam ID		IWS213	IWS213	IWS215	IWS217		
Sampling Date		2019/01/31 10:00	2019/01/31 10:00	2019/01/31 10:30	2019/01/31 10:30		
COC Number		700817-01-01	700817-01-01	700817-01-01	700817-01-01		
	UNITS	MW301	MW301 Lab-Dup	MW303	MW3033	RDL	QC Batch
Metals							
Dissolved Antimony (Sb)	ug/L	ND	ND	ND	ND	0.50	5957789
Dissolved Arsenic (As)	ug/L	1.6	1.5	1.0	ND	1.0	5957789
Dissolved Barium (Ba)	ug/L	240	240	430	430	2.0	5957789
Dissolved Beryllium (Be)	ug/L	ND	ND	ND	ND	0.50	5957789
Dissolved Boron (B)	ug/L	1900	1900	260	260	10	5957789
Dissolved Cadmium (Cd)	ug/L	ND	ND	ND	ND	0.10	5957789
Dissolved Chromium (Cr)	ug/L	ND	ND	ND	ND	5.0	5957789
Dissolved Cobalt (Co)	ug/L	0.65	0.68	1.9	1.9	0.50	5957789
Dissolved Copper (Cu)	ug/L	2.8	3.0	1.0	5.1	1.0	5957789
Dissolved Lead (Pb)	ug/L	ND	ND	ND	ND	0.50	5957789
Dissolved Molybdenum (Mo)	ug/L	3.7	3.7	12	13	0.50	5957789
Dissolved Nickel (Ni)	ug/L	1.6	1.5	5.4	6.5	1.0	5957789
Dissolved Selenium (Se)	ug/L	ND	ND	ND	ND	2.0	5957789
Dissolved Silver (Ag)	ug/L	ND	ND	ND	ND	0.10	5957789
Dissolved Thallium (Tl)	ug/L	ND	ND	0.11	0.095	0.050	5957789
Dissolved Uranium (U)	ug/L	5.6	5.4	8.3	8.3	0.10	5957789
Dissolved Vanadium (V)	ug/L	ND	ND	1.8	1.6	0.50	5957789
Dissolved Zinc (Zn)	ug/L	6.3	6.1	ND	6.5	5.0	5957789

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

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 #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Maxxam ID		IWS213	IWS214	IWS215	IWS216		
Sampling Date		2019/01/31 10:00	2019/01/31 11:30	2019/01/31 10:30	2019/01/31 10:00		
COC Number		700817-01-01	700817-01-01	700817-01-01	700817-01-01		
	UNITS	MW301	MW302	MW303	MW3011	RDL	QC Batch
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND	ND	ND	0.50	5954696
Volatile Organics							
Acetone (2-Propanone)	ug/L	ND	ND	25	ND	10	5956017
Benzene	ug/L	ND	ND	ND	ND	0.20	5956017
Bromodichloromethane	ug/L	ND	ND	ND	ND	0.50	5956017
Bromoform	ug/L	ND	ND	ND	ND	1.0	5956017
Bromomethane	ug/L	ND	ND	ND	ND	0.50	5956017
Carbon Tetrachloride	ug/L	ND	ND	ND	ND	0.20	5956017
Chlorobenzene	ug/L	ND	ND	ND	ND	0.20	5956017
Chloroform	ug/L	ND	ND	0.22	ND	0.20	5956017
Dibromochloromethane	ug/L	ND	ND	ND	ND	0.50	5956017
1,2-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	5956017
1,3-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	5956017
1,4-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	5956017
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	ND	ND	1.0	5956017
1,1-Dichloroethane	ug/L	ND	ND	ND	ND	0.20	5956017
1,2-Dichloroethane	ug/L	ND	ND	ND	ND	0.50	5956017
1,1-Dichloroethylene	ug/L	ND	ND	ND	ND	0.20	5956017
cis-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	0.50	5956017
trans-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	0.50	5956017
1,2-Dichloropropane	ug/L	ND	ND	ND	ND	0.20	5956017
cis-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	0.30	5956017
trans-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	0.40	5956017
Ethylbenzene	ug/L	ND	ND	ND	ND	0.20	5956017
Ethylene Dibromide	ug/L	ND	ND	ND	ND	0.20	5956017
Hexane	ug/L	ND	ND	ND	ND	1.0	5956017
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	ND	ND	2.0	5956017
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	ND	ND	10	5956017
Methyl Isobutyl Ketone	ug/L	ND	ND	ND	ND	5.0	5956017

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Maxxam ID		IWS213	IWS214	IWS215	IWS216		
Sampling Date		2019/01/31 10:00	2019/01/31 11:30	2019/01/31 10:30	2019/01/31 10:00		
COC Number		700817-01-01	700817-01-01	700817-01-01	700817-01-01		
	UNITS	MW301	MW302	MW303	MW3011	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	ND	ND	0.50	5956017
Styrene	ug/L	ND	ND	ND	ND	0.50	5956017
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	0.50	5956017
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	0.50	5956017
Tetrachloroethylene	ug/L	ND	ND	ND	ND	0.20	5956017
Toluene	ug/L	ND	ND	ND	ND	0.20	5956017
1,1,1-Trichloroethane	ug/L	ND	ND	ND	ND	0.20	5956017
1,1,2-Trichloroethane	ug/L	ND	ND	ND	ND	0.50	5956017
Trichloroethylene	ug/L	ND	ND	ND	ND	0.20	5956017
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	ND	ND	0.50	5956017
Vinyl Chloride	ug/L	ND	ND	ND	ND	0.20	5956017
p+m-Xylene	ug/L	ND	ND	ND	ND	0.20	5956017
o-Xylene	ug/L	ND	ND	ND	ND	0.20	5956017
Total Xylenes	ug/L	ND	ND	ND	ND	0.20	5956017
F1 (C6-C10)	ug/L	ND	ND	ND	ND	25	5956017
F1 (C6-C10) - BTEX	ug/L	ND	ND	ND	ND	25	5956017
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/L	ND	ND	ND	ND	100	5957968
F3 (C16-C34 Hydrocarbons)	ug/L	ND	ND	ND	ND	200	5957968
F4 (C34-C50 Hydrocarbons)	ug/L	ND	ND	ND	ND	200	5957968
Reached Baseline at C50	ug/L	Yes	Yes	Yes	Yes		5957968
Surrogate Recovery (%)							
o-Terphenyl	%	109	108	110	109		5957968
4-Bromofluorobenzene	%	98	98	97	98		5956017
D4-1,2-Dichloroethane	%	105	108	106	107		5956017
D8-Toluene	%	99	98	99	98		5956017

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 VOCS BY HS (WATER)

Maxxam ID		IWS218		
Sampling Date		2019/01/31		
COC Number		700817-01-01		
	UNITS	TRIP BLANK LOT 3515	RDL	QC Batch
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/L	ND	0.50	5954696
Volatile Organics				
Acetone (2-Propanone)	ug/L	ND	10	5956241
Benzene	ug/L	ND	0.20	5956241
Bromodichloromethane	ug/L	ND	0.50	5956241
Bromoform	ug/L	ND	1.0	5956241
Bromomethane	ug/L	ND	0.50	5956241
Carbon Tetrachloride	ug/L	ND	0.20	5956241
Chlorobenzene	ug/L	ND	0.20	5956241
Chloroform	ug/L	ND	0.20	5956241
Dibromochloromethane	ug/L	ND	0.50	5956241
1,2-Dichlorobenzene	ug/L	ND	0.50	5956241
1,3-Dichlorobenzene	ug/L	ND	0.50	5956241
1,4-Dichlorobenzene	ug/L	ND	0.50	5956241
Dichlorodifluoromethane (FREON 12)	ug/L	ND	1.0	5956241
1,1-Dichloroethane	ug/L	ND	0.20	5956241
1,2-Dichloroethane	ug/L	ND	0.50	5956241
1,1-Dichloroethylene	ug/L	ND	0.20	5956241
cis-1,2-Dichloroethylene	ug/L	ND	0.50	5956241
trans-1,2-Dichloroethylene	ug/L	ND	0.50	5956241
1,2-Dichloropropane	ug/L	ND	0.20	5956241
cis-1,3-Dichloropropene	ug/L	ND	0.30	5956241
trans-1,3-Dichloropropene	ug/L	ND	0.40	5956241
Ethylbenzene	ug/L	ND	0.20	5956241
Ethylene Dibromide	ug/L	ND	0.20	5956241
Hexane	ug/L	ND	1.0	5956241
Methylene Chloride(Dichloromethane)	ug/L	ND	2.0	5956241
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	10	5956241
Methyl Isobutyl Ketone	ug/L	ND	5.0	5956241

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

O.REG 153 VOCS BY HS (WATER)

Maxxam ID		IWS218		
Sampling Date		2019/01/31		
COC Number		700817-01-01		
	UNITS	**TRIP BLANK LOT 3515**	**RDL**	**QC Batch**
Methyl t-butyl ether (MTBE)	ug/L	ND	0.50	5956241
Styrene	ug/L	ND	0.50	5956241
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	5956241
1,1,2,2-Tetrachloroethane	ug/L	ND	0.50	5956241
Tetrachloroethylene	ug/L	ND	0.20	5956241
Toluene	ug/L	ND	0.20	5956241
1,1,1-Trichloroethane	ug/L	ND	0.20	5956241
1,1,2-Trichloroethane	ug/L	ND	0.50	5956241
Trichloroethylene	ug/L	ND	0.20	5956241
Trichlorofluoromethane (FREON 11)	ug/L	ND	0.50	5956241
Vinyl Chloride	ug/L	ND	0.20	5956241
p+m-Xylene	ug/L	ND	0.20	5956241
o-Xylene	ug/L	ND	0.20	5956241
Total Xylenes	ug/L	ND	0.20	5956241
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	99		5956241
D4-1,2-Dichloroethane	%	97		5956241
D8-Toluene	%	113		5956241

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

TEST SUMMARY

Maxxam ID: IWS213 **Collected:** 2019/01/31
Sample ID: MW301 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/05	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5957968	2019/02/02	2019/02/02	Prabhjot Gulati
Dissolved Metals by ICPMS	ICP/MS	5957789	N/A	2019/02/05	Thao Nguyen
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5956017	N/A	2019/02/04	Rebecca McClean

Maxxam ID: IWS213 Dup **Collected:** 2019/01/31
Sample ID: MW301 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	5957789	N/A	2019/02/05	Thao Nguyen

Maxxam ID: IWS214 **Collected:** 2019/01/31
Sample ID: MW302 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/05	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5957968	2019/02/02	2019/02/02	Prabhjot Gulati
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5956017	N/A	2019/02/04	Rebecca McClean

Maxxam ID: IWS215 **Collected:** 2019/01/31
Sample ID: MW303 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/05	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5957968	2019/02/02	2019/02/03	Prabhjot Gulati
Dissolved Metals by ICPMS	ICP/MS	5957789	N/A	2019/02/05	Thao Nguyen
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5956017	N/A	2019/02/04	Rebecca McClean

Maxxam ID: IWS216 **Collected:** 2019/01/31
Sample ID: MW3011 **Shipped:**
Matrix: Water **Received:** 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/05	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5957968	2019/02/02	2019/02/03	Prabhjot Gulati
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5956017	N/A	2019/02/04	Rebecca McClean

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

TEST SUMMARY

Maxxam ID: IWS217
Sample ID: MW3033
Matrix: Water

Collected: 2019/01/31
Shipped:
Received: 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	5957789	N/A	2019/02/05	Thao Nguyen

Maxxam ID: IWS218
Sample ID: TRIP BLANK LOT 3515
Matrix: Water

Collected: 2019/01/31
Shipped:
Received: 2019/01/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5954696	N/A	2019/02/04	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	5956241	N/A	2019/02/02	Anna Gabrielyan

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

GENERAL COMMENTS

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

Package 1	2.7°C

Results relate only to the items tested.

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
A Bureau Veritas Group Company

Maxxam Job #: B927806
Report Date: 2019/02/05

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5956017	4-Bromofluorobenzene	2019/02/04	101	70 - 130	101	70 - 130	99	%		
5956017	D4-1,2-Dichloroethane	2019/02/04	106	70 - 130	102	70 - 130	102	%		
5956017	D8-Toluene	2019/02/04	99	70 - 130	99	70 - 130	99	%		
5956241	4-Bromofluorobenzene	2019/02/01	102	70 - 130	101	70 - 130	100	%		
5956241	D4-1,2-Dichloroethane	2019/02/01	83	70 - 130	93	70 - 130	95	%		
5956241	D8-Toluene	2019/02/01	106	70 - 130	116	70 - 130	95	%		
5957968	o-Terphenyl	2019/02/02	109	60 - 130	112	60 - 130	107	%		
5956017	1,1,1,2-Tetrachloroethane	2019/02/04	99	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,1,1-Trichloroethane	2019/02/04	98	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	1,1,2,2-Tetrachloroethane	2019/02/04	103	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,1,2-Trichloroethane	2019/02/04	105	70 - 130	102	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,1-Dichloroethane	2019/02/04	99	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	1,1-Dichloroethylene	2019/02/04	100	70 - 130	101	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	1,2-Dichlorobenzene	2019/02/04	99	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,2-Dichloroethane	2019/02/04	105	70 - 130	102	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,2-Dichloropropane	2019/02/04	99	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	1,3-Dichlorobenzene	2019/02/04	102	70 - 130	102	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	1,4-Dichlorobenzene	2019/02/04	106	70 - 130	108	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Acetone (2-Propanone)	2019/02/04	116	60 - 140	126	60 - 140	ND, RDL=10	ug/L	NC	30
5956017	Benzene	2019/02/04	100	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Bromodichloromethane	2019/02/04	100	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Bromoform	2019/02/04	101	70 - 130	99	70 - 130	ND, RDL=1.0	ug/L	NC	30
5956017	Bromomethane	2019/02/04	100	60 - 140	104	60 - 140	ND, RDL=0.50	ug/L	NC	30
5956017	Carbon Tetrachloride	2019/02/04	97	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Chlorobenzene	2019/02/04	96	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Chloroform	2019/02/04	100	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	cis-1,2-Dichloroethylene	2019/02/04	102	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	cis-1,3-Dichloropropene	2019/02/04	100	70 - 130	99	70 - 130	ND, RDL=0.30	ug/L	NC	30
5956017	Dibromochloromethane	2019/02/04	107	70 - 130	107	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Dichlorodifluoromethane (FREON 12)	2019/02/04	103	60 - 140	107	60 - 140	ND, RDL=1.0	ug/L	NC	30
5956017	Ethylbenzene	2019/02/04	97	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5956017	Ethylene Dibromide	2019/02/04	103	70 - 130	101	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	F1 (C6-C10) - BTEX	2019/02/04					ND, RDL=25	ug/L	NC	30
5956017	F1 (C6-C10)	2019/02/04	100	60 - 140	90	60 - 140	ND, RDL=25	ug/L	NC	30
5956017	Hexane	2019/02/04	97	70 - 130	98	70 - 130	ND, RDL=1.0	ug/L	NC	30
5956017	Methyl Ethyl Ketone (2-Butanone)	2019/02/04	118	60 - 140	122	60 - 140	ND, RDL=10	ug/L	NC	30
5956017	Methyl Isobutyl Ketone	2019/02/04	112	70 - 130	111	70 - 130	ND, RDL=5.0	ug/L	NC	30
5956017	Methyl t-butyl ether (MTBE)	2019/02/04	102	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Methylene Chloride(Dichloromethane)	2019/02/04	96	70 - 130	94	70 - 130	ND, RDL=2.0	ug/L	NC	30
5956017	o-Xylene	2019/02/04	97	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	p+m-Xylene	2019/02/04	96	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Styrene	2019/02/04	100	70 - 130	100	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Tetrachloroethylene	2019/02/04	98	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Toluene	2019/02/04	94	70 - 130	94	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Total Xylenes	2019/02/04					ND, RDL=0.20	ug/L	NC	30
5956017	trans-1,2-Dichloroethylene	2019/02/04	100	70 - 130	100	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	trans-1,3-Dichloropropene	2019/02/04	103	70 - 130	102	70 - 130	ND, RDL=0.40	ug/L	NC	30
5956017	Trichloroethylene	2019/02/04	100	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956017	Trichlorofluoromethane (FREON 11)	2019/02/04	101	70 - 130	102	70 - 130	ND, RDL=0.50	ug/L	NC	30
5956017	Vinyl Chloride	2019/02/04	97	70 - 130	121	70 - 130	ND, RDL=0.20	ug/L	NC	30
5956241	1,1,1,2-Tetrachloroethane	2019/02/01	97	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,1,1-Trichloroethane	2019/02/01	94	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L		
5956241	1,1,2,2-Tetrachloroethane	2019/02/01	96	70 - 130	96	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,1,2-Trichloroethane	2019/02/01	90	70 - 130	91	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,1-Dichloroethane	2019/02/01	96	70 - 130	100	70 - 130	ND, RDL=0.20	ug/L		
5956241	1,1-Dichloroethylene	2019/02/01	93	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L		
5956241	1,2-Dichlorobenzene	2019/02/01	94	70 - 130	97	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,2-Dichloroethane	2019/02/01	92	70 - 130	92	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,2-Dichloropropane	2019/02/01	94	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L		
5956241	1,3-Dichlorobenzene	2019/02/01	95	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L		
5956241	1,4-Dichlorobenzene	2019/02/01	95	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L		
5956241	Acetone (2-Propanone)	2019/02/01	79	60 - 140	85	60 - 140	ND, RDL=10	ug/L		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5956241	Benzene	2019/02/01	87	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L		
5956241	Bromodichloromethane	2019/02/01	92	70 - 130	95	70 - 130	ND, RDL=0.50	ug/L		
5956241	Bromoform	2019/02/01	93	70 - 130	94	70 - 130	ND, RDL=1.0	ug/L		
5956241	Bromomethane	2019/02/01	97	60 - 140	104	60 - 140	ND, RDL=0.50	ug/L		
5956241	Carbon Tetrachloride	2019/02/01	91	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L		
5956241	Chlorobenzene	2019/02/01	96	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L		
5956241	Chloroform	2019/02/01	96	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L		
5956241	cis-1,2-Dichloroethylene	2019/02/01	99	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	0.16	30
5956241	cis-1,3-Dichloropropene	2019/02/01	82	70 - 130	89	70 - 130	ND, RDL=0.30	ug/L		
5956241	Dibromochloromethane	2019/02/01	95	70 - 130	97	70 - 130	ND, RDL=0.50	ug/L		
5956241	Dichlorodifluoromethane (FREON 12)	2019/02/01	93	60 - 140	98	60 - 140	ND, RDL=1.0	ug/L		
5956241	Ethylbenzene	2019/02/01	95	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L		
5956241	Ethylene Dibromide	2019/02/01	94	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L		
5956241	Hexane	2019/02/01	98	70 - 130	101	70 - 130	ND, RDL=1.0	ug/L		
5956241	Methyl Ethyl Ketone (2-Butanone)	2019/02/01	90	60 - 140	92	60 - 140	ND, RDL=10	ug/L		
5956241	Methyl Isobutyl Ketone	2019/02/01	83	70 - 130	92	70 - 130	ND, RDL=5.0	ug/L		
5956241	Methyl t-butyl ether (MTBE)	2019/02/01	95	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L		
5956241	Methylene Chloride(Dichloromethane)	2019/02/01	94	70 - 130	98	70 - 130	ND, RDL=2.0	ug/L		
5956241	o-Xylene	2019/02/01	94	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L		
5956241	p+m-Xylene	2019/02/01	93	70 - 130	95	70 - 130	ND, RDL=0.20	ug/L		
5956241	Styrene	2019/02/01	96	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L		
5956241	Tetrachloroethylene	2019/02/01	98	70 - 130	103	70 - 130	ND, RDL=0.20	ug/L		
5956241	Toluene	2019/02/01	91	70 - 130	94	70 - 130	ND, RDL=0.20	ug/L		
5956241	Total Xylenes	2019/02/01					ND, RDL=0.20	ug/L		
5956241	trans-1,2-Dichloroethylene	2019/02/01	100	70 - 130	103	70 - 130	ND, RDL=0.50	ug/L		
5956241	trans-1,3-Dichloropropene	2019/02/01	88	70 - 130	89	70 - 130	ND, RDL=0.40	ug/L		
5956241	Trichloroethylene	2019/02/01	99	70 - 130	101	70 - 130	ND, RDL=0.20	ug/L	8.2	30
5956241	Trichlorofluoromethane (FREON 11)	2019/02/01	94	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L		
5956241	Vinyl Chloride	2019/02/01	104	70 - 130	107	70 - 130	ND, RDL=0.20	ug/L		
5957789	Dissolved Antimony (Sb)	2019/02/05	113	80 - 120	106	80 - 120	ND, RDL=0.50	ug/L	NC	20
5957789	Dissolved Arsenic (As)	2019/02/05	99	80 - 120	99	80 - 120	ND, RDL=1.0	ug/L	9.1	20

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Maxxam Job #: B927806
Report Date: 2019/02/05

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5957789	Dissolved Barium (Ba)	2019/02/05	102	80 - 120	101	80 - 120	ND, RDL=2.0	ug/L	1.1	20
5957789	Dissolved Beryllium (Be)	2019/02/05	97	80 - 120	96	80 - 120	ND, RDL=0.50	ug/L	NC	20
5957789	Dissolved Boron (B)	2019/02/05	NC	80 - 120	94	80 - 120	ND, RDL=10	ug/L	0.080	20
5957789	Dissolved Cadmium (Cd)	2019/02/05	104	80 - 120	100	80 - 120	ND, RDL=0.10	ug/L	NC	20
5957789	Dissolved Chromium (Cr)	2019/02/05	93	80 - 120	93	80 - 120	ND, RDL=5.0	ug/L	NC	20
5957789	Dissolved Cobalt (Co)	2019/02/05	91	80 - 120	93	80 - 120	ND, RDL=0.50	ug/L	3.9	20
5957789	Dissolved Copper (Cu)	2019/02/05	95	80 - 120	95	80 - 120	ND, RDL=1.0	ug/L	4.2	20
5957789	Dissolved Lead (Pb)	2019/02/05	94	80 - 120	95	80 - 120	ND, RDL=0.50	ug/L	NC	20
5957789	Dissolved Molybdenum (Mo)	2019/02/05	109	80 - 120	101	80 - 120	ND, RDL=0.50	ug/L	1.8	20
5957789	Dissolved Nickel (Ni)	2019/02/05	88	80 - 120	92	80 - 120	ND, RDL=1.0	ug/L	2.7	20
5957789	Dissolved Selenium (Se)	2019/02/05	103	80 - 120	101	80 - 120	ND, RDL=2.0	ug/L	NC	20
5957789	Dissolved Silver (Ag)	2019/02/05	84	80 - 120	100	80 - 120	ND, RDL=0.10	ug/L	NC	20
5957789	Dissolved Thallium (Tl)	2019/02/05	94	80 - 120	94	80 - 120	ND, RDL=0.050	ug/L	NC	20
5957789	Dissolved Uranium (U)	2019/02/05	97	80 - 120	95	80 - 120	ND, RDL=0.10	ug/L	2.3	20
5957789	Dissolved Vanadium (V)	2019/02/05	97	80 - 120	95	80 - 120	ND, RDL=0.50	ug/L	NC	20
5957789	Dissolved Zinc (Zn)	2019/02/05	90	80 - 120	95	80 - 120	ND, RDL=5.0	ug/L	3.5	20
5957968	F2 (C10-C16 Hydrocarbons)	2019/02/02	106	50 - 130	103	60 - 130	ND, RDL=100	ug/L	NC	30
5957968	F3 (C16-C34 Hydrocarbons)	2019/02/02	104	50 - 130	107	60 - 130	ND, RDL=200	ug/L	NC	30
5957968	F4 (C34-C50 Hydrocarbons)	2019/02/02	99	50 - 130	99	60 - 130	ND, RDL=200	ug/L	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 (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x RDL).

