

REPORT NO. 161-06382-00

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT UPDATE AND REMEDICATION

PART OF LOT 4, CONCESSION 3,
PARTS 1, 2, 3, 4 AND 5,
GLOUCESTER, ONTARIO
(3646, 3636 AND 3604 INNES ROAD,
Ottawa, Ontario)

NOVEMBER 28, 2016

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT UPDATE AND REMEDIATION

PART OF LOT 4, CONCESSION 3,
PARTS 1, 2, 3, 4 AND 5,
GLOUCESTER, ONTARIO

(3646, 3636 AND 3604 INNES ROAD,
OTTAWA, ONTARIO)

The Builders Warehouse Inc.

Project no: 161-06382-00
Date: November 28, 2016

WSP Canada Inc.
2611 Queensview Drive, Suite 300
Ottawa, Ontario K2B 8K2 Canada

Phone: +1-613-829-2800
Fax: +1-613-829-8299
www.wspgroup.com





November 28, 2016

La Coop Federee
Attn: Eric Morissette, Director, Environmental Services
200 – 9001 Acadie Boulevard
Montreal, QC, H4N 3H7

**Subject: Phase Two Environmental Site Assessment Update
Lot 4, Concession 4, Parts 1, 2, 3, 4, 5 Gloucester, Ontario
(3646, 3636, 3604 Innes Road, Ottawa, Ontario)
161-06382-00**

Dear Mr. Morissette,

We are pleased to forward our update to the report documenting the results of the Phase Two Environmental Site Assessment (ESA) completed at the above-noted property.

The Phase Two ESA was completed in general accordance with *Ontario Regulation (O. Reg.) 153/04* to document management and further investigation of areas of potential environmental concern (APECs) identified in previous reports.

Based on the findings of the investigation, elevated concentrations of contaminants remain in soil and groundwater at the Site. Additional investigations are recommended to assess the extent of groundwater impacts. The management of impacted soil is recommended to be managed through risk assessment.

If you have any questions or require further information, please contact the undersigned.

Yours truly,

WSP Canada Inc.

A handwritten signature in dark ink, appearing to read "Kmaton", written over a light grey circular stamp.

Kathryn Maton, C.E.T.
Environmental Technologist

A handwritten signature in dark ink, appearing to read "Carolyn Adams", written in a cursive style.

Carolyn Adams, M.A.Sc., P.Eng., QP_{ESA/RA}
Manager, Environmental Management

WSP Canada Inc.
2611 Queensview Drive, Suite 300
Ottawa, Ontario K2B 8K2

Phone: +1 613-829-2800
Fax: +1 613-829-8299
www.wspgroup.com

EXECUTIVE SUMMARY

WSP Canada Inc. (WSP) was retained by The Builders Warehouse Inc./La Coop Federee to update a Phase Two Environmental Site Assessment (ESA) of the seven (7) parcels of land located at Part of Lot 4, Concession 4, Parts 1, 2, 3, 4, 5 Gloucester, Ontario (with municipal addresses of 3646, 3636, 3604 Innes Road, Ottawa, Ontario, and Part of Lot 4, Concession 3, Part 2, Plan 5R8348, Gloucester, Ontario) (the "Site"). The Site is a rectangular shaped vacant property with a square portion located on the northeast corner along Innes Road.

There are eight (8) structures present on the north side of the Site, which are currently vacant commercial buildings (a former BMR hardware store). The south portion of the Site is vacant forested land that has not been developed.

The Phase Two ESA was completed to characterize subsurface conditions according to the industry standards in effect at the time, in general accordance with *Ontario Regulation (O. Reg.) 153/04*. We understand that the Site may be sold and the south, vacant portion of the Site may be developed for residential uses; the north portion of the Site would remain commercial use. The filing of a Record of Site Condition (RSC) would be required if the north portion of the Site is used for residential or parkland purposes.

WSP identified two Areas of Potential Environmental Concern (APECs) at the Site resulting from two on site PCAs, and one APEC that was attributed to one off-site PCA with the potential for contaminant migration through groundwater movement. The Phase Two ESA consisted of the completion of 13 boreholes to a maximum depth of 7.01 m below ground surface (mbgs), installation of groundwater monitoring wells, and the collection of soil and groundwater samples for chemical analysis. As the Phase One ESA identified multiple well records that may be located on the Site and within the Phase One Study Area, the applicable generic soil and groundwater standards selected for evaluating subsurface conditions are the Ontario Ministry of the Environment and Climate Change (MOECC) Table 2: Full Depth Generic Site Condition Standards (SCS) in a Potable Ground Water Condition. The north portion of the site would be suitable for comparison to industrial, commercial and community (ICC) land use standards and for the south portion of the Site, standards for residential, parkland and institutional (RPI) property uses would apply.

The Phase Two ESA update indicated:

- Chemical analysis of metals and inorganics of the soil submitted within the fill and native materials across the Site identified exceedances of barium, cobalt, and vanadium. Due to the presence of these chemicals in the native silty clay or clayey silt (in both 2013 and 2016 drilling programs), they may be representative of background in this area and not necessarily indicative of any off-Site or on-Site sources of contamination.
- The elevated concentrations of electrical conductivity (EC) and sodium adsorption ratio (SAR) identified in BH16-6 and BH16-8 may be attributed to the historic application of road salt on the Site. These areas are within the commercial portion of the site and values of EC and SAR meet the ICC standards. The salt impacts were identified in the shallow native soils.
- In 2013, elevated concentrations of PHC- F3 and F4 were identified within the fill material at TE-02 (located on the southeast corner of the 'overstock storage yard', from ground surface to 0.35 mbgs). The fill material was described as 55% brick, wood, burnt wood, plastic and 45% sandy silt with trace organic material. In 2016, BH16-4, BH/MW16-5 and BH16-6 were advanced around TE-02 to delineate the PHC F3 and F4 contamination. All samples collected from these boreholes met the applicable Table 2 SCS, indicating that impacts are limited to surface soil at TE-02.

- Elevated concentrations of ethylbenzene and PHC F2 were present in the groundwater of MW16-5 (located in the southeast corner of the 'overstock storage yard') when compared to the Table 2 SCS.

Based on the Phase Two ESA Update and remediation conducted at the Site on November 2, 2016, impacted soils located in the vicinity of TE-02 were removed and soil remaining in this area at the Site meets the applicable SCS for ICC Property Use.

Impacts from the use of road salt in the commercial portion of the site are within standards established for ICC Property Use.

The groundwater in the vicinity of MW16-5 had an exceedance of ethylbenzene and PHC F1 to F4. Additional investigation with the installation of monitoring wells is recommended to delineate the impacts and assess the extent of groundwater contamination.

The elevated metal concentrations in soil in the former Phase Two ESAs can be managed through a risk assessment process to identify risk management measures that will allow this soil to remain onsite. This management of the contaminants, even though they may be naturally occurring will be required prior to filing a Record of Site Condition.

TABLE OF CONTENTS

1	PHASE TWO ESA UPDATE	1
1.1	BACKGROUND.....	1
1.2	SOIL AND GROUNDWATER QUALITY	1
2	SCOPE OF WORK	3
2.1.1	PHASE TWO ESA UPDATE	3
2.1.1.1	SOIL.....	3
2.1.1.2	GROUNDWATER.....	4
2.1.2	REMEDIAL ACTIONS	4
2.2	FREE FLOWING PRODUCT	4
3	DISCUSSION OF RESULTS	5
3.1	GENERAL	5
3.2	SOIL QUALITY RESULTS.....	5
3.2.1	TEST PITTING PROGRAM.....	5
3.2.2	CONFIRMATION SAMPLING AND ANALYSIS	5
3.3	GROUNDWATER QUALITY RESULTS.....	5
3.4	QUALITY ASSURANCE AND QUALITY CONTROL RESULTS.....	5
3.5	CONCLUSIONS	6
4	QUALIFICATIONS OF THE ASSESSORS	7
4.1	SIGNATURES	7
5	REFERENCES.....	5-8

TABLES

TABLE 1	SUMMARY OF ANALYTICAL RESULTS IN SOIL: METALS AND INORGANICS AND PAHS (2013)
TABLE 2	SUMMARY OF ANALYTICAL RESULTS IN SOIL: METALS AND INORGANICS AND PAHS (2016)
TABLE 3	SUMMARY OF ANALYTICAL RESULTS IN SOIL: PHCS AND BTEX (2013)
TABLE 4	SUMMARY OF ANALYTICAL RESULTS IN SOIL: PHCS AND BTEX (2016)
TABLE 5	SUMMARY OF ANALYTICAL RESULTS IN SOIL (CONFIRMATORY SAMPLING): PHCS AND BTEX
TABLE 6	SUMMARY OF ANALYTICAL RESULTS IN GROUNDWATER: METALS AND INORGANICS AND PAHS
TABLE 7	SUMMARY OF ANALYTICAL RESULTS IN GROUNDWATER: PHCS AND BTEX
TABLE 8	SUMMARY OF RELATIVE PERCENT DIFFERENCES (RPDS) IN GROUNDWATER
TABLE 9	SUMMARY OF RELATIVE PERCENT DIFFERENCES (RPDS) IN SOIL

FIGURES

FIGURE 1	SITE LOCATION PLAN
FIGURE 2	SITE PLAN AND STUDY AREA
FIGURE 3	CONTAMINANT DISTRIBUTION OF METALS AND INORGANICS IN SOIL
FIGURE 4	CONTAMINANT DISTRIBUTION OF PHCS IN SOIL
FIGURE 5	CONTAMINANT DISTRIBUTION OF PHCS IN GROUNDWATER
FIGURE 6	PRE-REMEDATION SITE PLAN
FIGURE 7	POST-REMEDATION SITE PLAN