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Maxxam Job #: B927806
Report Date: 2019/02/05

exp Services Inc
Client Project #: HAM-00801245-G0
Site Location: Blair Road, Burlington
Your P.O. #: BRM-ENV
Sampler Initials: PM

VALIDATION SIGNATURE PAGE

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



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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Appendix F:
Conceptual Site Model

Phase Two Conceptual Site Model – 1160 Blair Road, Burlington, Ontario

This section presents the Phase Two Conceptual Site Model (P2CSM), as it relates to the Site designated as 1160 Blair Road, in Burlington, Ontario providing a narrative, graphical and tabulated description integrating information related to the Site geologic and hydrogeologic conditions, areas of potential environmental concern/potential contaminating activities, the presence and distribution of potential contaminants of concern, contaminant fate and transport, and potential exposure pathways. The P2CSM was completed in accordance with Ontario Regulation 153/04, as amended (O.Reg.153/04), as defined by the Ontario Ministry of the Environment, Conservation and Parks (MECP).

1 Introduction

The RSC property is located on the southwest side of Blair Road in Burlington, Ontario, hereinafter referred to as the 'Site'. The location of the Site is provided on Figure 1.

The Site is currently occupied by a two-storey industrial/commercial building with approximately 7,205 m² (77,555 ft²) of floor area. The Site building is currently occupied by various commercial tenants including:

- Creative Edge Dance Studio;
- RDC (Responsible Distribution Canada) (office);
- Ciscon Landscaping (showroom, office and yard);
- Body by PT (exercise gym);
- Burlington Movers (storage and office);
- Eurostar Renos;
- Insatax (office);
- Nuway Software (office);
- KGO Group Ltd. (storage);
- Recording Studio;
- Construction companies (storage and office)
- Archangel Raphael and Saint Marina Coptic Orthodox Church

At the time of the Site visit, three (3) of the units were vacant, two (2) of which were located on the second floor.

There are no hazardous wastes generators listed for the current tenants and no evidence of the generation of hazardous wastes were noted during the Phase One ESA Site reconnaissance. A review of the historical records indicated various wastes were generated on the Site and/or inferred small quantities of wastes handled. Based on the information provided and reviewed in completion of the Phase One ESA, the handling of hazardous wastes does not pose an environmental concern.

The surrounding area of the Site building consists of asphalt paved parking. The southwest portion of the Site consists of vacant land occupied by a number of shipping containers. These containers are used for storage by Burlington Movers (tenant of the Site building).

A review of the historical records and information provided from the Site representative indicated that the Site building was constructed in the 1970s. According to the city directory listings, the Site was occupied by the Rotunda Office Building from 1975 to 1995.

From reviewed City Directories, tenants have included: Town & Country Booking Service Ltd., Deer John Ltd., Columbian Chemicals Canada Ltd., White Motor Credit Corp. of Canada, Mayfair Travel Services,

Chef Cafeteria, Fife Controls Canada Ltd., Hunter JD Packaging, Gibbs Wire & Steel Company Ltd., Eaman Riggs Insulation Ltd. (all circa 1984), Town & Country Booking Service Ltd., Loomis Courier Service, Adam Irrigation Systems, CSR Business Systems Inc., Robinson, Wurth Paul Ltd., Robinson Ogilvy Inc., Jenmar Color Separations Inc., and Wurth Paul Ltd. (all circa 1991), Town & Country Bookkeeping Service Ltd., Loomis Courier Service Ltd., (all circa 1994) and All Tig Ltd., Gowan's Repair & Service, Roofing Depot, Best Cut, Inter Mill Technologies, Creek Mill Meadows Inc., and Linton Roundhouse Warehousing (all circa 1997).

Of the above listings and based on review of previous environmental reports, and reports from Opta Information Intelligence Inc., potentially contaminating activities (PCAs) may have occurred along the north side and southeast side of the industrial portion of the building (units formerly occupied by Gowan's Repair & Service, and Best Cut).

The surrounding properties within the Phase One Environmental Site Assessment (ESA) study area predominantly consists of light industrial or commercial land uses. The Phase One ESA study area and a Surrounding Land Use Plan are shown on Figure 2.

Refer to Table 1 for the Site identification information.

Table 1: Site Identification Information

Civic Address	1160 Blair Road, Burlington, ON
Current Land Use	Commercial
Proposed Land Use	Community (Church)
Legal Description	Part of Lot 12, Concession 2, South of Dundas Street, "Nelson", designated as Parts 9, 10 and 11, Reference Plan 20R-11755, Burlington
Property Identification Number (PIN)	07163-0083(LT)
Assessment Roll Number (ARN)	2402-090-903-41100-000
Universal Transverse Mercator (UTM) coordinates	NAD83 17, 597267E 4802107N
Site Area	1.67212 hectares
Property Owners	2118218 Ontario Inc.

2 Potentially Contaminating Activities and Areas of Potential Environmental Concern

2.1 Potentially Contaminating Activities

Refer to Table 2 for the list of potentially contaminating activities (PCAs) that have occurred within the Phase One Study Area, which includes the Site and properties within 250 m radius of the Site boundaries. Not withstanding industrial operations; PCAs which contributed to an APEC were mainly based on the following attributes: proximity to the Site, nature of waste streams and groundwater flow direction.

Table 2: Potentially Contaminating Activities

PCA Identifier	Address	Location of Activity (in relation to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
1 (1A, 1B, 1C)	1160 Blair Road	On-Site	40 – Pesticides (including Herbicides, Fungicides, and Anti Fouling Agents) manufacturing, processing, bulk storage and large-scale applications 34 – Metal Fabrication 52 – Storage, maintenance, fuelling and repair of equipment, vehicles and materials used to maintain transportation systems	Based on the 1959 aerial photograph, the Site was used for permanent crops (orchard). As such, there is the potential for the historic use of recalcitrant pesticides to have posed an environmental impact to the Site. According to the 1999 Trow Phase I ESA report, Best Cut (metal processing) was located onsite, circa 1997 to 1999. According to the 1999 Trow Phase I ESA report, Gowan's Repair and Service was located onsite, circa 1997.	Yes
2(2A. 2B, 2C)	1150 Blair Road	Off-Site (southeast adjacent)	28- Gasoline and Associate Products Storage in Fixed Tank 34- Metal Fabrication Not listed – Generator of hazardous wastes	Gotfryd Contracting Ltd. was listed as having an expired private liquid fuel outlet (Self-Serve) at 1160 Blair Road. Expiry year is 1989. A single walled diesel underground storage tank was present. A review of city directories indicated that Gotfryd Contracting Ltd was a tenant at 1150 Blair Road in 1990. Given the absence of any other records of fuel storage on Site, it is considered that the TSSA listed the expired fuel tank at 1160 Blair Road instead of the correct address of 1150 Blair Road.	Yes, based on proximity to the Site and local groundwater flow.

PCA Identifier	Address	Location of Activity (in relation to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
				The location of two (2) diesel USTs and one (1) solvent spill containment tank was confirmed by EXP during a supplemental records review. According to the Ecolog ERIS report, Kenwar Tool & Die Ltd. is listed in Scott's Directory, with the following operations: "special dies and tool and industrial molds". JR Tool and Die is listed in Scott's Directory, with the following operations: "Machine tools, metal cutting types; special dies and tools, die sets, jigs and fixtures and industrial molds; industrial and commercial machinery and equipment". A.W. Chesterton was listed in Scott's Directory, with the following operations, "Industrial machinery and equipment" and also registered as a waste generator of various wastes including emulsified oils, polymeric resins, inorganic & organic laboratory chemicals, halogenated solvents and petroleum distillates from 1994 to 2001.	
3	1157 Blair Road	Off-Site (approx 30 m north)	Not listed – Generator of hazardous wastes	Fagersta Secoroc Ltd. was registered as a waste generator of emulsified oils and halogenated solvents from 1986 to 1998 and was listed in the city directories at this address between 1975 and 2000. Screenplay Designs Inc. was registered as a waste generator of waste oils & lubricants for 2007 and 2008 and graphic art wastes in 2008. Wardco Window & Door Manufacturing was registered as a waste generator of paint/pigment/coating residues from 2013 to 2017. XCG Consultants Ltd. was registered as a waste generator of oil skimmings & sludges from 2003 to 2006. Atlas Copco Canada was registered as a waste generator of oil skimmings & sludges for 2002/2003/2007 and halogenated solvents, other specified inorganics, oil skimming & sludges from 2008 to 2017.	Yes, based on proximity to the Site and local groundwater flow.
4	3300 Mainway	Off-Site (west adjacent)	34 – Metal Fabrication Not listed – Generator of hazardous wastes	Verns Metal Stamping Inc. is listed in Scott's Directory, with the following operations: "Metal stampings; fabricated metal products". Jones Tool & Machine Co. Ltd. is listed in Scott's Directory, with the following description of operations: "Special dies and tools, die sets, jogs and fixtures and industrial molds; industrial and commercial machinery and equipment". Swissline Industries Ltd. was listed as waste generator of petroleum distillates from 1992 to 1998.	No, based on local groundwater flow.
5	1140 Blair Road	Off-Site (approx. 45 m southeast)	Not listed – Spill incident	A spill incident associated with this address included a 10 L spill of PCB oil to soil in 2001 due to a rotten hydro pole breaking. Environmental impact was deemed possible.	No, based on small quantity of spill.
6(6A, 6B, 6C)	3388 Mainway	Off-Site (approx. 30 m north)	Not listed – Generator of hazardous wastes 34 – Metal Fabrication 27- Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Thomas Wire Die Limited was listed as a waste generator of aromatic solvents and emulsified oils from 1986 to 1998. Canfanco Inc. was listed as a waste generator of alkaline wastes-heavy metals, paint/pigment/coating residues, aromatic solvent, waste oils & lubricant and organic laboratory chemicals from 2002 to 2004 and is listed in Scott's Directory, with the following operations: "Stamping and all other machinery manufacturing". Canadian Fanner Co. Ltd. is listed in Scott's Directory, with the following operations: "Metal	Yes, based on proximity to the Site and local groundwater flow.

PCA Identifier	Address	Location of Activity (in relation to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
				stamping; industrial and commercial machinery and equipment" and was listed in the city directories between 1975 and 1995 Ontario Auto Collision/Aro Motors Car Star is listed in the Burlington City directories in 2005 and was still present during the visual reconnaissance of adjacent properties.	
7	3390 Mainway	Off-Site (approx. 30 m north)	Not listed – Generator of hazardous wastes	Chem Systems Inc. was listed as a waste generator of petroleum distillates from 2002 to 2003 and was listed in the city directories in 2000. Hayward Gordon Ltd. was listed as a waste generator of petroleum distillates, paint/pigment/coating residues, inorganic/organic laboratory chemicals, waste compressed gases, polymeric resin, waste oils and lubricants from 2004 to 2006. Listed in Scott's Directory, with the following operations: "Material handling equipment manufacturing, all other general-purpose machinery".	Yes, based on proximity to the Site and local groundwater flow.
8	3400 Landmark Road	Off-Site (approx. 40 m east)	Not listed – Generator of hazardous wastes	Airmax Compressor Services Ltd. (Units 9 & 10) was registered as a waste generator of alkaline wastes, heavy metals, waste oils & lubricants, acid wastes, petroleum distillates from 2007 to 2016. L&A Diecrafts Ltd. (Units 5-10) was registered as a waste generator of waste oils & lubricants in 2005 and is listed in Scott's Directory, with the following operations: "Die-cut paper and paperboard and cardboard; signs and advertising specialties; sign manufacturing". Febau Canada (Units 3,4,5 and 6) was registered as a waste generator of inert inorganic wastes in 2007. Ascona Management & Consulting Inc. was registered as a waste generator of paint/pigment/coating residues in 2009.	No, based on nature of waste streams and proximity to the Site.
9(9A, 9B)	1171 Pioneer Road	Off-Site (southwest adjacent)	28- Gasoline and Associate Products Storage in Fixed Tank Not listed – Generator of hazardous wastes	Automotive Manager Bell Canada was listed as having an expired private fuel outlet (Self-Serve) and piping. Expiry year was 1990. The capacity of the tank was 25,000 L. Bell Canada was listed as a waste generator of various wastes including acid-waste- heavy metals, alkaline wastes, heavy metals, oil skimmings and sludges, aliphatic solvent, petroleum distillates, waste compressed gases, waste oils and lubricants, paint/pigments/coating residues, neutralized wastes- heavy metals, pathological wastes, organic/inorganic laboratory chemicals from 1988 to 2017.	Yes, based on proximity to the Site.
10(10A, 10B, 10C, 10D)	1153 Pioneer Road	Off-Site (south adjacent)	33 – Metal Treatment, Coating, Plating and Finishing 34 – Metal Fabrication 54 – Textile Manufacturing and Processing Not listed – Generator of hazardous wastes	BCG Precision Grinding and Honing Inc. was listed as a waste generator of waste oils and lubricants from 2013 to 2017 and was observed during the visual reconnaissance of adjacent properties. Mill Pack Industrial Maintenance Inc. was listed as a waste generator of waste oils and lubricants from 2012 to 2017 and was observed during the visual reconnaissance of adjacent properties. Burlington Centreless Grinding was listed as a waste generator of waste oils and lubricants from 2001 to 2012 and listed in Scott's Directory, with the following operations, "Industrial and commercial machinery and equipment; coating, engraving, heat treating and allied activities". This tenant was observed during the visual reconnaissance of adjacent properties.	No, based on local groundwater flow.

PCA Identifier	Address	Location of Activity (in relation to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
				K.C Graphics was listed as a waste generator of petroleum distillates from 1989 to 2001 and listed in Scott's Directory, as a textile and fabric finishing manufacturing business. 931344 Ontario Inc. was listed as a waste generator of petroleum distillates and paint/pigment/coating residues from 2002 to 2004. Canadian Induction Processing Inc. was listed as a waste generator of oil skimming and sludges and emulsified oils from 1986 to 2001 and listed in Scott's Directory, with the following operations: "Coating, engraving, heat treating and allied activates". Machinery Repair Technologies was listed as a waste generator of petroleum distillates and waste oils and lubricants from 1997 to 2003. Brant Custom Grinding Limited was listed in Scott's Directory, with the following operations: "coating, engraving, heat treatment and allied activities; machine shops; other plate work and fabricated structural product manufacturing". This tenant was observed during the visual reconnaissance of adjacent properties. Singlepoint MFG. Inc., M.I.R Fabric Products Ltd., TPREX Inc. and P.S.T Machining were observed during the visual reconnaissance of adjacent properties.	
11(11A, 11B)	3312 Mainway	Off-Site (northwest adjacent)	34 – Metal Fabrication 19 – Electronic and Computer Equipment Manufacturing	Weigh-Matic Systems Inc. was listed in Scott's Directory, with the following operations: "Cutting Tools & Machinists' Precision Measuring Devices; packaging machinery". Carlisle Technology Inc. was listed in Scott's Directory, with the following operations: "Computer and peripheral equipment, semiconductor and other electronic component manufacturing". This tenant was observed during the visual reconnaissance of adjacent properties. Integrity Worldwide Inc. was listed in Scott's Directory, with the following operations: "Ornamental and architectural metal product manufacturing".	No, based on local groundwater flow.
12(12A, 12B)	3330 – 3344 Mainway	Off-Site (northwest adjacent)	Not listed – Generator of hazardous wastes 19 – Electronic and Computer Equipment Manufacturing	Loomis Courier Service (3330 Mainway) was listed as a waste generator of paint/pigment/coating residues, inorganic/organic laboratory chemicals, halogenated pesticides and non-halogenated pesticides from 1996 to 1999. Hamilton Digital Designs Ltd. was listed in Scott's Directory, with the following operations: "Radio and television broadcasting and wireless communication equipment manufacturing; measuring, medical and controlling devices manufacturing; sign manufacturing". 1187188 Ontario Ltd. (3344 Mainway) was listed as a waste generator of pathological wastes from 2010 to 2014.	No, based on local groundwater flow.
13(13A, 13B, 13C, 13D, 13E, 13F)	3317 – 3339 Mainway	Off-Site (approx. 120 m northwest)	Not listed – Generator of hazardous wastes 33 – Metal Treatment, Coating, Plating and Finishing 34 – Metal Fabrication	Antel Optronics Inc. was listed as a waste generator from 1986 to 1994, however no additional details were provided. Modular Controls Limited was listed as a waste generator of petroleum distillates, waste oils and lubricants and emulsified oils from 1986 to 1998. Gates Air Systems Ltd. was listed as a waste generator of waste oils and lubricants from 1993 to 1998. Organizers Plus Modular Controls Limited was listed in Scott's Directory, with the following	No, based on proximity to the Site.

PCA Identifier	Address	Location of Activity (in relation to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
			47 - Rubber Manufacturing and Processing 43 – Plastics (including Fibreglass) Manufacturing and Processing Not listed – Spill incident	operations, "Wood kitchen cabinet and counter top manufacturing and other millwork". Halton Sheet Metal Ltd. was listed in Scott's Directory, with the following operations: "Industrial and commercial fan and blower and air purification equipment manufacturing and coating, engraving, heat treating and allied activities". JC CNC was listed as a waste generator of oil skimming and sludges from 1997 to 2001. The business was listed as a waste and listed under Scott's Directory with the following operations: "Machine Shop, mining and oil and gas field machinery manufacturing and railroad rolling stock manufacturing". Accurate Concrete Cutting was listed as a waste generator of waste crankcase oils and lubricants from 2016 to 2017. Allen Industrial Rubber Prod was listed in Scott's Directory, with the following description of operations: "Gaskets, packing and sealing devices; fabricated rubber products; resin and synthetic rubber manufacturing; other rubber product manufacturing and other miscellaneous manufacturing". This tenant was observed during the visual reconnaissance of adjacent properties. Alkano Grinding and Stamping Company was listed as a waste generator of waste oils and lubricants from 2012 to 2017. This tenant was observed during the visual reconnaissance of adjacent properties. Quality Cylinder Service was listed as a waste generator of waste oils and lubricants from 1986 to 1989. Quality Hydraulic Service was listed as a waste generator of petroleum distillates and waste oils and lubricants from 1990 to 1998. Welcan Machine Shop was listed as a waste generator of waste oils and lubricants and emulsified oils from 1996 to 2001. This business was listed in Scott's Directory, with the following description of operations: "Industrial and commercial machinery and equipment and steel foundries, not elsewhere classified". Airon HVAC Service Ltd was listed as a waste generator of aliphatic solvents and waste oils and lubricants for 2006. Eagle-Quip Inc. was listed as a waste generator of petroleum distillates and waste oils and lubricants from 1986 to 1988. Fairway Industrial was listed as a waste generator of petroleum distillates and waste oils and lubricants from 1989 to 2001. Halton Metal Outlet Ltd. was listed in Scott's Directory with the following description of operations: "Coating, engraving, heat treating and allied activities; iron and steel mills and ferro-alloy manufacturing". Travis Industrial Maintenance was listed as a waste generator of petroleum distillates and waste oils and lubricants from 1995 to 2004. Firecraft Kilns Sales and Service was listed in Scott's Directory, with the following description of operation: "All other industrial machinery manufacturing". Helec Insulation Ltd. was listed in Scott's Directory, with the following description of	

PCA Identifier	Address	Location of Activity (in relation to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
				operations: "Plastic products, not elsewhere classified and mineral wool". This tenant was observed during the visual reconnaissance of adjacent properties. Feed Rite Automatic Inc. was listed in Scott's Directory with the following description operations: "Material handling equipment manufacturing; other plate work and fabricated structural product manufacturing; cutlery and hand tool manufacturing; all other general-purpose machinery manufacturing; rubber and plastic hose and belting manufacturing". A spill incident associated with this property (3255 Mainway) included 27 L of Citrotech to asphalt. Environmental impact was not anticipated.	
14(14A, 14B)	3415 Landmark Road	Off-Site (approx. 95 m northeast)	Not listed – Generator of hazardous wastes 34 – Metal Fabrication	Euroline Custom Cabinets was listed as a waste generator of paint/pigment/coating residues from 1995 to 2001 and in Scott's Directory, with the following operations: "Wood household furniture, window and door manufacturing and millwork". Cor-Mag Inc. was listed as a waste generator of waste oils and lubricants from 1992 to 1998 and was listed in the City directories between 1980 and 1990. IndustAutoCo Inc. was listed as a waste generator of PCBs from 2014 to 2015. TCR Machining Ltd. (Custom & Production CNC Machining) occupied the property during the visual reconnaissance of the surrounding properties.	No, based on proximity to the Site.
15(15A, 15B)	1101 Blair Road	Off-Site (approx. 90 m east)	Not listed – Generator of hazardous wastes (PCA-15A) Not listed – Spill incident	Shell Canada Products was listed as a waste generator of waste oils/sludges (petroleum based), waste crankcase oils and lubricants as of December 2017. Waste oils and lubricants, alkaline wastes-other metals and oil skimming and sludges from 2011 to 2016. Quaker State Inc. was listed as a waste generator of oil skimmings and sludges, waste oils and lubricants and aromatic solvents from 1986 to 2001. Pennzoil Quaker State Canada Company was listed as a waste generator of oil skimmings and sludges, waste oils and lubricants and aromatic solvents from 2002 to 2010; emulsified oils from 2002 to 2008. A spill incident in 2002 associated with this property included oil sheen on the lot and catchbasin due to watermain failure. The spill was contained, although environmental impact was deemed possible.	No, based on proximity to the Site.
16(16A, 16B, 16C, 16D)	1121 Pioneer Road	Off-Site (approx. 125 m south)	Not listed – PCB Storage Site Not listed – Generator of hazardous wastes 33 – Metal Treatment, Coating, Plating and Finishing 43 – Plastic (including Fibreglass) Manufacturing and Processing	Hunter Drums Limited was registered in the Ontario PCB Storage Database. And was listed as a waste generator of acid wastes-heavy metals, paint/pigment/coating residues, aromatic solvents, aliphatic solvents, petroleum distillates and waste oil and lubricants from 1986 to 1989. Listed in Scott's Directory with the following operations: "Metal shipping barrels, drums, kegs and pails; all other plastic product manufacturing; other metal container manufacturing and coating, engraving, heat treating and allied activities". Mauser Canada Ltd. was listed as a waste generator of alkaline waste- other/heavy metals, oil skimmings and sludges, aliphatic solvents, detergents/soaps, aromatic solvents, waste oils and lubricants, inorganic laboratory chemicals and paint/pigment/coating residues from 2005 to 2017. Listed in Scott's Directory with the following	No, based on proximity to the Site.

PCA Identifier	Address	Location of Activity (in relation to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
				operations: "All other plastic product manufacturing and other metal container manufacturing". Russel-Stanley was listed as a waste generator of paint/pigment/coating residues, aromatic solvents, waste oils and lubricants from 1997 to 2004 and acid wastes-heavy metals, alkaline wastes-other metals, aliphatic solvents, PCBs, oil skimmings and sludges and petroleum distillates from 1997 to 2001.	
17(17A, 17B, 17C)	3410 Mainway	Off-Site (approx. 100 m north)	Not listed – PCB Storage Site 31 – Ink Manufacturing, Processing and Bulk Storage Not listed – Generator of hazardous wastes	Reiger Printing Ink Co Ltd. was registered in the Ontario PCB Storage Database, any PCBs stored on the property were removed as of 1996. The company was also listed as a waste generator of paint/pigment/coating residues from 1986 to 2008 and petroleum distillates, polymeric resins, PCB's, waste oils and lubricants, inorganic pigment wastes, graphic art wastes from 1992 to 2008. This business was in Scott's Directory with the following operations: "Printing Ink Manufacturing and other printing". 2210263 Ontario Inc. was registered as a RSC property (2010) and listed as a waste generator of waste oils and lubricants from 2009 to 2010. The intended property use was community. No soil was remediated within 3 m of the property boundary. Activityplex Burlington Corp. was listed as a waste generator of inert organic waste as of December 2017. MIP Group Inc. was listed as a waste generator of inert organic waste in 2016.	No, based on proximity to the Site.
18(18A,18 B, 18C)	3264 Mainway	Off-Site (approx. 105 m west)	Not listed – Generator of hazardous wastes 26 – Foam and Expanded Foam Manufacturing and Processing 57 – Vehicle and Associated Parts Manufacturing	FibreCast Inc. was listed as a waste generator of waste oils and lubricants and PCBs in 2016 and waste crankcase oils and lubricants in 2017. The business was also listed under Scott's Directory, with the following operations: "Engineering services; clay building material and refractory manufacturing; other specialty line building supplies wholesaler-distributors; all other textile product mills; urethane and other foam products (except Polystyrene) manufacturing; polystyrene foam product manufacturing; all other non-metallic mineral product manufacturing; plumbing, heating and air conditioning equipment and supplies wholesaler distributors". AISCO Systems Limited was listed as a waste generator of paint/pigment/coating residues in 1990 and paint/pigment/coating residues, inorganic laboratory chemicals, petroleum distillated, polymeric resins, oil skimming and sludges and alkaline wastes-other metals from 1992 to 2001. The business was also listed as a waste generator from 1986 to 1989, however no additional details were provided. The business was listed under Scott's Directory, with the following operations: "Industrial and commercial machinery and equipment, service/special industry machinery and industrial truck, tractors, trailers and stackers".	No, based on proximity to the Site.
19(19A, 19B)	1149 Pioneer Road	Off-Site (approx. 50 m south)	Not listed – Generator of hazardous wastes Not listed – Spill incident	Rehau Industries Inc. was listed as a waste generator of aliphatic solvent, petroleum distillates, polymeric resins and waste oils and lubricants from 1986 to 2001. This tenant was observed during the visual reconnaissance of the surrounding properties. A spill incident in 1991 associated with this property included 1000 L of plasticizer spilled to	No, based on local groundwater flow.

PCA Identifier	Address	Location of Activity (in relation to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
				the ditch due to equipment failure relating to a valve/fitting leak. The receiving medium was land and environmental impact was deemed possible.	
20(20A, 20B, 20C)	1100 Blair Road	Off-Site (approx. 115 m southeast)	8 – Chemical Manufacturing, Processing and Bulk Storage Not listed – Generator of hazardous wastes Not listed – Spill incident	Quadra Chemicals Ltd. was listed under the Chemical Registry which provides a listing of facilities that manufacture or distribute chemicals and listed under the Canadian Pulp and Paper Directory. This business was also listed as a waste generator of inorganic/organic laboratory chemicals from 1992 to 2012; paint/pigment/coating residues, alkaline wastes-other metals, PCBs and other specified inorganics from 1999 to 2012 and polymeric resins in 2012. Organic acids, paint/pigment/coating residues, aliphatic solvent, organic/inorganic laboratory chemicals, heavy fuels, detergents/soaps, PCBs, waste oils and lubricants, oil skimmings and sludges, aromatic solvents, amines, petroleum distillates, polymeric resins, other specified inorganics, graphic art wastes and alkaline wastes- other metals were listed for 2013 to 2017. Acco Canadian Material Handling was listed as a waste generator of paint/pigment/coating residues from 1986 to 1997 and alkaline wastes-other metals and waste oils and lubricants from 1990 to 1998. A spill incident in 1993 associated with this property included 15 kilograms of sodium dichromate dihydrate to the driveway due to weld/seam failure. The receiving medium was land and environmental impact was not anticipated.	No, based on proximity to the Site.
21(21A, 21B, 21C)	3285 - 3295 Mainway	Off-Site (approx. 115 m west)	31 – Ink Manufacturing, Processing and Bulk Storage 34 – Metal Fabrication Not listed – Generator of hazardous wastes	Brown Falcon Machine & Tool (3295 Mainway) was listed as a waste generator of petroleum distillates from 1992 to 1998. Tymatic Controls (Div. of Tyrrell Air Controls Ltd.) (3295 Mainway) was listed under Scott's Directory with the following operations: "Measuring, medical and controlling devices manufacturing; switchgear and switchboard and relay and industrial control apparatus manufacturing; electrical wiring and construction supplies wholesaler-distributors and industrial machinery, equipment and supplies wholesaler-distributors". Erodall Ltd. (3295 Mainway) was listed under Scott's Directory with the following operation: "Machine shops". Printing House Ltd. (3285 Mainway) was listed as a waste generator of oil skimmings and sludges, paint/pigment/coating residues, graphic art wastes and photoprocessing wastes from 1999 to 2017. Cooper Fluid Power Inc. (3285 Mainway) was listed as a waste generator of aliphatic solvents, petroleum distillates, oil skimming and sludges and waste oils and lubricants from 1996 to 2001. Cotswold Precision Company Ltd. (3285 Mainway) was listed as a waste generator of waste oils and lubricants and emulsified oils from 1994 to 2001. This business was listed under Scott's Directory with the following operations: "Fabricated metal products; overhead travelling cranes, hoist and monorail systems; industrial and commercial machinery and equipment; machine shops; all other miscellaneous fabricated product manufacturing; material handling equipment manufacturing". Precision Metalworks Inc. (3285 Mainway) was listed as a waste generator of oil skimming and	No, based on proximity to the Site.

PCA Identifier	Address	Location of Activity (in relation to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
				sludges and waste oils and lubricants from 2007 to 2009. Sympro CNC Machining and Manufacturing (3285 Mainway) was listed as a waste generator from 2003 to 2004, however no additional details were provided. Precision Print (3285 Mainway) was listed as a waste generator of paint/pigment/coating residues in 2010. This business was listed under Scott's Directory with the following operations: "Digital printing, quick printing and other printing". McKellar Machine Products and The Printing House were observed during the reconnaissance of surrounding properties..	
22	3424 Landmark Road	Off-Site (approx. 115 m northeast)	28- Gasoline and Associate Products Storage in Fixed Tank	Humpty Dumpty Foods Ltd. was listed under TSSA Expired Facilities as having a private (self-serve) fuel outlet, expiring in 1993.	No, based on proximity to the Site.
23(23A, 23B)	3385 Mainway	Off-Site (approx. 130 m northwest)	Not listed – Generator of hazardous wastes 34 – Metal Fabrication	Toromont Industries Ltd. was listed as a waste generator of light fuels, waste crankcase and lubricants and petroleum distillates as of December 2017. Kingsbury Machine Toll (CDA) Ltd. was listed as a waste generator of paint/pigment/coating residues, aromatic solvents, petroleum distillates, oil skimming and sludges, waste oils and lubricants and emulsified oils from 1986 to 2004. The business was listed under Scott's Directory with the following operations: "Measuring, medical and controlling devices manufacturing, switchgear and switchboard and relay and industrial control apparatus manufacturing, other metalworking machinery manufacturing and all other general-purpose machinery manufacturing".	No, based on proximity to the Site.
24	3435 Landmark Road	Off-Site (approx. 160 m northeast)	Not listed – Generator of hazardous wastes	Laker Energy Products Ltd. was listed as a waste generator of emulsified oils, inorganic laboratory chemical, other specified inorganics and acid waste- other metals from 2012 to 2016. Gennum was listed as a waste generator of aromatic solvent, aliphatic solvents, halogenated solvents, waste oils and lubricants, organic laboratory chemicals, acid waste-heavy metals, alkaline wastes-heavy metals and other specified inorganic from 1988 to 2004. Linerar Technology Inc. was listed as a waste generator of aromatic solvents, halogenated solvent, waste oils and lubricants from 1986 to 1987.	No, based on proximity to the Site.
25	3365 Mainway	Off-Site (approx. 130 m northwest)	Not listed – Generator of hazardous wastes	Ecosynthetix Inc. was listed as a waste generator for inorganic/organic laboratory chemicals, paint/pigment/coating residues, other polymeric wastes, waste oils and lubricants, waste compressed gases from 2012 to 2017. This tenant was observed during the visual reconnaissance of adjacent properties.	No, based on proximity to the Site.
26	3426 Mainway	Off-Site (approx. 175 m north)	Not listed – Generator of hazardous wastes	Bosch Rexroth Canada Corp was listed as a waste generator for acid waste-heavy metals, organic laboratory chemicals, alkaline wastes- heavy metals and aromatic solvents from 2010 to 2017 and for waste oils and lubricants and petroleum distillates, oil skimming and sludges and amines from 2001 to 2017. This business was also listed under the Canadian Pulp and Paper Directory and listed under Scott's Directory with the following operations: "Material handling Equipment Manufacturing; industrial machinery, equipment	No, based on proximity to the Site.

PCA Identifier	Address	Location of Activity (in relation to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
				and supplies wholesaler-distributions; switchgear and switchboard and relay and industrial control apparatus manufacturing; computer, computer peripheral and pre-packing software wholesaler-distributors; measures, medical and controlling devices manufacturing; other engine and power transmission equipment manufacturing, metal valve manufacturing, motor and generator manufacturing; all other general-purpose machinery manufacturing." Kernic Equipment was listed as a waste generator of aromatic solvents and waste oils and lubricants from 1992 to 1998. Basic Technologies was listed as a waste generator of petroleum distillates and emulsified soils from 1997 to 2000.	
27(27A, 27B)	3291 Mainway	Off-Site (approx. 215 m west)	Not listed – Generator of hazardous wastes 34 – Metal Fabrication	Nixon Integrated Machining Design Ltd. was listed as a waste generator of emulsified oils, waste oils and lubricants and petroleum distillates from 1996 to 2017 and was listed under Scott's Directory as a machine shop. Brown Flacon Machine and Tool was listed as a waste generator of petroleum distillates from 1993 to 2001 and was listed in Scott's Directory with the following operations: "Special dies and told, die sets, jigs and fixtures and industrial moulds; industrial and commercial machinery and equipment, not elsewhere classified".	No, based on proximity to the Site.
28(28A, 28B)	3450 Landmark Road	Off-Site (approx. 215 m northeast)	Not listed – Generator of hazardous wastes 19 – Electronic and Computer Equipment Manufacturing	Bramkal Contractors Inc. was listed as a waste generator of paint/pigment/coating residues, reactive anion wastes, aromatic solvents, organic laboratory chemicals and emulsified oils in 2016 and as a waste generator of waste oils and lubricants and petroleum distillates from 2006 to 2008. Burlington Cutting and Finishing Inc. was listed as a waste generator of emulsified oils from 2007 to 2009 and was listed in Scott's Directory with the following operation: "Stamping". A-1 Asphalt Maintenance Ltd. was listed as a waste generator of paint/pigment/coating residues, petroleum distillates, heavy fuels and waste oils and lubricants from 2002 to 2005. Tach West Technologies Ltd. was listed in Scott's Directory with the following operations: "Semiconductor and other electronic component manufacturing; measuring, medical and controlling devices manufacturing; professional machinery, equipment and supplies wholesaler-distributors and other new motor vehicle parts and accessories wholesaler-distributors".	No, based on proximity to the Site.
29	3455 Landmark Road	Off-Site (approx. 215 m northeast)	Not listed – Generator of hazardous wastes	Comstock Canada Ltd. was listed as a waste generator of petroleum distillates, inorganic/organic laboratory chemicals, waste oils and lubricants, alkaline wastes- other metals from 1999 to 2014 and acid wastes, paint/pigment/coating residues, halogenated solvents from 1995 to 2008.	No, based on proximity to the Site.
30	3419 Mainway	Off-Site (approx. 235 m north)	Not listed – Spill incident	A spill incident in 2000 associated with this property included 568 L of diesel fuel to the parking lot and drain/storm sewer due to a valve/fitting leak or failure to moving equipment. The receiving medium was land/water and environmental impact was deemed possible.	No, based on proximity to the Site.

PCA Identifier	Address	Location of Activity (in relation to Site)(1)	Potentially Contaminating Activity (PCA)(2)	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
31(31A, 31B, 31C)	3267 Mainway	Off-Site (approx. 150 m west)	Not listed – Generator of hazardous wastes 57 – Vehicle and Associated Part Manufacturing Not listed – Spill incident	Revstone Industries Burlington Inc. was listed as a waste generator of petroleum distillates, aliphatic solvents, acid-wastes-heavy metals, emulsified oils, waste oils and lubricants, oil skimmings and sludges, alkaline wastes-other metals from 2009 to 2012. National Rigging and Transportation Ltd. was listed as a waste generator in 2012, however no additional details were provided. Burlington Technologies was listed as a waste generator for waste oils and lubricants, emulsified oils, other specified inorganics, aliphatic solvent, petroleum distillates and oil skimmings and sludges from 1992 to 2008. Burlington Die Casting was listed as a waste generator of waste oils and lubricants and emulsified oils from 1986 to 1990 and was listed in Scott's Directory with the following operations: "Non-ferrous foundries (except die-casting); industrial mould manufacturing; other metalworking machinery manufacturing; automobile and light duty motor vehicle manufacturing; heavy-duty truck manufacturing". A spill incident in 2004 associated with this property included an unknown quantity of cutting oil (petroleum based, not specified) to a creek. The receiving medium was water and environmental impact was not noted in the report. A spill incident in 2005 associated with this property included approximately 20 L of hydraulic oil to an onsite catch basin. The receiving medium was water and environmental impact was deemed possible.	No, based on proximity to the Site.
32(32A, 32B, 32C, 32D)	1232 Dillon Road	Off-Site (approx. 220 m northwest)	Not listed – Generator of hazardous wastes 33 – Metal Treatment, Coating, Plating and Processing 34 – Metal Fabrication Not listed – Spill incident	JC CNC Works Inc. was listed as a waste generator of emulsified oils and waste oils/sludges (petroleum based) from 2011 to 2017 and was listed in Scott's Directory with the following description operations: "Railroad rolling stock manufacturing; mining and oil and gas field machinery manufacturing; coating, engraving, heat treating and allied activities; other plate work and fabricated structural product manufacturing". This tenant was observed during the visual reconnaissance of adjacent properties. X-Pert Metal Finishing Ltd. was listed as a waste generator of acid waste-heavy metals, alkaline wastes- heavy metals and oil skimming and sludges from 1986 to 1998. Hahn and Sons Ltd. was listed as a waste generator of waste oil and lubricants from 2013 to 2017. This tenant was observed during the visual reconnaissance of adjacent properties. X-Pert Metals reported a spill incident in 1991 associated with a flood on site that leaked an unknown quantity of chemicals into a sewer. The receiving medium was watercourse or lake and environmental impact was deemed possible.	No, based on proximity to the Site.
33	3280 Mainway	Off-Site (approx. 60 m west)	27- Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	The property at 3280 Mainway was occupied by Fix Auto Collision during the visual reconnaissance of the surrounding properties.	No, based on local groundwater flow.

(1) Distances are approximate. Precise distances are not possible due to the age of some listings and the aggregation and/or loss of addresses.
(2) Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D (O.Reg 153/04, as amended) that is occurring or has occurred in a phase one Study area.

Refer to Figure 3 for the location of the PCAs.

2.2 Areas of Potential Environmental Concern

Based on the evaluation of the PCAs located within the Phase One Study Area, the following areas of potential environmental concern (APECs) were identified, as presented in Table 3.

Table 3: Areas of Potential Environmental Concern

Area of Potential Environmental Concern (APEC)(1)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)(2)	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1A	Entire Site	40 – Pesticides (including Herbicides, Fungicides and Anti Fouling Agents) manufacturing, processing, bulk storage and large-scale applications	On-Site (1160 Blair Road)	Organochlorine Pesticides, Metals, As, Sb, Se	Soil
APEC 1B	Southeast Industrial Unit	34 – Metal Fabrication		Metals, VOCs and PHCs	Soil and Groundwater
APEC 1C	Northwest Industrial Unit	52 – Storage, maintenance, fuelling and repair of equipment, vehicles and materials used to maintain transportation systems		VOCs and PHCs	Soil and Groundwater
APEC 2	Southeast adjacent to property line	28 – Gasoline and Associate Products in Fixed Tanks, 34 – Metal Fabrication	Off-Site (1150 Blair Road)	VOCs and PHCs, Metals	Soil and Groundwater
APEC 3	Southern corner of property	28- Gasoline and Associate Products Storage in Fixed Tank Not listed – Generator of hazardous wastes	Off-Site (1171 Blair Road)	PHCs, VOCs, BTEX, Metals	Groundwater
APEC 4	Northeast adjacent to property boundary	Not listed – Generator of hazardous wastes	Off-Site (1157 Blair Road)	PHCs, VOCs, BTEX, Metals	Groundwater
APEC 5	Northern corner of property	Not listed – Generator of hazardous wastes 34 – Metal Fabrication 27- Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Off-Site (3388 Mainway)	PHCs, VOCs, BTEX, Metals	Groundwater
APEC 6	Northern corner of property	Not listed – Generator of hazardous wastes	Off-Site (3390 Mainway)	PHCs, VOCs, BTEX, Metals	Groundwater

(1) Area of Potential Environmental Concern means the area on, in or under a phase one study area where one or more contaminants are potentially present, as determined through the PI ESA, including through (a) identification of post or present uses on, in or under the phase one property, and (b) identification of potentially contaminating activities.
(2) Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D (O.Reg.153/04, as amended) that is occurring or has occurred in a phase one Study area.

Refer to Figure 4 for the location of the APECs.

2.3 Underground Utilities

Potable water is provided to the Site building through the municipal water distribution system and sanitary wastewater is discharged to the municipal sewer system. The water line enters the Site from the northern corner and runs parallel along the northwest side of the Site building, entering the Site building near the centre of the northwest side. The sanitary sewer line enters the Site from Blair Road to the north Site of the Site building.

A stormwater line is situated around the building, connecting various catch basins surrounding the building, draining to Blair Road near the northeast corner of the Site.

The natural gas line enters the Site from the northeast corner and runs parallel along the southeast side of the Site building, entering the building near the centre of the southeast side.

A telecommunication line is located on the northeast side of the building moving towards the boulevard.

Given that underground utilities are located on the Site, there is the potential for the distribution and transport of contaminants via the underground utilities

The approximate location of underground utilities is shown in Figure 5.

3 Physical Site Description

3.1 Stratigraphy

The Site and surrounding area is located in the physiographic region described as Till Plains (Drumlinized). The Site and surrounding areas are dominated by Halton Till deposits which predominately consist of clay and silt till. The bedrock in the general area was part of a group belonging to the Queenston Formation, consisting of red shale expected to be at depths ranging between 3 to 7 m below ground surface.

The general stratigraphy at the Site, as observed in the boreholes, consisted of clayey silt / silty clay beneath the asphalt pavement structure transitioning into a shale-till complex. A brief description of the soil stratigraphy at the Site, in order of depth, is summarized in the following sections.

Pavement Structure – A surficial pavement structure was encountered at each borehole location. The pavement structure consisted of asphalt and a sand and gravel base with maximum thickness of 0.3 m.

Clayey silt/silty clay till – Clayey silt/silty clay till was encountered beneath the pavement structure in the each of the boreholes advanced at the Site. This deposit was generally brown to reddish brown in colour and moist. The till extended to depths generally ranging between approximately 2.3 and 3.8 below existing ground surface.

Shale-Till Complex – The clayey silt/silty clay layer transitioned into a shale-till complex in the deeper boreholes. This deposit was reddish-brown to grey in colour and damp. The shale-till complex extended to a maximum depth of approximately 7.6 m below ground surface, the maximum depth of investigation.

Shale Bedrock – Auger refusal was encountered in two (2) of the boreholes advanced (BH101 and BH102) at depths ranging between 5.2 and 5.5 m below ground surface. It is assumed that the refusal was encountered at the interface of the Queenston shale bedrock, however no samples of the bedrock were recovered as part of the Phase Two ESA.

The Site stratigraphy characteristics are summarized in Table 4.

Table 4: Site Geological Characteristics

Stratigraphy	Details	Minimum Depth Observed (m bgs)	Maximum Depth Observed (m bgs)	Approximate Elevation Range (m ASL)
Surface	Pavement Structure (asphalt and sand and gravel base)	0	0.3	~102.2 to 100.1
Overburden	Clayey silt / silty clay	0.1	3.8	~102.0 to 96.9
	Shale-Till Complex	2.3	7.6	~99.9 to 94.6
Bedrock	Queenston Shale (inferred)	5.2 (auger refusal)	N/A	~96.6 to <94.6

Refer to the geological cross sections in Figures 10A and 11A for an overview of the Site stratigraphy.

3.2 Hydrogeology

The Site is relatively flat with no discernible slopes. No surface water features are situated within the Phase One Study Area. Tuck Creek is located approximately 375 m northeast of the Site, Roseland is situated approximately 850 m south of the Site, and Lake Ontario is located approximately 3.8 km southeast of the Site. Based on the location and distance from the Site to Lake Ontario, the inferred regional groundwater flow direction in the area is considered to be to the southeast. Based on the groundwater data collected from across the Site, the local groundwater flow direction is generally to the west/southwest. However, EXP notes that the groundwater is under relatively confined conditions and that the measured depths to water may not be indicative of the top of the groundwater table. Further groundwater levels may be influenced by the presence of underground utilities in the northern portion of the Site. As such the measured groundwater flow direction may not be representative of the regional area and groundwater flow direction can be estimated with greater certainty using measurements of groundwater elevations at the Site on several occasions over a longer period of time.

Refer to Table 5 for the Site hydrogeology characteristics based on groundwater monitoring observations.

Table 5: Site Hydrogeology Characteristics

Parameter	Observations
Depth to Groundwater	2.52 m bgs to 3.67 m bgs
Groundwater Elevation	97.5 m AMSL to 99.3 m AMSL
Direction of Groundwater Flow	West/Southwest
Hydraulic Conductivity	10^{-6} to 10^{-9} m/s (estimated)
Horizontal Hydraulic Gradient	0.005 to 0.03 m/m

The hydrogeology of the Site is illustrated on the interpreted groundwater contour plan (Figure 9) and are based on the most recent groundwater information collected from the Site (January 31, 2019). It is noted that a second water-bearing unit was not encountered at the depths investigated.

The Site hydrogeology is presented on the geological cross sections in Figures 10A and 11A.

3.3 Site Sensitivity

The Site Sensitivity classification with respect to the conditions set out under Section 41 and 43.1 of O.Reg.153/04 were evaluated to determine if the Site is sensitive, as presented in Table 5.

Table 6: Site Sensitivity

Sensitivity	Classification	Does Sensitivity Apply to Site?
Section 41 applies if	(i) property is within an area of natural significance	No
	(ii) property includes or is adjacent to an area of natural significance or part of such an area	No
	(iii) property includes land that is within 30 m of an area of natural significance or part of such an area	No
	(iv) soil at property has a pH value for surface soil less than 5 or greater than 9	No
	(v) soil at property has a pH value for sub-surface soil less than 5 or greater than 11	No
	(vi) a qualified person is of the opinion that, given the characteristics of the property and the certifications the qualified person would be required to make in a record of site condition in relation to the property as specified in Schedule A, it is appropriate to apply this section to the property	No
Section 43.1 applies if	(i) property is a shallow soil property	No
	(ii) property includes all or part of a water body or is adjacent to a water body or includes land that is within 30 m of a water body	No

3.4 Remedial Activities

It is noted that a Soil Remediation Program (SRP) has been completed at the Site in July 2018. The scope of work for the Soil Remediation Program was as follows:

- Complete one (1) excavation within the Site to remove identified OC Pesticide impacts;
- Collect confirmatory samples in accordance with confirmatory sampling requirements as outlined in O. Reg. 153/04, as amended.

A summary of the excavation and confirmatory samples is as follows:

- The final area of the excavation was approximately 120 m^2 and was excavated to depths ranging between 1.5 m and 2.0 m below grade. Based on the size of the excavation, a total of fourteen (14) screening soil samples were collected from the floors and walls of the excavation which comprised of eight (8) sidewall samples and six (6) floor samples. Following the screening of the soil samples, a total of five (5) confirmatory sidewall samples and three (3) confirmatory floor samples were submitted for analysis in accordance with the "*Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario,*" Ministry of the Environment of Ontario, December 1996.

Between July 9 and July 17, 2018, a total of 452.5 tonnes (approximately 226 m^3) of excavated impacted soils were transported off-Site by Ground Force Environmental Inc. to the Walker Environmental Landfill in Niagara Falls, Ontario or Walker Environmental Atlas Landfill in Welland, Ontario.

Based on the analytical results of SRP, the OC Pesticide impacts in soil located in the previously identified area has been removed. Refer to Figures 7A to 8D and Figures 10A/B to 11A/B for pre-remediation conditions and Figures 12 to 14 for the post-remediation conditions.

3.4.1 Soil Importation

No soil was imported from another property and placed on-Site.

A total of 485 tonnes of crushed stone, sourced from the Waynco pit in Cambridge, was imported to the Site to backfill the excavation.

3.5 Land Use

Based on a review of historical aerial photographs, chain of title information, historical maps, and other records, the Site building was constructed in the early 1970s. Prior to Site development, the Site was used for agricultural purposes, including an orchard.

This RSC will be used to support a rezoning application to the City of Burlington to convert a portion of the Site to a church (community land use). No modifications to the Site or Site building are planned.

4 Contaminants of Concern

The MOECC (2011a) Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition for Community Property Use and medium to fine-textured soil were considered applicable for determining contaminants of concern (COCs), based on the rationale presented in Table 7.

Table 7: Site Condition Standards

Descriptor	Site-Specific Condition
Section 41 Site Sensitivity	Not applicable ○ The soil at the Site has pH values between 5 and 9 for surficial soil; and, between 5 and 11 for subsurface soil. ○ The Site is not located within, or adjacent to, an area of natural significance, or part of such an area; and, the Site does not include land that is within 30 m of an area of natural significance, or part of such an area.
Section 43.1 Site Sensitivity	Not applicable ○ The Site is not considered a shallow soil property, based on the recovered soil cores, which indicated that more than two-thirds of the Site has an overburden thickness in excess of 2 m; and, ○ The Site is not located within 30 m of a surface water body; the nearest surface water body, Tuck Creek, is located approximately 375 m northeast of the RSC property boundary.
Ground Water	Non-Potable ○ The Site is supplied by the City of Burlington water distribution system.
Land Use	Industrial/Commercial/Community ○ The future use of the Site will be community land use.
Soil Texture	Medium to Fine ○ The predominant texture of soils at the Site is considered to be medium to fine, as per grain size analysis results.

The Phase Two Assessment was completed in a staged approach. Seven (7) boreholes (BH101 to BH107) were advanced to address APEC 1, and were also strategically placed to address APECs 2 and 3 and 4. Based on the analytical results of the initial borehole program, eight (8) boreholes (boreholes BH201 to BH208) were advanced to delineate identified impacts in soil. Vertical delineation was achieved during the supplemental assessment stage. Due to access restrictions, horizontal delineation was not completely achieved, and as such, confirmatory wall samples collected during the SRP were used to demonstrate horizontal delineation.

Three (3) of the boreholes were instrumented with groundwater monitoring wells for to allow for the collection of groundwater. Select soil and groundwater samples were submitted for analysis of OCs, PHCs/BTEX, VOCs, and/or metals (including As, Sb and Se) as shown in Table 8 below.

The locations of the boreholes and monitoring wells are provided on Figures 6A and 6B. Figures 7A to 7E summarize the results of the pre-remediation soil sample analysis and Figures 8A to 8D summarize the results of the pre-remediation groundwater analysis.

Table 8: Summary of Sample Submission for Laboratory Analysis

Soil				
Location and Sample ID	**Sample Depth (m below ground surface)**	**APEC Coverage / Rationale**	**Analysis**	**Exceeds Table 3 SCS?**
BH101 S2	0.8 – 1.4	Shallow soil below pavement structure (APEC 1A)	Metals, OC Pesticides	Yes, Exceeds for OC Pesticides (DDE)
BH101 S3	1.5 – 2.1	Vertical delineation of OC Pesticides impacts identified in BH101 S2 (APEC 1A)	OC Pesticides	No
BH101 S5	3.0 – 3.7	Deepest recovered overburden sample to assess off-Site (APEC 2)	VOCs, PHCs, BTEX	No
BH102 S1	0 – 0.6	Shallow soil below pavement structure (APEC 1A)	Metals, OC Pesticides	No
BH102 S3	1.5 – 2.1	Deepest recovered overburden sample to assess off-Site (APEC 3)	VOCs, PHCs, BTEX	No
BH103 S1	0 – 0.6	Shallow soil below pavement structure (APEC 1A)	Metals, OC Pesticides	No
BH104 S1	0 – 0.6	Shallow soil below pavement structure (APEC 1A)	Metals, OC Pesticides	No
BH105 S1	0 – 0.6	Shallow soil below pavement structure (APEC 1A)	Metals, OC Pesticides	No
BH106 S2	0.8 – 1.4	Shallow soil below pavement structure (APEC 1A)	Metals, OC Pesticides	No
BH107 SS1	0 – 0.6	Shallow soil below pavement structure (APEC 1A)	Metals, OC Pesticides	No
BH107 SS4	2.3 – 2.9	Deepest recovered overburden sample to assess off-Site (APEC 4)	VOCs, PHCs, BTEX	No
BH201 S2	0.8 – 1.4	Horizontal and vertical delineation of OC Pesticides impacts in BH101 S2 (APEC 1A)	OC Pesticides	No
BH201 S3	1.5 – 2.1		OC Pesticides	No
BH202 S2	0.8 – 1.4		OC Pesticides	No
BH202 S3	1.5 – 2.1		OC Pesticides	No
BH203 S2	0.8 – 1.4		OC Pesticides	No
BH203 S3	1.5 – 2.1		OC Pesticides	No
BH204 S2	0.8 – 1.5		OC Pesticides	No
BH204 S3	1.5 – 2.3		OC Pesticides	No
BH205 S2	0.8 – 1.5		OC Pesticides	No
BH205 S3	1.5 – 2.3		OC Pesticides	No
BH206 S2	0.8 – 1.5		OC Pesticides	No
BH206 S3	1.5 – 2.3		OC Pesticides	No
BH207 S2	0.8 – 1.5		OC Pesticides	No
BH207 S3	1.5 – 2.3		OC Pesticides	No
BH208 S2	0.8 – 1.5		OC Pesticides	No

BH208 S3	1.5 – 2.3		OC Pesticides	No
BH301 - SS1	0 – 0.76	Shallow soil below pavement structure (APEC 2)	Metals	No
BH301 - SS11	0 – 0.76	QA/QC sample of BH301 - SS1	Metals	No
BH301 - SS4	2.29 – 3.05	Inferred groundwater table (APEC 2)	PHCs, BTEX, VOCs	No
BH302 - SS1	0 – 0.76	Shallow soil below pavement structure (APEC 1C)	Metals	No
BH302 - SS4	2.29 – 3.05	Inferred groundwater table (APEC 1C)	PHCs, BTEX, VOCs	No
BH303 - SS1	0 – 0.76	Shallow soil below pavement structure (APEC 1B)	Metals	No
BH303 - SS4	2.29 – 3.05	Inferred groundwater table (APEC 1B)	PHCs, BTEX, VOCs	No
BH303 - SS44	2.29 – 3.05	QA/QC sample of BH303 - SS4	PHCs, BTEX, VOCs	No
Groundwater				
Location ID	**Screened Interval (m below ground surface)**	**APEC Coverage**	**Analysis**	**Exceeds Table 3 SCS?**
MW101	4.0 – 5.5	Assess on-Site PCA (APEC 1A) and off-Site PCA (APEC 2)	PHCs, BTEX, VOCs, OC Pesticides, Metals	No
MW102	2.1 – 5.2	Assess on-Site PCA (APEC 1A) and off-Site PCA (APEC 3)	PHCs, BTEX, VOCs, OC Pesticides, Metals	No
MW107	4.6 – 7.6	Assess on-Site PCA (APEC 1A) and off-Site PCA (APEC 4)	PHCs, BTEX, VOCs, OC Pesticides, Metals	No
MW301	2.9 – 5.9	Assess off-Site PCA (APEC 2)	VOCs, PHCs, Metals	No
MW302	3.1 – 6.1	Assess on-Site PCA (APEC 1C)	VOCs, PHCs	No
MW303	1.7 – 4.7	Assess on-Site PCA (APEC 1B)	VOCs, PHCs, Metals	No

Based on the reported analytical results, the following parameters were detected at concentrations above the applicable Table 3 SCS:

- Soil:
    - OC Pesticides
        - DDE (specifically *p,p'*-DDE)

As noted previously, a remediation program in accordance with O.Reg.153/04 has been undertaken and the impacts identified in soil have been removed from the Site.

4.1 Soil and Groundwater Impacts

Details of the delineation, source and distribution of all impacts are summarized in Table 9. Prior to the excavation of impacted soil, a borehole program was completed to horizontally and vertically delineate the impacts. Horizontal delineation was not fully achieved during the assessment (borehole drilling) stage. As such, confirmatory wall samples collected during the SRP were used to demonstrate horizontal delineation.

Table 9: Delineation of Soil Impacts

Parameter Group and Media	Pre-Excavation			Post Excavation		
	Horizontal Delineation	**Vertical Delineation**	**Associated Figures**	**Horizontal Delineation**	**Vertical Delineation**	**Associated Figures**
OCs in Soil	Soil Impacts in the southern portion of the RSC Property	Silty clay/clayey silt till unit to ~1.5 to 2.3 m below ground in the southern portion of the RSC Property	Figure 7A Figure 7B Figure 10B Figure 11B	Impacts Removed (5 sidewall samples and 3 soil samples collected from borehole drilling)	Impacts Removed (3 floor samples and 3 soil samples collected from borehole drilling)	Figure 12A Figure 12B Figure 13 Figure 14

Groundwater impacts were not identified during the assessment.

4.2 Contaminant Fate and Transport

4.2.1 Soil Media

The soil COCs found at the Site are comprised of the parameters listed in Section 4 and included DDE, an OC Pesticides.

Based on the former activities on and within vicinity of the Site, the impacts in soil are likely associated with the former use of the Site as an orchard.

A variety of physical, chemical and biochemical mechanisms affect the fate and transport of the potential COCs in soil, the contribution of which is dependent on the soil conditions and the chemical/physical properties of the COCs. Relevant fate and transport mechanisms are natural attenuation mechanisms, including advection mixing, mechanical dispersion/molecular diffusion, phase partitions (i.e. sorption and volatilization), and possibly abiotic or biotic chemical reactions, which effectively reduce COC concentrations.

Concentrations of the COCs in soil will be reduced by the effects of molecular diffusion and the creation of concentration gradients. As volatile chemical constituents (i.e. moderately high Henry's Law Constant and saturated vapour pressure), can volatilize into soil gas and be transported through soil gas under the influence of pressure (e.g. water table fluctuations) and partial pressure gradients in the unsaturated zone. The transport of volatile COCs can also be retarded by sorption on to organic material that may be associated with the soil mineral particles through the overburden material. Non-volatile chemical constituents, may undergo abiotic or biotic chemical reactions associated with the soil mineral particles and the micro-organisms present in the overburden material.

The primary COC (*p,p'*-DDE) can be considered a semi-volatile contaminant. As a result of the various natural attenuation mechanisms in the soil environment, the concentrations of this COC in soil is expected to reduce at the Site in the long-term. However, the identified impacts in soil have been remediated, and no longer remain on the Site in concentrations exceeding the Table 3 SCS.

There are no known preferential pathways for contaminants present in soil media.

4.2.2 Groundwater Media

No COCs were identified in groundwater on the Site.

4.2.3 Preferential Pathways

The preferential pathways for contaminants present in soil and groundwater media typically include various underground utilities, building footings and surface features.

Details on the preferential pathways for the impacts are summarized in Table 10.

Table 10: Preferential Pathways

G. anything known about migration of the contaminants present on, in or under the RSC Property at a concentration greater than the applicable site condition standard away from any area of potential environmental concern, including the identification of any preferential pathways,	There are currently underground utilities present around the Site building however, these utilities are not located within the formerly impacted area. Therefore, no known preferential pathways are present. Further, no groundwater impacts were identified and the soil impacts have been remediated.

4.2.4 Climatic Conditions

It is noted that climatic or meteorological conditions may influence the distribution and migration of COCs at the Site. Seasonal fluctuations in groundwater due to cyclical increases and decreases in precipitation can affect groundwater recharge. Groundwater levels may be elevated in the spring and fall due to snow melt and/or increases in precipitation; and, groundwater levels may be lowered in the winter and summer due to snow storage and/or increased evaporation. Such fluctuations can increase the vertical distribution of COCs in the capillary zone, as well as alter the direction of groundwater flow paths based on changes in infiltration rates. However, based on the conditions observed at the Site and the observed depth of groundwater, it is not anticipated that the climatic or meteorological changes will result in significant alterations in the distribution of contaminants.

Details on the climatic or meteorological conditions are summarized in Table 11.

Table 11: Climatic or Meteorological Conditions

H. climatic or meteorological conditions that may have influenced distribution and migration of the contaminants, such as temporal fluctuations in ground water levels, and	Some groundwater fluctuations are expected at the Site, but not a significant variation

4.2.5 Soil Vapour Migration

Given the presence of potentially semi-volatile COCs in soil (*p,p'*-DDE) prior to the remediation undertaken at the Site, soil vapour intrusion may have been a potential contaminant transport mechanism in soil. Intrusion of vapour-phase contaminants into the indoor air occurs from volatilization of chemicals from the dissolved or non-aqueous phases in the subsurface.

The relevant mechanisms for soil vapour intrusion are soil gas advection and vapour migration from diffusion through the building foundation. Soil gas advection is the dominant mechanism when the pressure gradient is greater than 1 Pascal (MOECC 2011b), as is the case in many commercial buildings. Soil gas advection can occur through any unsealed entry points, cracks or openings present in the building foundation.

Soil vapour flow is greatest within 1 m to 2 m below the building foundation (MOECC 2011b); as such, the soil permeability of backfill beneath the building foundation will affect the soil vapour flow rate. Furthermore, pressure gradients (i.e. depressurization of the indoor airspace of the building) created by temperature differences between indoor and outdoor air may affect soil gas flow rate by creating a "stack effect" where, as warm air rises, it is replaced by air infiltrating through doors and windows, and soil gas migrating through the foundation.

As such, in the event that the vapour intrusion pathway is present there may be potential for unacceptable health risks to building occupants via inhalation of indoor air. However, the identified soil impacts have been removed from the Site; therefore, the vapour intrusion pathway is considered incomplete.

Details on soil vapour migration are summarized in Table 12.

Table 12: Soil Vapour Migration

1. if applicable, information concerning soil vapour intrusion of the contaminants into buildings including,	There is a potential for soil vapours to be present within the subsurface (sourced from soil); to migrate along preferential pathways such as building footings and underground utility services; and, eventually to migrate into an overlying building or the atmosphere. However, the identified soil impacts have been removed from the Site; therefore, the vapour intrusion pathway is considered incomplete.
2. relevant construction features of a building, such as a basement or crawl space,	There is no basement at the Site and no modifications to the Site building are planned
3. building heating, ventilating and air conditioning design and operation, and	Unknown
4. subsurface utilities,	Underground utilities could affect soil vapour migration. However, the identified soil impacts have been removed from the Site; therefore, the vapour intrusion pathway is considered incomplete.

5 Exposure Pathways

5.1 Human Health Receptors and Exposure Pathways

The Site is currently occupied by a multi-tenant commercial/light industrial building with the intention to rezone the Site to allow community land use (church). The potential human receptors on the Site consist of residents (adult, teen, child, toddler and infant), short-term workers, construction workers, and property visitors (adult, teen, child, toddler and infant).

The COCs present at the Site, prior to remediation, were observed in soil media. There is a potential for select receptors on the Site to come into direct contact with contaminated soil, but no COCs were identified in groundwater. Furthermore, given that select COCs are considered to be semi-volatile, there is a potential for select receptors on the Site to come into indirect contact with COCs, through the volatilization of parameters into soil gas followed by the migration of vapours to outdoor air or intrusion into an overlying building.

The potential exposure pathways for the human receptors at the RSC Property include:

- Resident and property visitor
    - Inadvertent soil ingestion;
    - Soil dermal contact;
    - Soil particulate inhalation;
    - Indoor air inhalation;
    - Vapour skin contact; and,
    - Outdoor air inhalation.
- Construction worker
    - Inadvertent soil ingestion;
    - Soil dermal contact;
    - Soil particulate inhalation;
    - Incidental groundwater ingestion;
    - Incidental groundwater dermal contact;
    - Outdoor air inhalation (trench scenario); and,

    - Vapour skin contact.
- Short-term (outdoor) worker:
    - Soil particulate inhalation;
    - Soil dermal contact;
    - Inadvertent soil ingestion;
    - Outdoor air inhalation; and,
    - Vapour skin contact.

Refer to Figure 15 for the human health conceptual exposure model. However, it is noted that all identified impacts have been removed from the Site, and the potential exposure pathways are considered incomplete.

5.2 Ecological Receptors and Exposure Pathways

The Site is currently occupied by a multi-tenant commercial/light industrial building with the intention to rezone the Site to allow community land use (church). The majority of the Site is paved with a hard ground cover (asphalt). However, there are potential ecological receptors that may be present on the Site (or in close proximity) including: terrestrial vegetation such as trees, grasses and shrubs; soil invertebrates such as earthworms, millipedes and beetles; terrestrial birds such as pigeons, sparrows and robins; and, terrestrial mammals such as moles, voles and mice.

The COCs present at the Site prior to remediation were observed in soil media. There is a potential for select receptors to come into direct contact with contaminated soil on the Site, but no COCs were identified in groundwater. Furthermore, given that select COCs are considered to be semi-volatile, there is a potential for select receptors to come into indirect contact with COCs, through the volatilization of parameters into soil gas followed by the migration of vapours to outdoor air on the Site.

Given that the shallowest measured depth to groundwater at the Site is approximately 2.5 m bgs, the exposure pathways relevant to groundwater are considered incomplete.

The MOECP evaluates exposure to aquatic receptors at properties within 5 km of a surface water body. Tuck Creek is located approximately 375 m northeast of the Site, Roseland is situated approximately 850 m south of the Site, and Lake Ontario is located approximately 3.8 km southeast of the Site. Given that the nearest surface water bodies to the Site are located within 5 km of the Site, aquatic receptors, such as aquatic vegetation, benthic and pelagic invertebrates, birds, mammals and fish are also considered. Thus, there is a potential for select aquatic receptors off the RSC Property to come into indirect contact with contaminated groundwater, through the leaching of contaminants into groundwater media, and eventually discharging to the downgradient water body.

The potential ecological receptors and exposure pathways include the following:

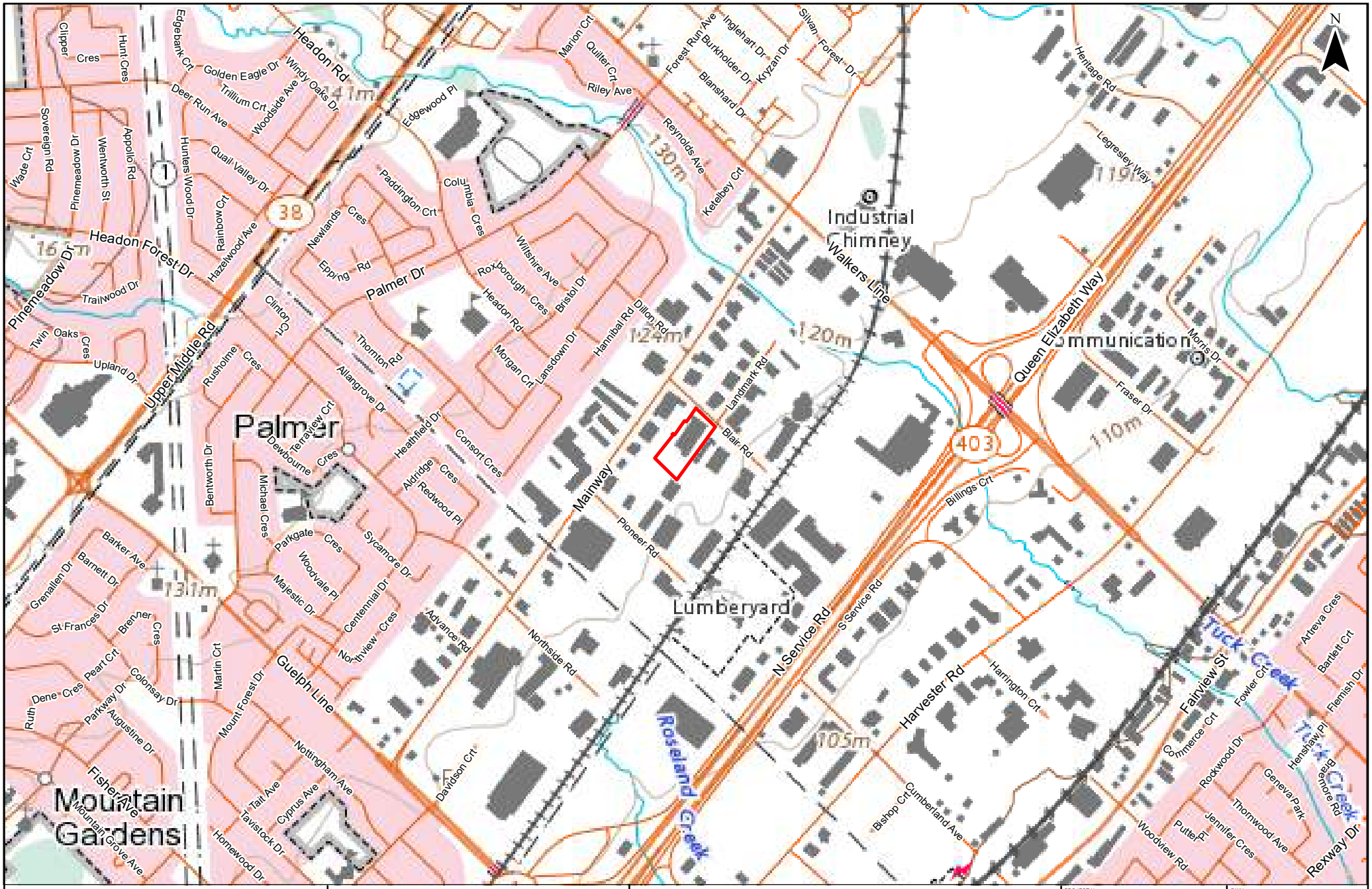
- Terrestrial Vegetation
    - root uptake of soil; and,
    - stem and foliar uptake of vapour.
- Soil Organisms
    - dermal contact (with soil);
    - ingestion of soil;
    - soil particulate inhalation; and,
    - inhalation of vapour.
- Terrestrial Mammals and Birds
    - soil dermal contact;
    - ingestion of soil;

  - soil particulate inhalation;
  - inhalation of vapour; and,
  - tissue residue ingestion.
- Aquatic Receptors in Downgradient Surface Water Bodies
  - surface water dermal contact;
  - surface water ingestion;
  - ingestion of plant and animal tissue; and,
  - gill uptake.

Refer to Figure 16 for the ecological conceptual exposure model. However, it is noted that all identified impacts have been removed from the Site, and the potential exposure pathways are considered incomplete.

P2CSM Figures

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Figure 13: Cross Section A-A', Post-Remediation OCs in Soil
Figure 14: Cross Section B-B', Post-Remediation OCs in Soil
Figure 15: Human Health On-Site Conceptual Exposure Model
Figure 16: Ecological On-Site Conceptual Exposure Model



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RSC Property Boundary

0 150 300 450 600 750 m

TITLE AND LOCATION:

SITE LOCATION PLAN
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.:	DWN:
HAM-00801245-G0	AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 1



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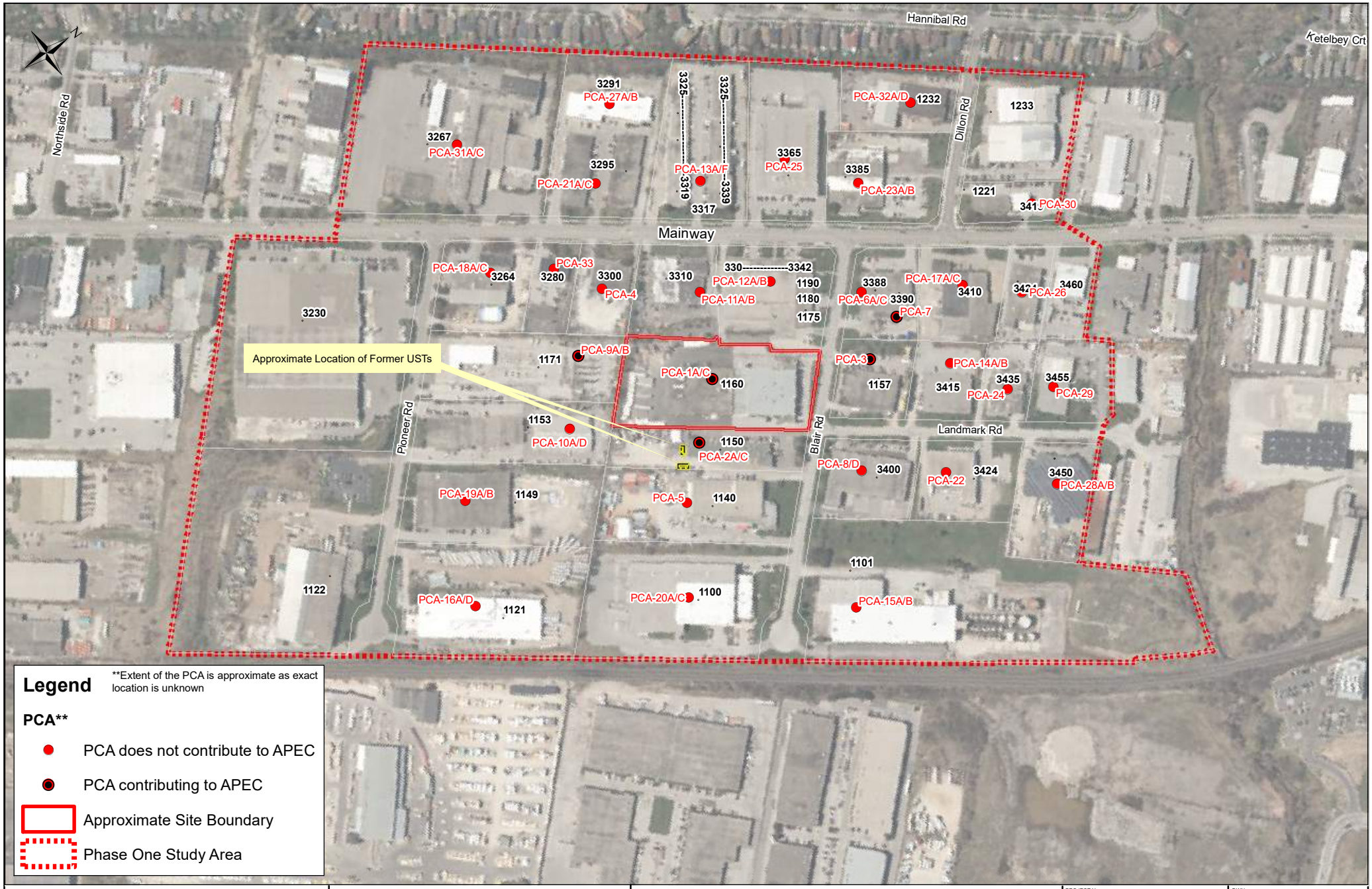
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TITLE AND LOCATION:

PHASE ONE STUDY AREA AND SURROUNDING LAND USE MAP
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
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Legend

PCA**

- PCA does not contribute to APEC
- PCA contributing to APEC
- Approximate Site Boundary
- Phase One Study Area

**Extent of the PCA is approximate as exact location is unknown

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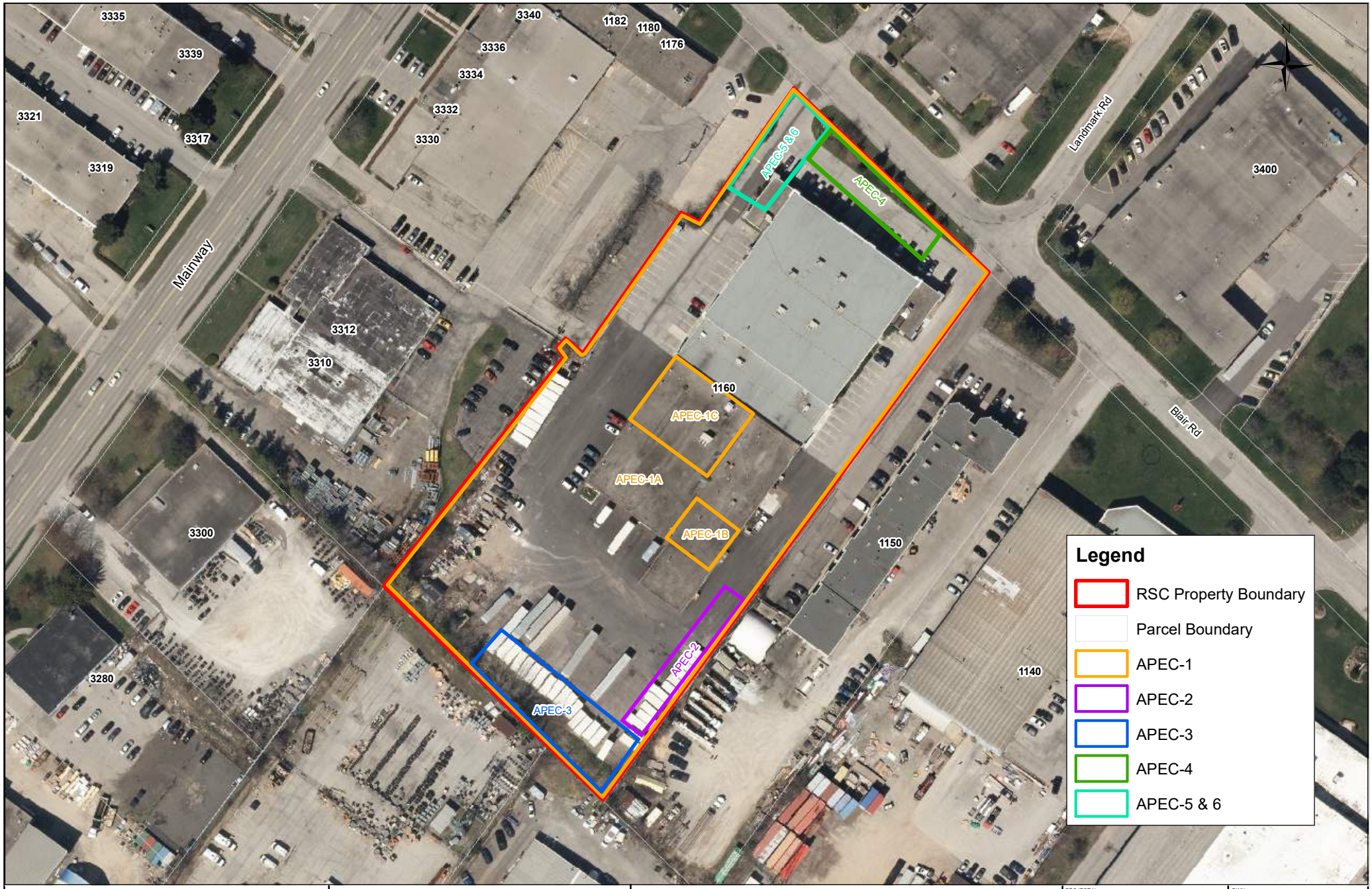
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POTENTIALLY CONTAMINATING ACTIVITIES
Phase Two Environmental Site Assessment
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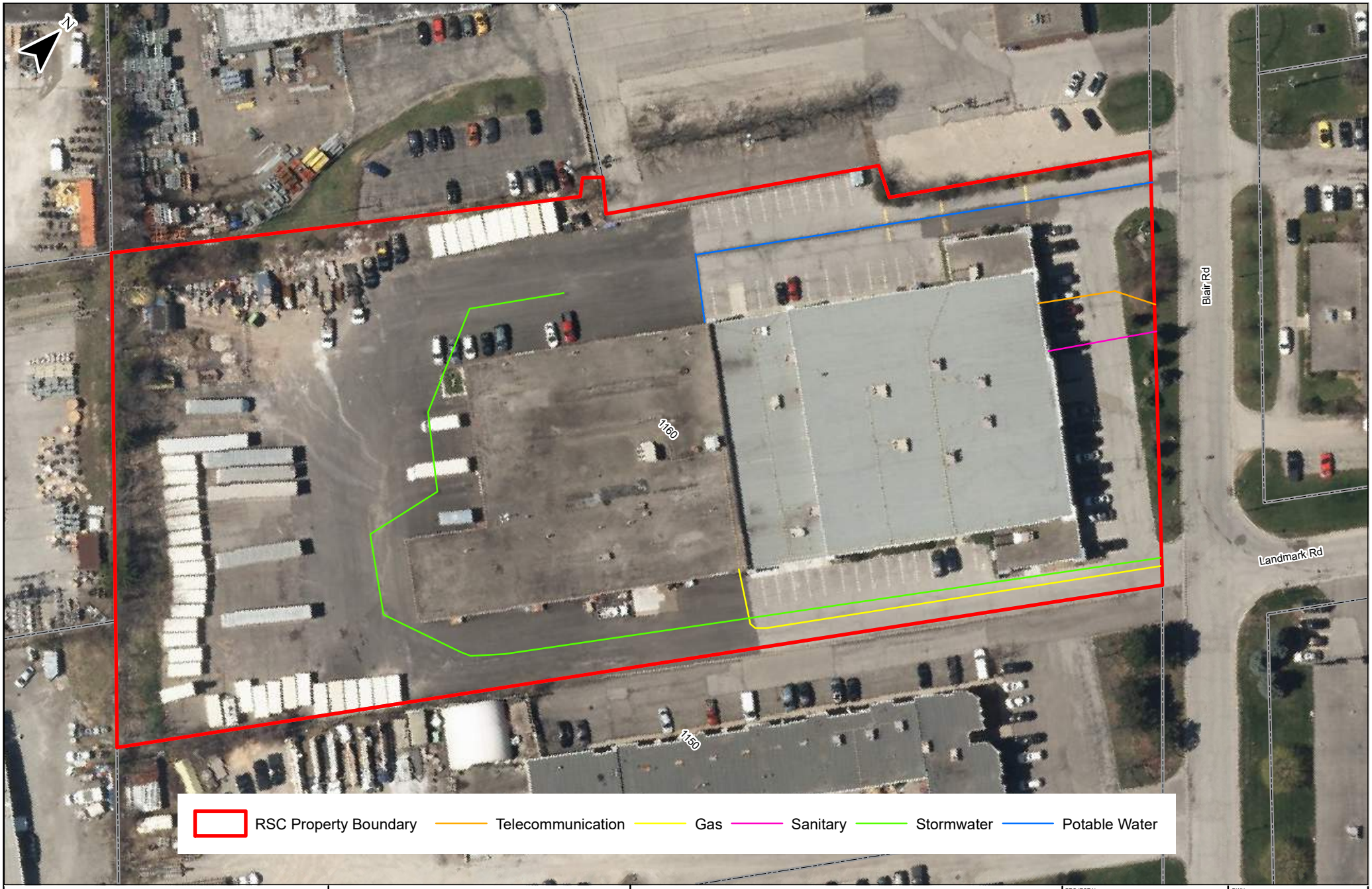
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TITLE AND LOCATION:

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN
Phase Two Environmental Site Assessment
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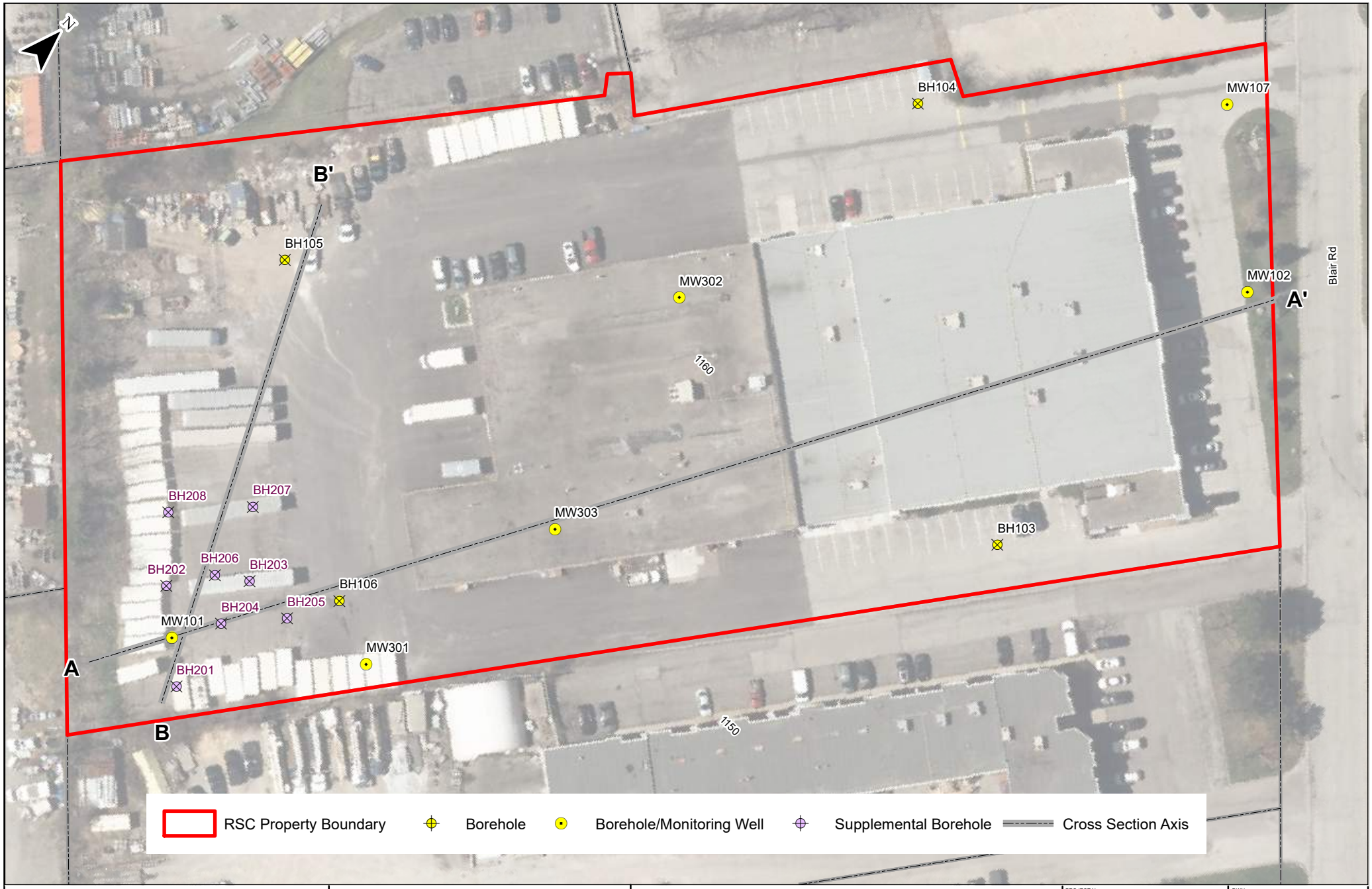
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TITLE AND LOCATION:

UNDERGROUND UTILITIES PLAN
Phase Two Environmental Site Assessment
1160 Blair Road
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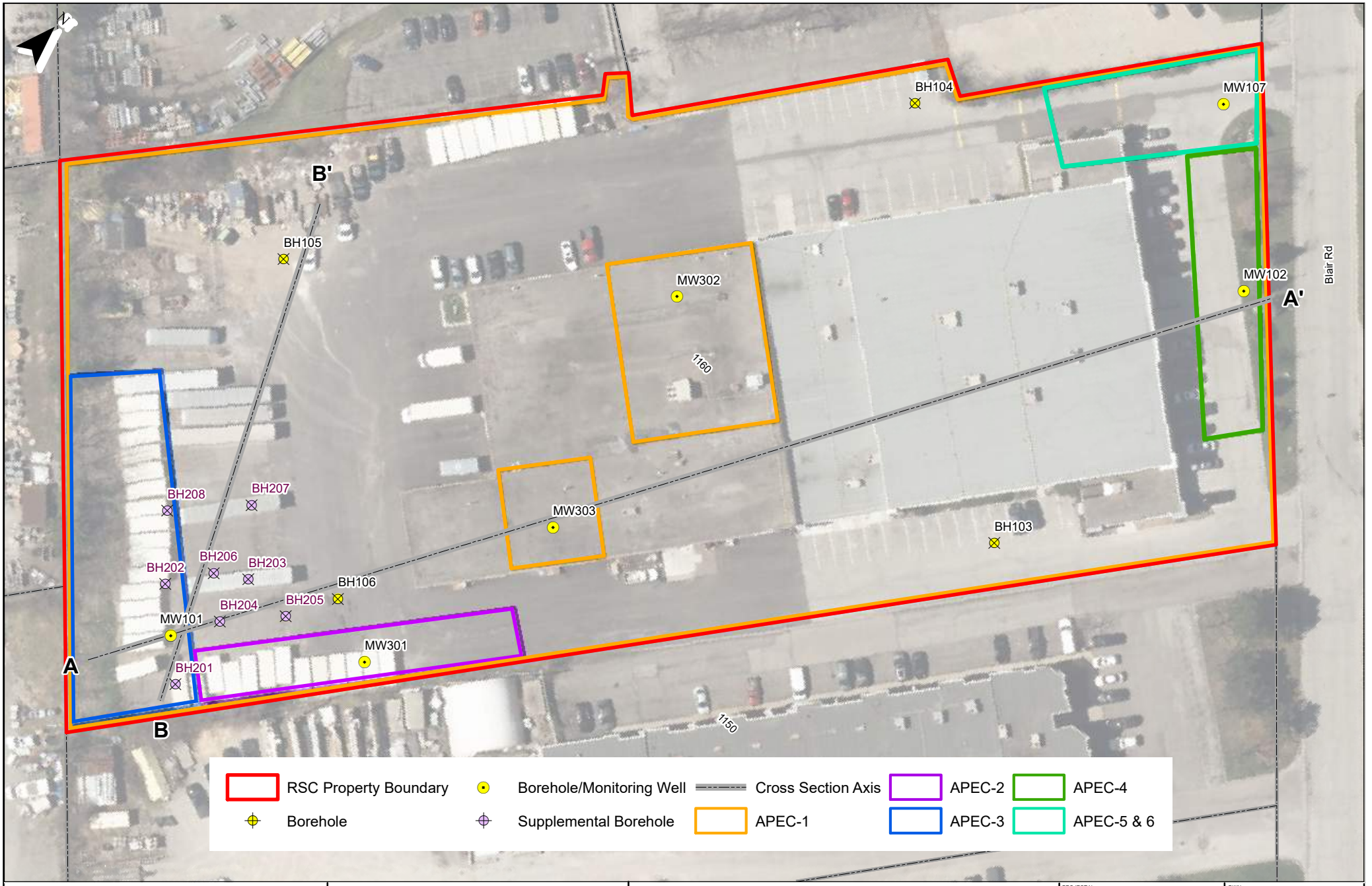
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TITLE AND LOCATION:

BOREHOLE LOCATION PLAN
Phase Two Environmental Site Assessment
1160 Blair Road
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PROJECT No.: HAM-00801245-G0	DWN: AC
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DATE: FEBRUARY 2019	FIG. No.: 6A



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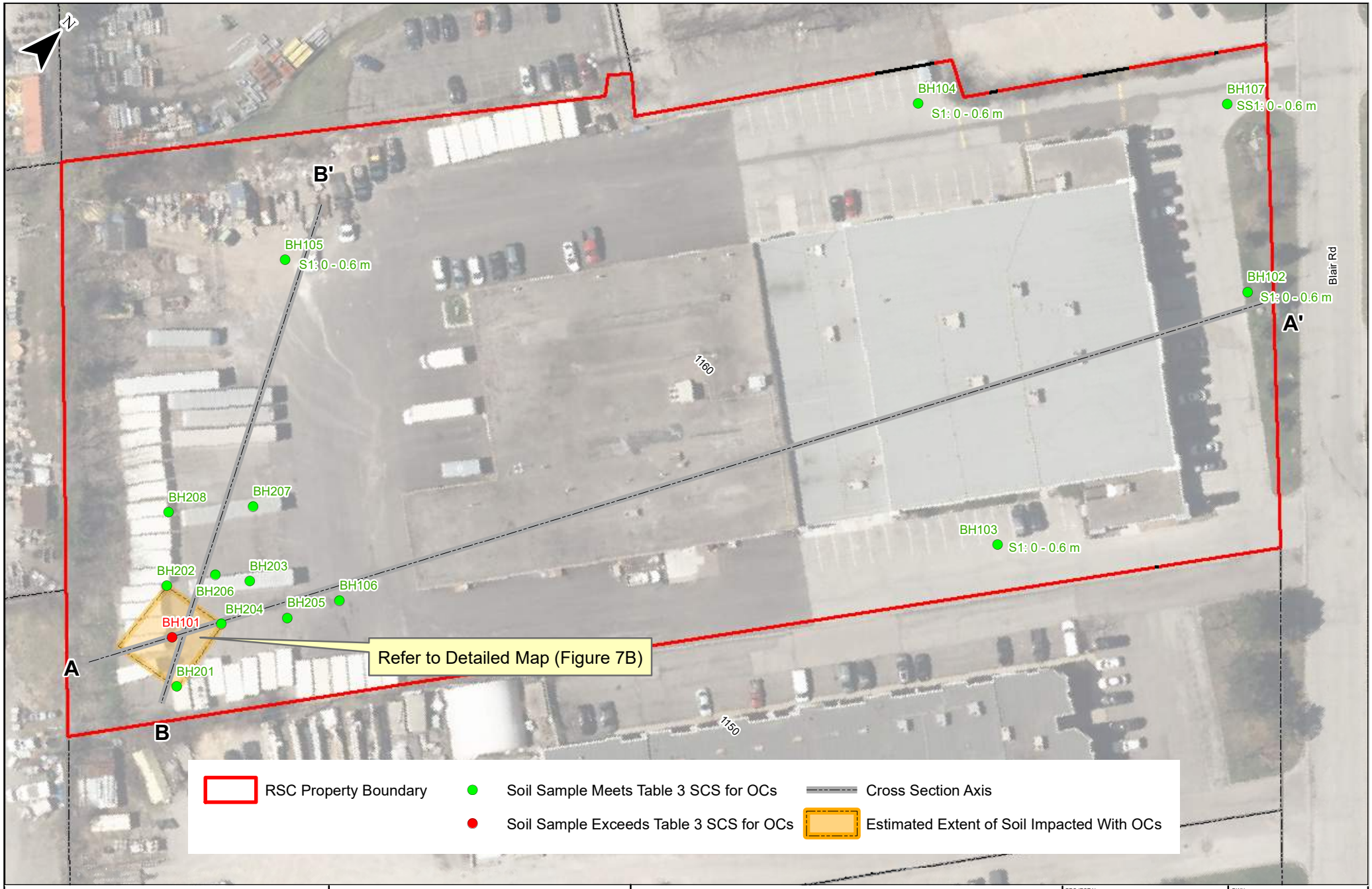
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TITLE AND LOCATION:

BOREHOLE LOCATION PLAN WITH APECs
Phase Two Environmental Site Assessment
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PROJECT No.: HAM-00801245-G0	DWN: AC
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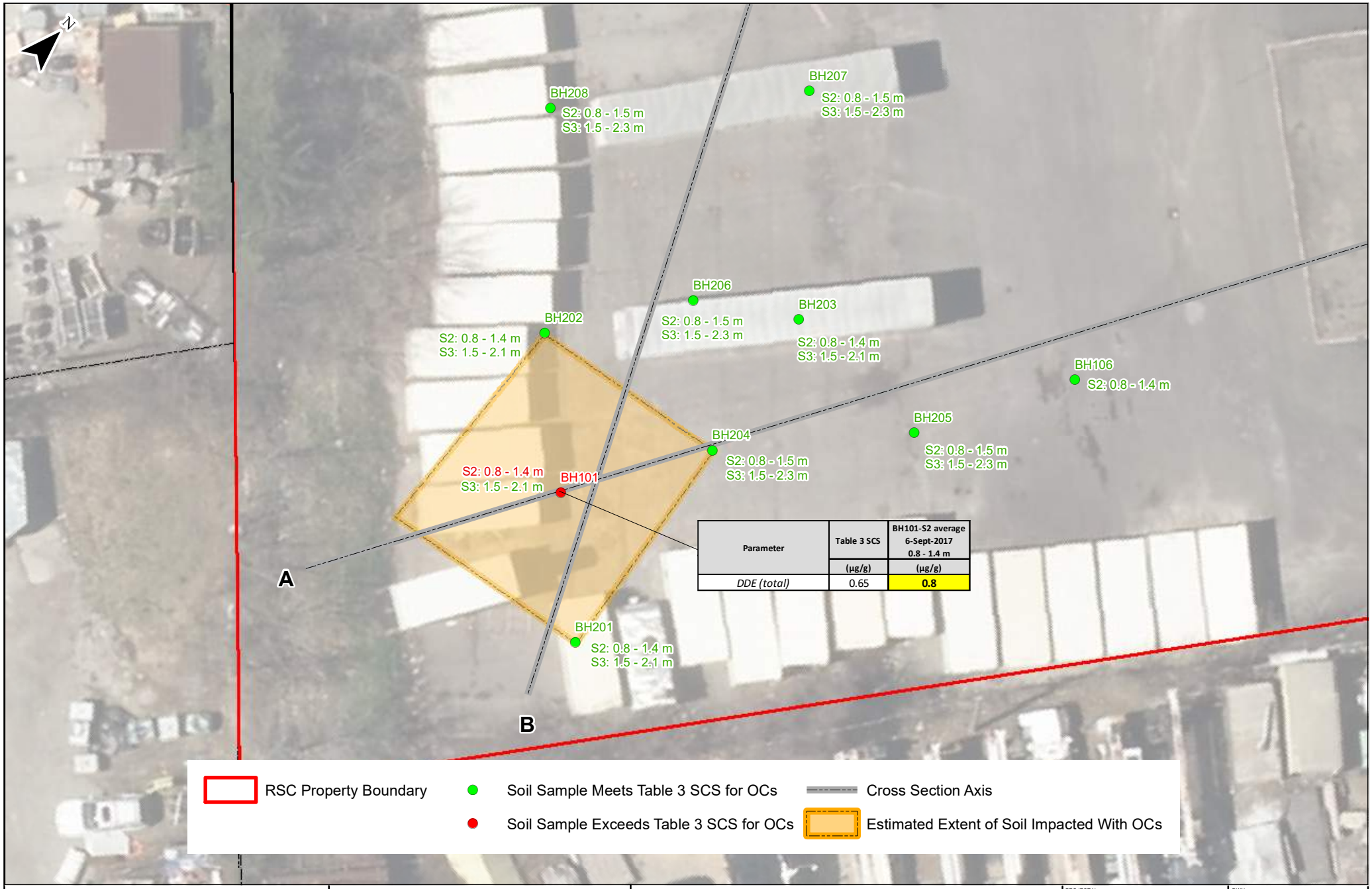
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0 5 10 15 20 25 m

TITLE AND LOCATION:

PRE-REMEDIATION SOIL SAMPLE ANALYSIS
ORGANOCHLORINE PESTICIDES (OCs)
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 7A



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0 2 4 6 8 10 m

TITLE AND LOCATION:

PRE-REMEDIATION SOIL SAMPLE ANALYSIS ORGANOCHLORINE PESTICIDES (OCs) DETAILED MAP

Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 7B



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0 5 10 15 20 25 m

TITLE AND LOCATION:

PRE-REMEDIATION SOIL SAMPLE ANALYSIS METALS
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 7C



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0 5 10 15 20 25 m

TITLE AND LOCATION:

PRE-REMEDIATION SOIL SAMPLE ANALYSIS
VOLATILE ORGANIC COMPOUNDS (VOCs)
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 7D



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0 5 10 15 20 25 m

TITLE AND LOCATION:
PRE-REMEDIATION SOIL SAMPLE ANALYSIS
PETROLEUM HYDROCARBONS (PHCs) and
BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES (BTEX)
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 7E



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0 5 10 15 20 25 m

TITLE AND LOCATION:

PRE-REMEDIATION GROUNDWATER ANALYSIS
ORGANOCHLORINE PESTICIDES (OCs)
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 8A



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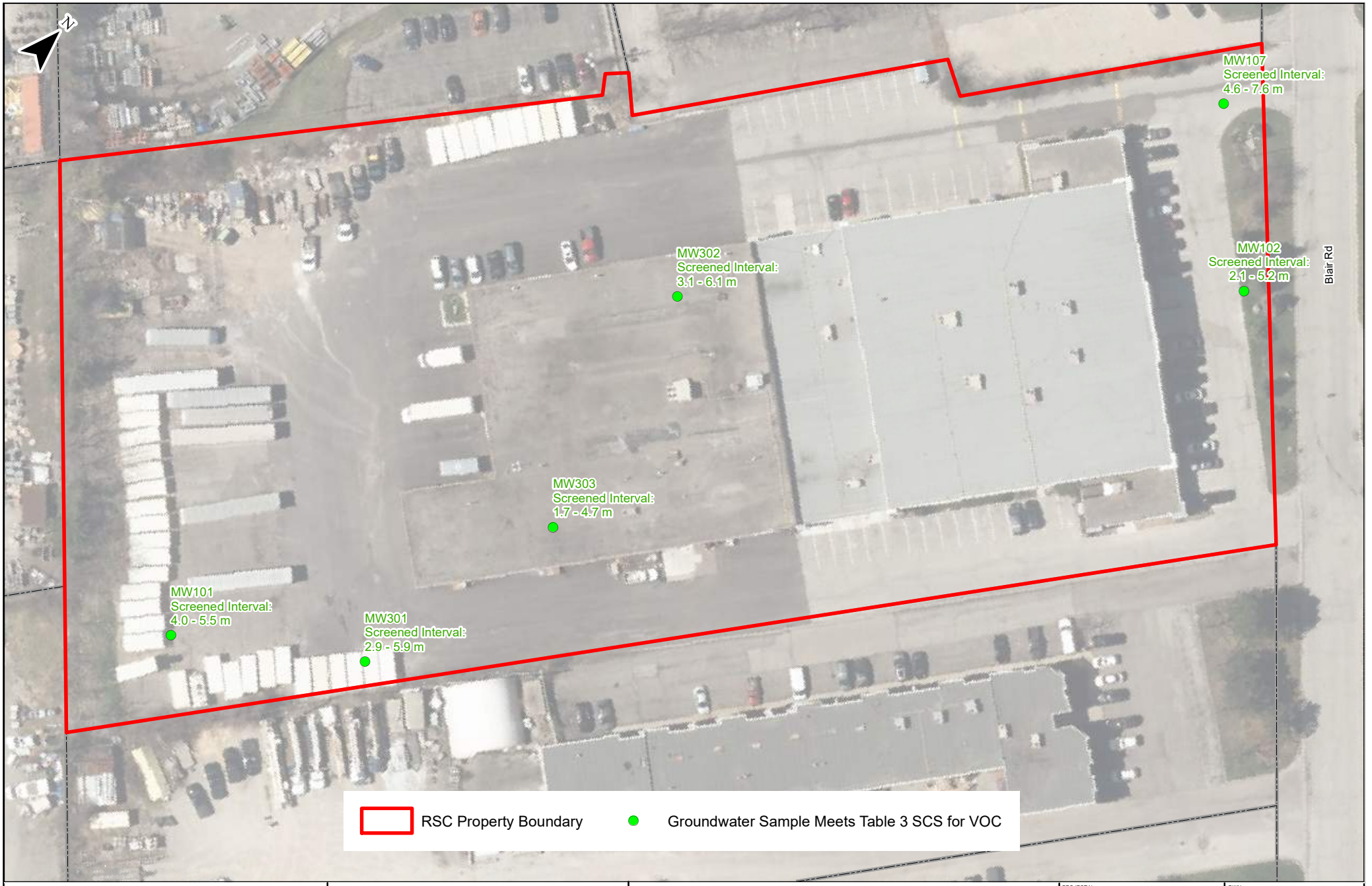
•BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
•INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY•

0 5 10 15 20 25 m

TITLE AND LOCATION:

PRE-REMEDIATION GROUNDWATER ANALYSIS
METALS
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 8B



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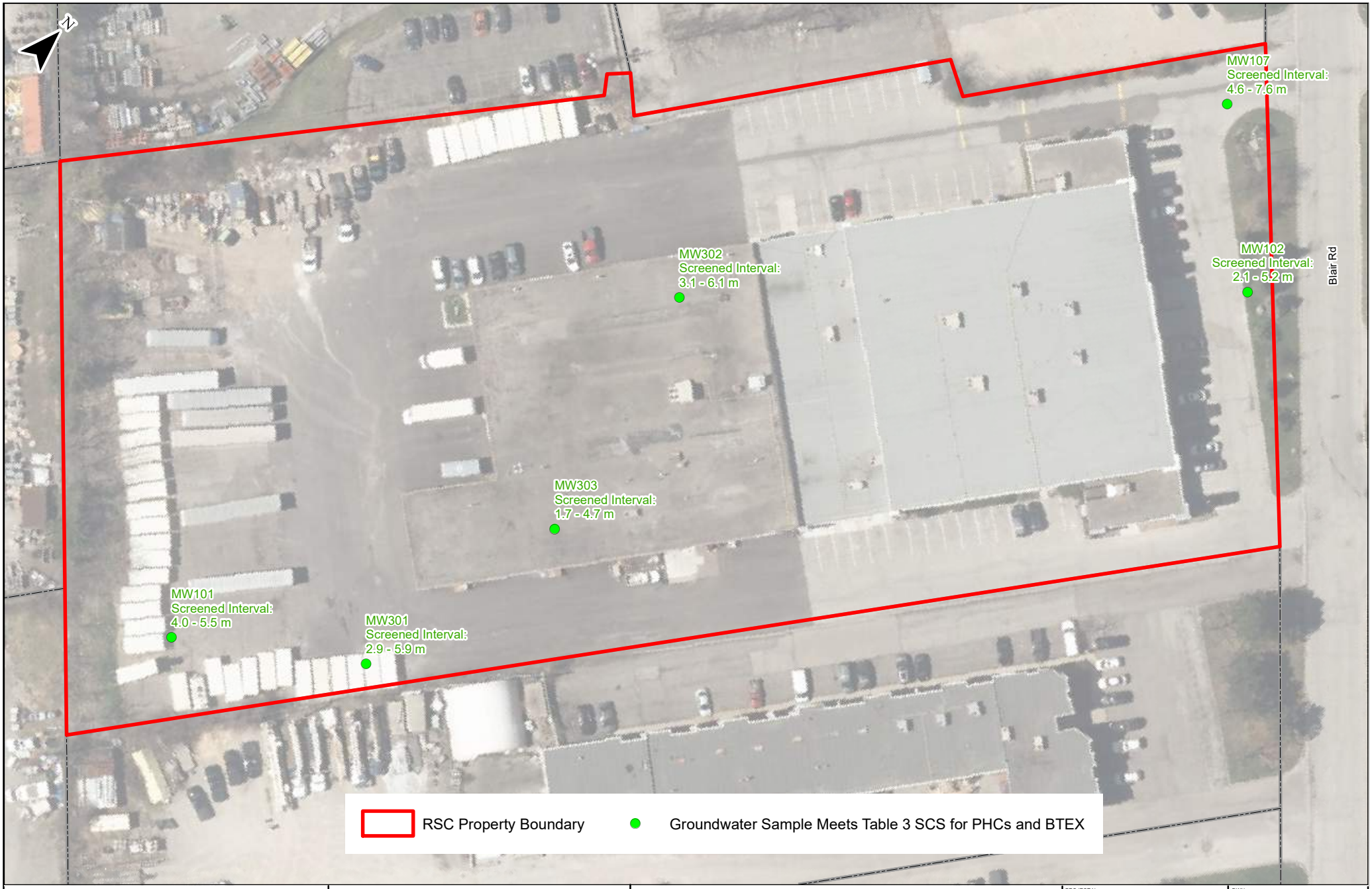
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•INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

0 5 10 15 20 25 m

TITLE AND LOCATION:

PRE-REMEDIATION GROUNDWATER ANALYSIS
VOLATILE ORGANIC COMPOUNDS (VOCs)
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 8C



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0 5 10 15 20 25 m

TITLE AND LOCATION:
PRE-REMEDIATION GROUNDWATER ANALYSIS
PETROLEUM HYDROCARBONS (PHCs) and
BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES (BTEX)
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 8D



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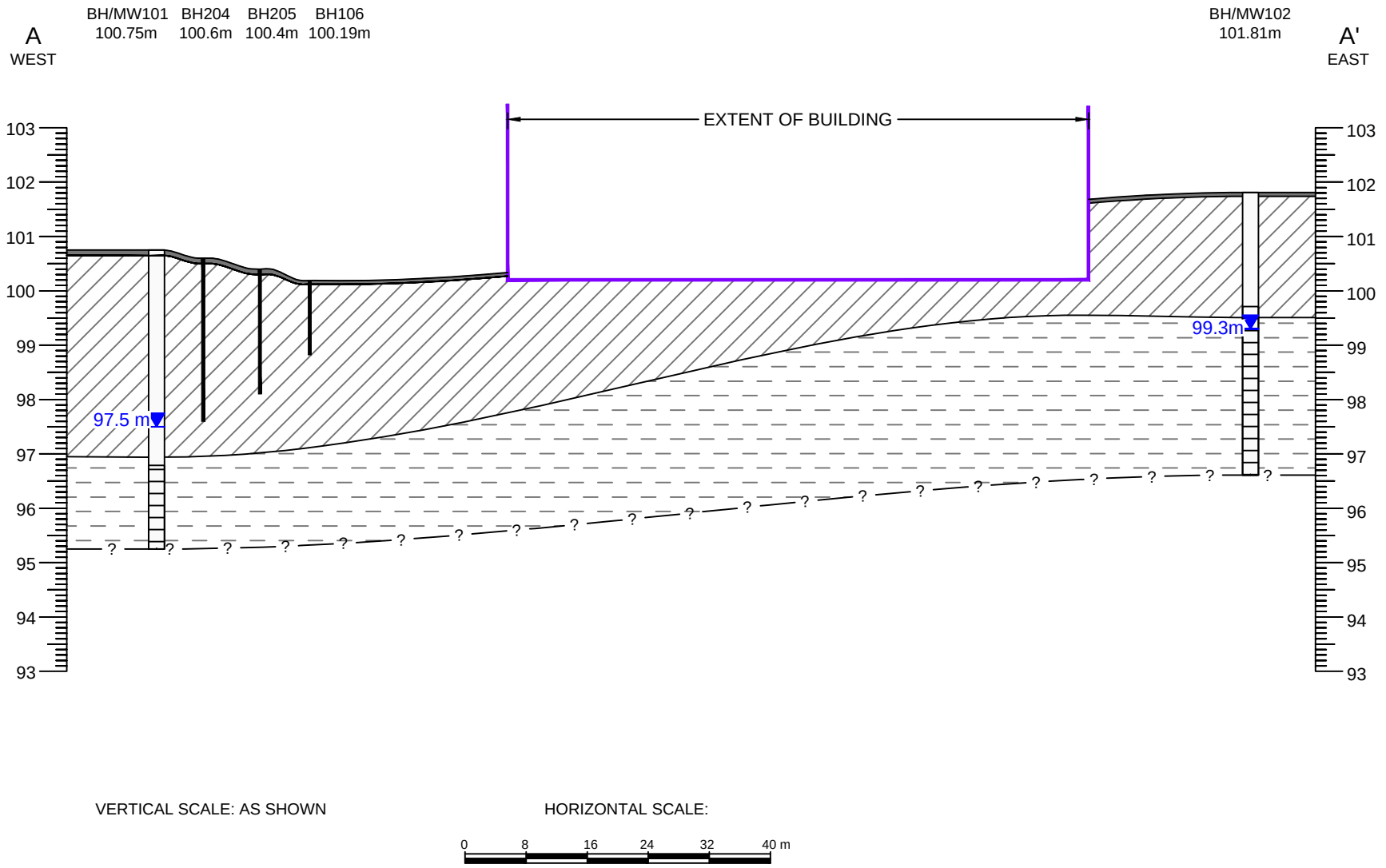
Note: MW101 was unable to be located due to snow cover during monitoring activities.

0 5 10 15 20 25 m

TITLE AND LOCATION:

INTERPRETED GROUNDWATER CONTOUR PLAN
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: DM
DATE: FEBRUARY 2019	FIG. No.: 9



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LEGEND:

- ASPHALT
- CLAYEY SILT / SILTY CLAY
- SHALE / TILL COMPLEX
- GROUNDWATER LEVEL (JULY 4, 2018)
- MONITORING WELL SCREEN

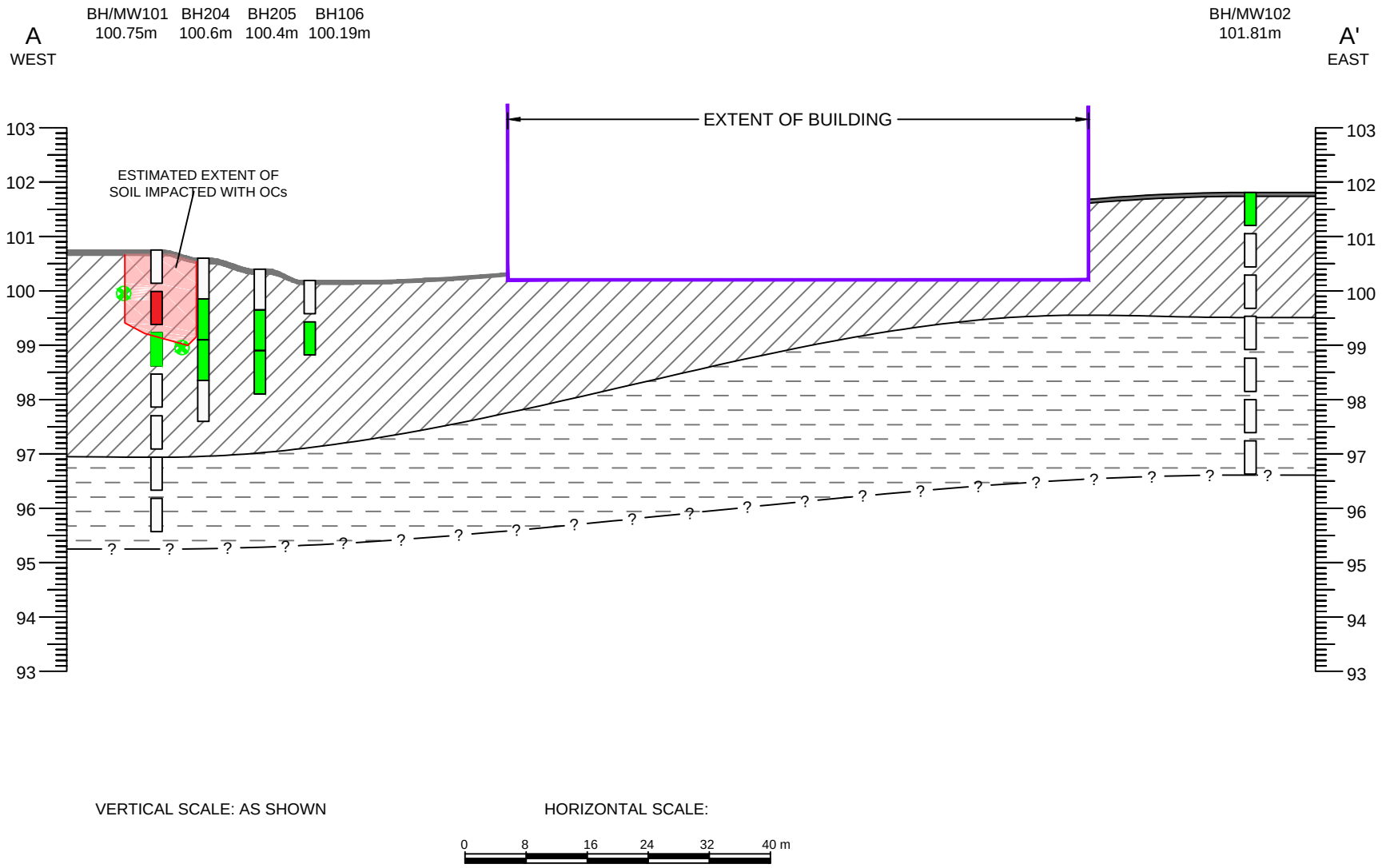
TITLE AND LOCATION:

CROSS SECTION A-A' PRE-REMEDIATION

PHASE TWO ESA
1160 BLAIR ROAD,
BURLINGTON, ONTARIO

PROJECT NO.:	DWN.:
HAM-00801245-G0	AS
SCALE: AS NOTED	CK: EE
DATE: JULY 2018	FIG. NO.: 10A

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LEGEND:

- ASPHALT
- CLAYEY SILT / SILTY CLAY
- SHALE / TILL COMPLEX
- CONFIRMATORY SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE EXCEEDS TABLE 3 SCS FOR OCs
- SOIL SAMPLE NOT ANALYZED FOR OCs

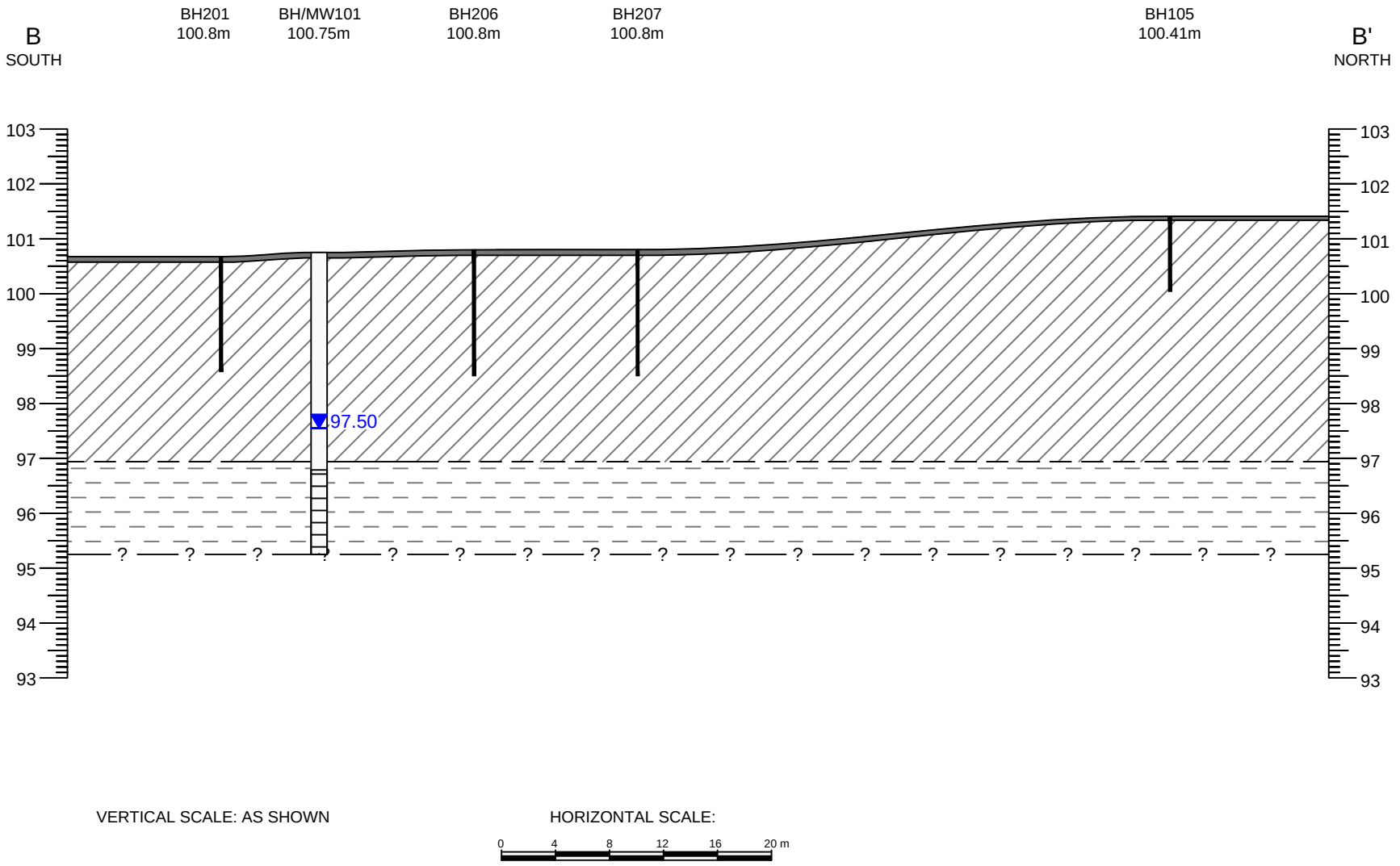
TITLE AND LOCATION:

CROSS SECTION A-A' PRE-REMEDIATION OCs IN SOIL

PHASE TWO ESA
1160 BLAIR ROAD,
BURLINGTON, ONTARIO

PROJECT NO.:	DWN.:
HAM-00801245-G0	AS
SCALE:	CK:
AS NOTED	EE
DATE:	FIG. NO.:
JULY 2018	10B

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LEGEND:

- ASPHALT
- CLAYEY SILT / SILTY CLAY
- SHALE / TILL COMPLEX
- GROUNDWATER LEVEL (JULY 4, 2018)
- MONITORING WELL SCREEN

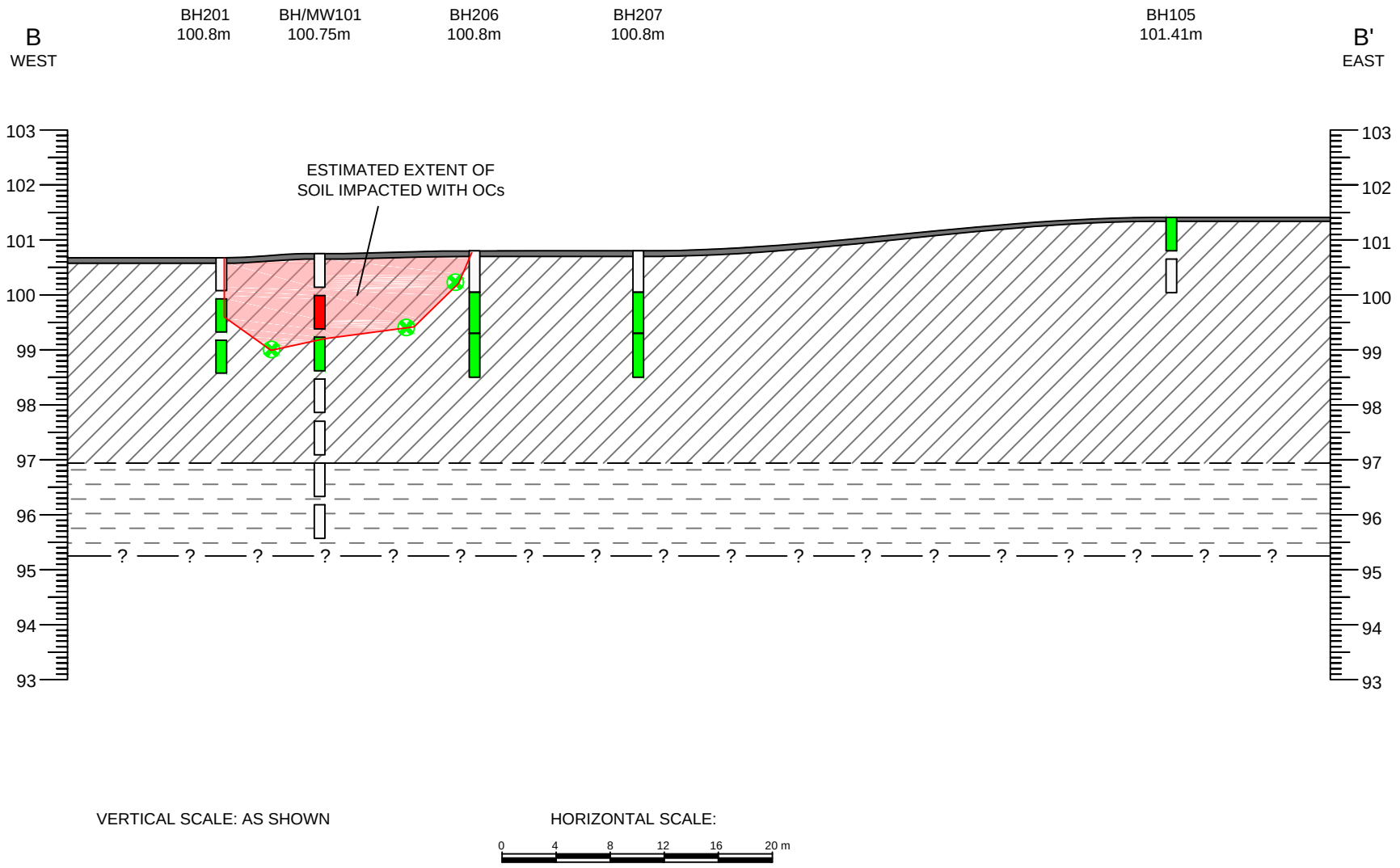
TITLE AND LOCATION:

CROSS SECTION B-B'
PRE-REMEDIATION

PHASE TWO ESA
1160 BLAIR ROAD,
BURLINGTON, ONTARIO

PROJECT NO.:	DWN.:
HAM-00801245-G0	AS
SCALE: AS NOTED	CK: EE
DATE: JULY 2018	FIG. NO.: 11A

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LEGEND:

- ASPHALT
- CLAYEY SILT / SILTY CLAY
- SHALE / TILL COMPLEX
- CONFIRMATORY SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE EXCEEDS TABLE 3 SCS FOR OCs
- SOIL SAMPLE NOT ANALYZED FOR OCs

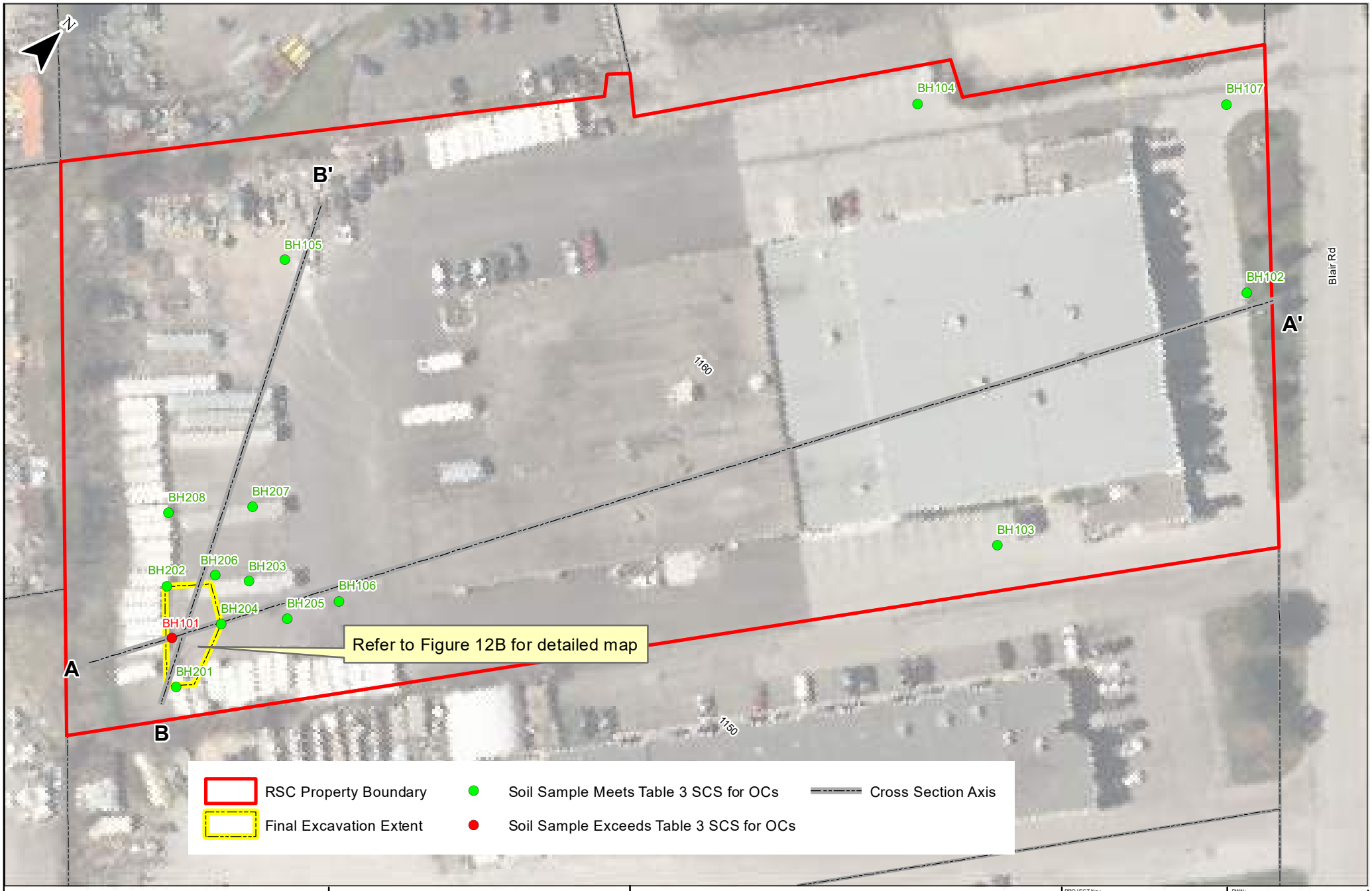
TITLE AND LOCATION:

CROSS SECTION B-B' PRE-REMEDIATION OCs IN SOIL

PHASE TWO ESA
1160 BLAIR ROAD,
BURLINGTON, ONTARIO

PROJECT NO.:	DWN.:
HAM-00801245-G0	AS
SCALE: AS NOTED	CK: EE
DATE: JULY 2018	FIG. NO.: 11B

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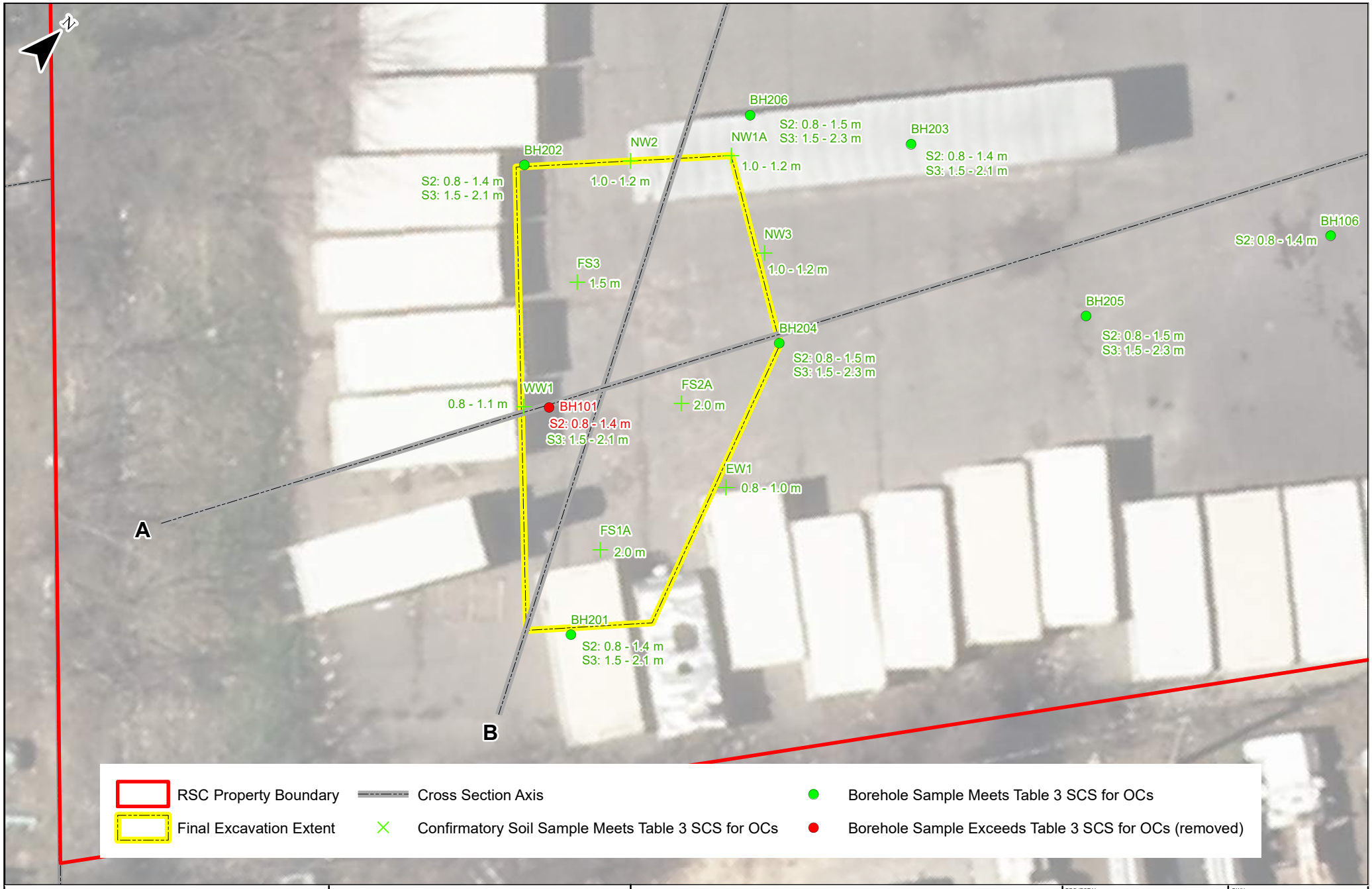
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• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

0 5 10 15 20 25 m

TITLE AND LOCATION:

POST-REMEDIATION SOIL SAMPLE ANALYSIS
ORGANOCHLORINE PESTICIDES (OCs)
Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
SCALE: AS NOTED	CHKD: EE
DATE: JULY 2018	FIG. No.: 12A



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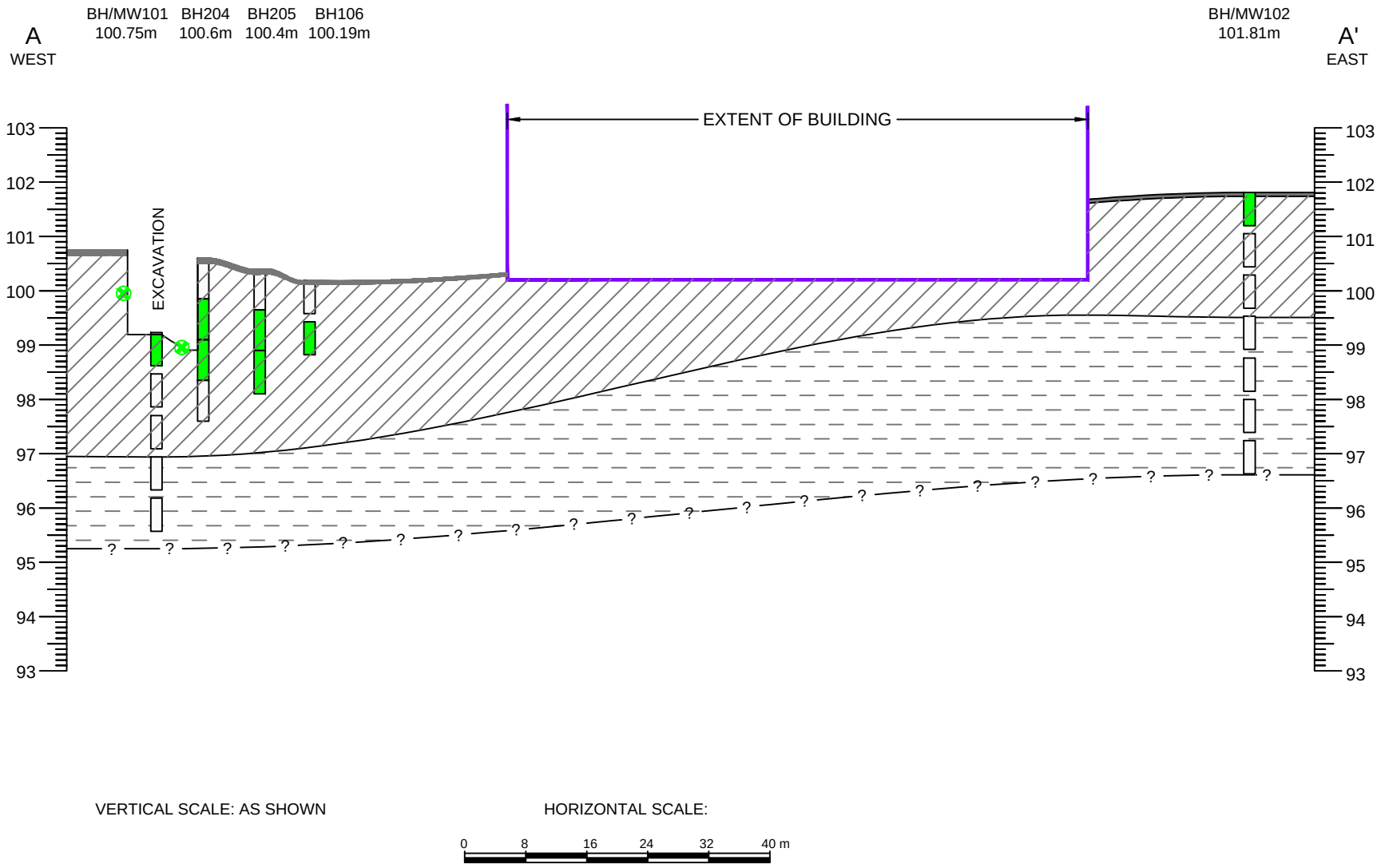
0 1 2 3 4 5 m

TITLE AND LOCATION:

POST-REMEDIATION SOIL SAMPLE ANALYSIS ORGANOCHLORINE PESTICIDES (OCs) DETAILED MAP

Phase Two Environmental Site Assessment
1160 Blair Road
Burlington, Ontario

PROJECT No.: HAM-00801245-G0	DWN: AC
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VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 8 16 24 32 40 m

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LEGEND:

- ASPHALT
- CLAYEY SILT / SILTY CLAY
- SHALE / TILL COMPLEX
- CONFIRMATORY SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE EXCEEDS TABLE 3 SCS FOR OCs
- SOIL SAMPLE NOT ANALYZED FOR OCs

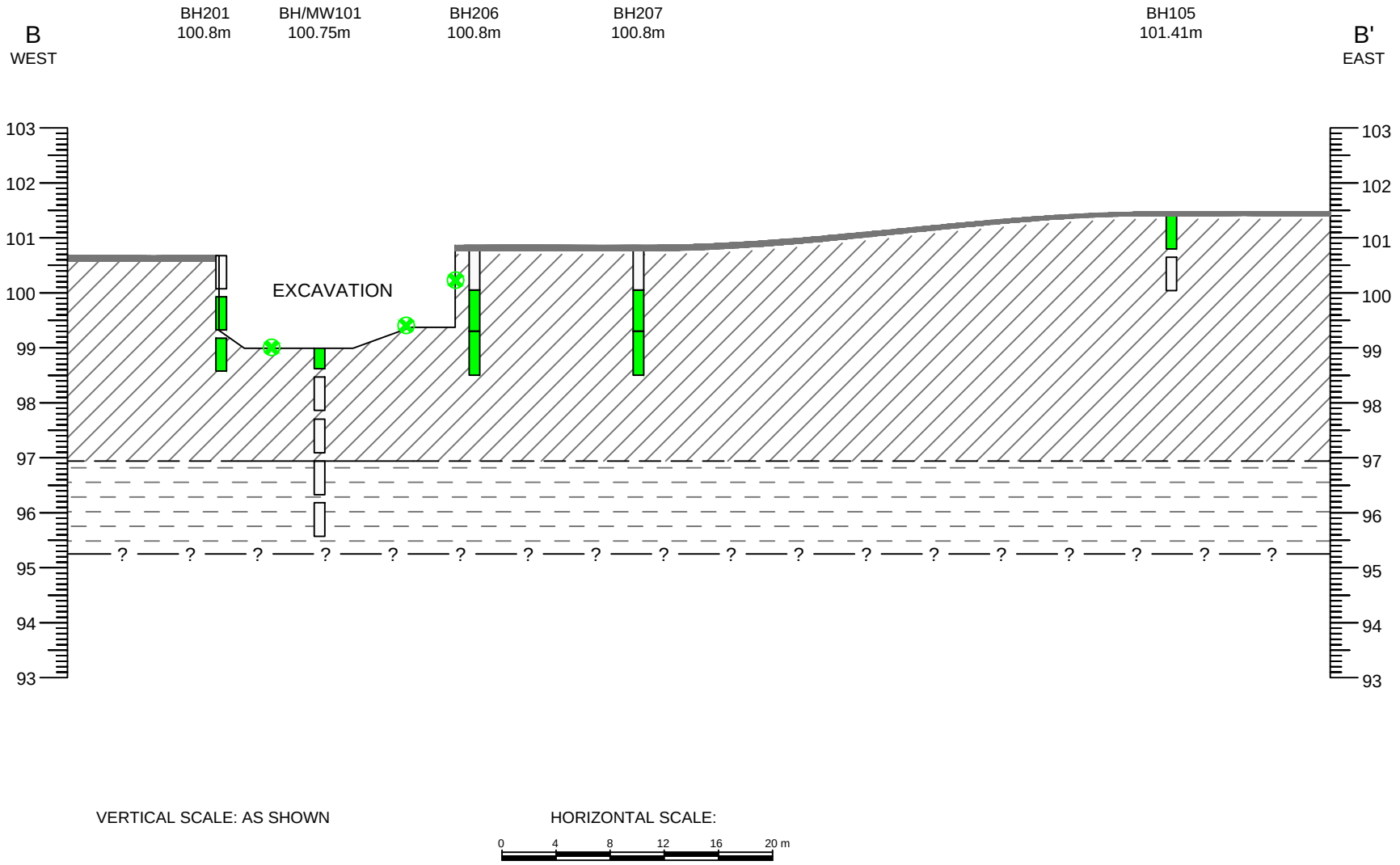
TITLE AND LOCATION:

CROSS SECTION A-A' POST-REMEDIATION OCs IN SOIL

PHASE TWO ESA
1160 BLAIR ROAD,
BURLINGTON, ONTARIO

PROJECT NO.:	DWN.:
HAM-00801245-G0	AS
SCALE: AS NOTED	CK: EE
DATE: JULY 2018	FIG. NO.: 13

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LEGEND:

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- SHALE / TILL COMPLEX
- CONFIRMATORY SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE MEETS TABLE 3 SCS FOR OCs
- SOIL SAMPLE EXCEEDS TABLE 3 SCS FOR OCs
- SOIL SAMPLE NOT ANALYZED FOR OCs

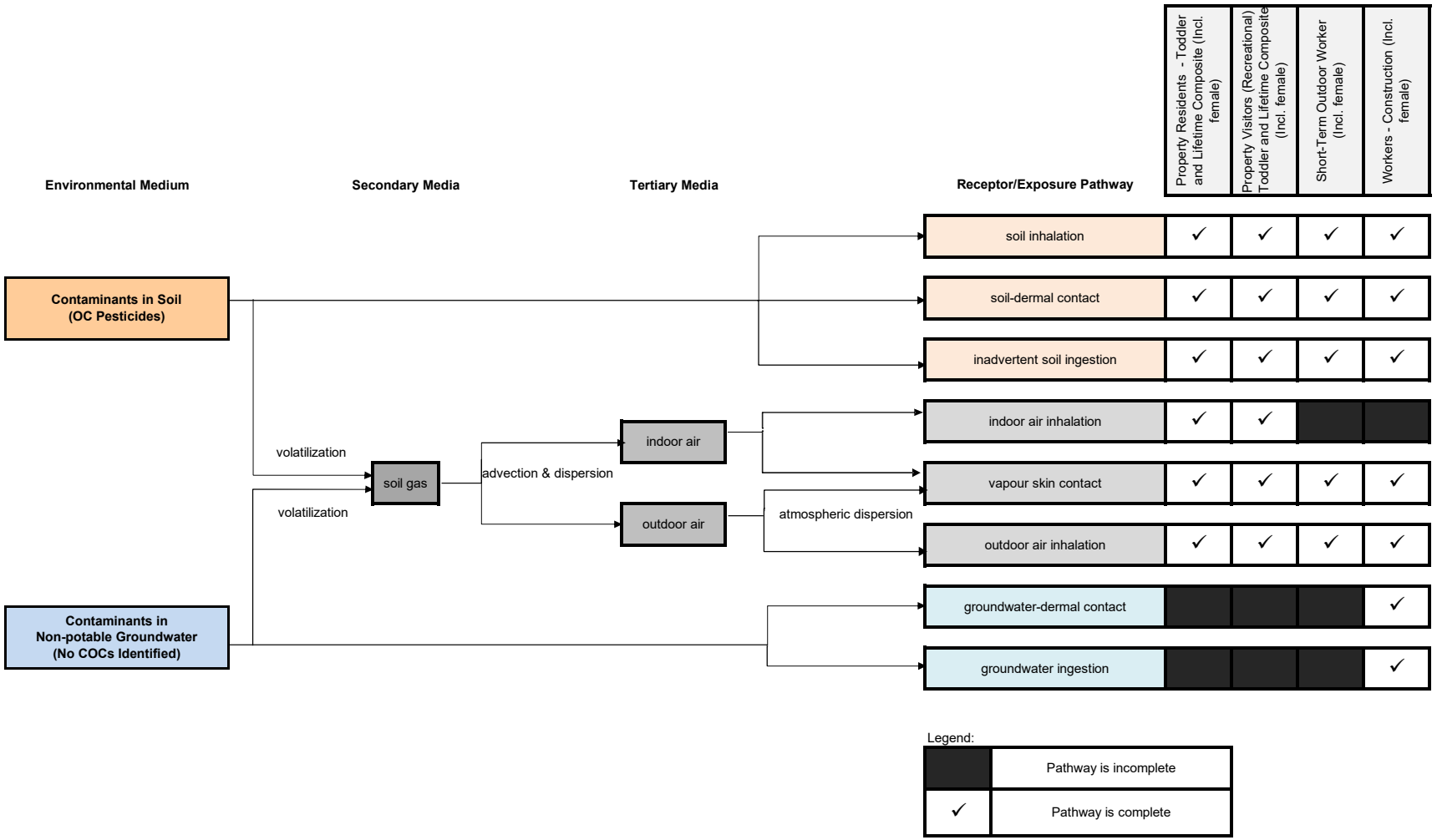
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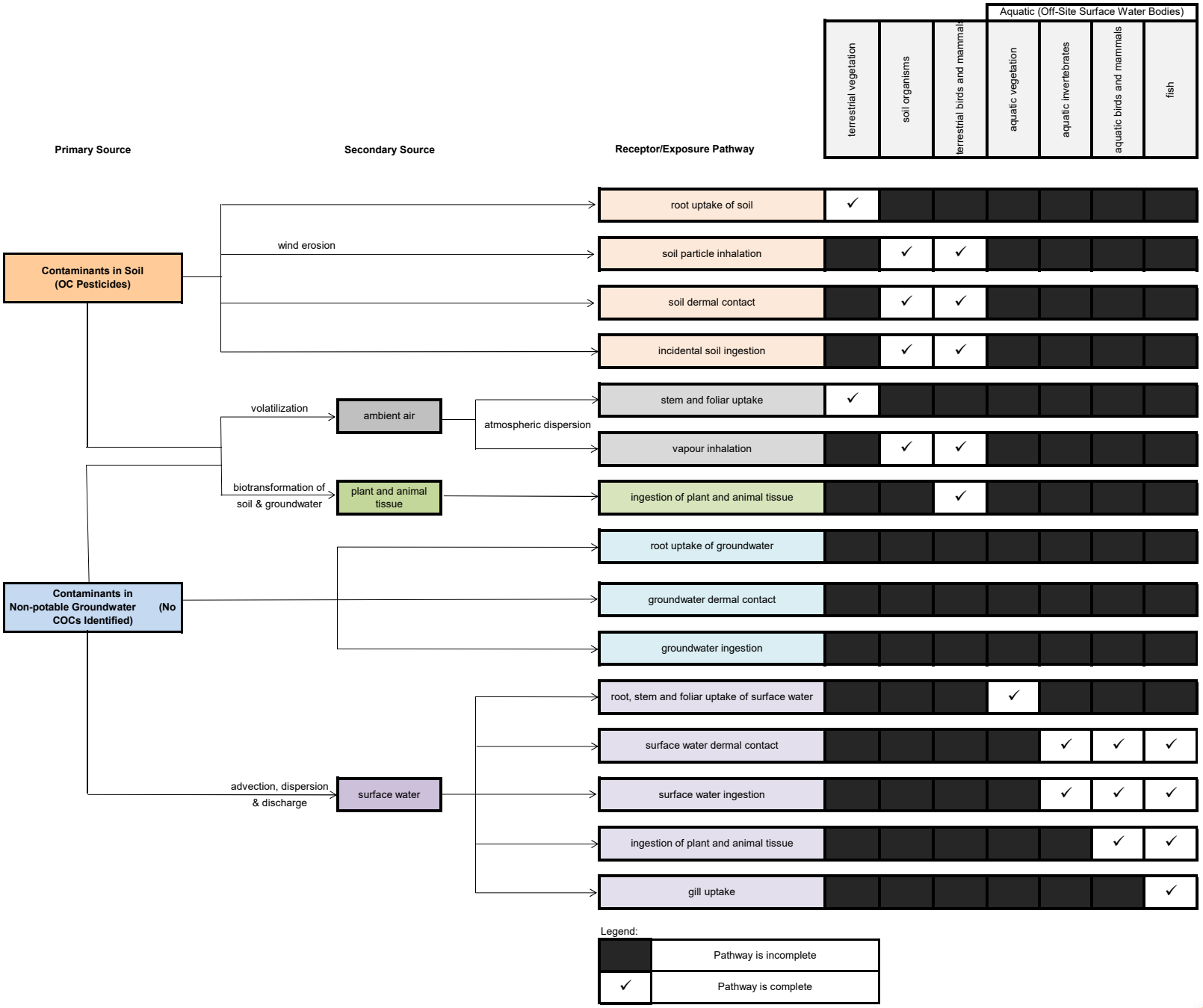
CROSS SECTION B-B' POST-REMEDIATION OCs IN SOIL

PHASE TWO ESA
1160 BLAIR ROAD,
BURLINGTON, ONTARIO

PROJECT NO.:	DWN.:
HAM-00801245-G0	AS
SCALE: AS NOTED	CK: EE
DATE: JULY 2018	FIG. NO.: 14

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Environmental Medium
Secondary Media
Tertiary Media
Receptor/Exposure Pathway
Property Residents - Toddler and Lifetime Composite (Incl. female)
Property Visitors (Recreational) Toddler and Lifetime Composite (Incl. female)
Short-Term Outdoor Worker (Incl. female)
Workers - Construction (Incl. female)
Contaminants in Soil (OC Pesticides)
Contaminants in Non-potable Groundwater (No COCs Identified)
volatilization
volatilization
soil gas
advection & dispersion
indoor air
outdoor air
atmospheric dispersion
soil inhalation
soil-dermal contact
inadvertent soil ingestion
indoor air inhalation
vapour skin contact
outdoor air inhalation
groundwater-dermal contact
groundwater ingestion
Legend:
Pathway is incomplete
Pathway is complete


Aquatic (Off-Site Surface Water Bodies)
terrestrial vegetation
soil organisms
terrestrial birds and mammals
aquatic vegetation
aquatic invertebrates
aquatic birds and mammals
fish
Primary Source
Secondary Source
Receptor/Exposure Pathway
Contaminants in Soil (OC Pesticides)
wind erosion
root uptake of soil
soil particle inhalation
soil dermal contact
incidental soil ingestion
volatilization
ambient air
atmospheric dispersion
stem and foliar uptake
vapour inhalation
biotransformation of soil & groundwater
plant and animal tissue
ingestion of plant and animal tissue
Contaminants in Non-potable Groundwater (No COCs Identified)
root uptake of groundwater
groundwater dermal contact
groundwater ingestion
root, stem and foliar uptake of surface water
surface water dermal contact
advection, dispersion & discharge
surface water
surface water ingestion
ingestion of plant and animal tissue
gill uptake
Legend:
Pathway is incomplete
Pathway is complete