APPENDICES

APPENDIX A	BOREHOLE/TEST PIT LOGS
APPENDIX B	CERTIFICATES OF ANALYSIS

1

PHASE TWO ESA UPDATE

1.1

BACKGROUND

WSP Canada Inc. (WSP) was retained by The Builders Warehouse Inc. to conduct a Phase Two Environmental Site Assessment (ESA) of seven (7) parcels of land identified as Part of Lot 4, Concession 4, Parts 1, 2, 3, 4, 5 Gloucester, Ontario and Part of Lot 4, Concession 3, Part 2, Plan 5R8348, Gloucester, Ontario, making up municipal addresses 3646, 3636, and 3604 Innes Road, Ottawa, Ontario, (the “Site”). The Site is a rectangular shaped property with a square portion jutting out on the northeast corner along Innes Road. The Site location is shown in Figure 1 and Figure 2.

We understand that the Site is being offered for sale. The Site has two distinct areas, a vacant, undeveloped south portion and a commercial north portion. If redevelopment plans include residential parkland or institutional (RPI) property uses on lands historically used for commercial purposes (i.e., the north portion), the filing of a Record of Site Condition (RSC) would be required. If residential or parkland uses are restricted to the south portion of the Site, filing of a RSC would be voluntary, or in compliance with municipal development requirements rather than provincial legislation.

The Phase Two ESA was completed to characterize subsurface conditions according to current industry standards, in general accordance with Ontario Regulation (O. Reg.) 153/04. Results of previous investigations identified an area of soil contamination, and remediation was conducted under this work program. Groundwater with evidence of impacts identified in a previous investigation was reassessed in this work program. In addition, results from previous assessments were verified at two locations.

This update to the Phase Two ESA provides documentation of the remediation and supplemental soil and groundwater sampling. It summarizes the current subsurface conditions at the Site. Additional investigation and remediation work will be required prior to issuing a Phase Two ESA report that can support the filing of a RSC.

1.2

SOIL AND GROUNDWATER QUALITY

Soil and groundwater quality at the Site has been assessed in 2013 and again in 2016, as reported in a Phase Two ESA issued July 27, 2016. The report identified metal and inorganic (MI) parameters in native soil, and petroleum hydrocarbon compounds (PHCs), including fractions F1 to F4 and benzene, toluene, ethylbenzene and xylenes (BTEX) in soil and groundwater at concentrations exceeding the Table 2 Site Condition Standards (SCS) issued by the Ministry of the Environment and Climate Change (MOECC). Exceedances encountered across the Site are presented in Figure 3 to Figure 5. In summary:

- The concentrations of barium, cobalt, and vanadium exceeded SCS in the native silty clay or clayey silt. Because elevated concentrations were present on the developed and undeveloped portions of the land (in both 2013 and 2016 drilling programs), they may be representative of background in this area and not necessarily indicative of any off-Site or on-Site sources of contamination.

- Elevated values of electrical conductivity (EC) and sodium adsorption ratio (SAR) identified in BH16-6 and BH16-8 may be attributed to the historic application of road salt on the Site. The salt impacts were identified in the shallow native soils.
- The 2016 delineation of PHC- F3 and F4 contamination confirmed only the fill material at TE-02 (2013) at the southeast corner of the 'overstock storage yard' was impacted. The fill material at surface was described as 55% brick, wood, burnt wood, plastic and 45% sandy silt with trace organic material.
- Elevated concentrations of ethylbenzene and PHC F2 were measured in the groundwater at MW16-5 (located in the southeast corner of the 'overstock storage yard') when compared to the Table 2 SCS.

The scope of work in November 2016 included remediation of contaminated soil at TE-02, resampling of groundwater at MW16-5 and verification of soil quality through test pitting at two areas that required supplemental assessment after the previous investigations (WSP 2016). This supplemental work is presented as an update to Phase Two ESA documentation and confirmation of remedial actions.

2 SCOPE OF WORK

2.1.1 PHASE TWO ESA UPDATE

The soil and groundwater quality at the Site was investigated at the locations shown on Figure 2 through the advancement of test pits and the sampling of an existing monitoring well (MW16-5) to characterize current environmental conditions. Investigation methods followed Standard Operating Procedures prepared by WSP for the conduct of environmental investigations. The investigation methods are described in the following sections.

2.1.1.1 SOIL

WSP retained A. Lacroix Equipment Rentals Ltd. (Lacroix) to conduct test pitting activities at the Site under the supervision of WSP field staff on November 2, 2016.

Four test pits (TP16-1 to TP16-4) were advanced on each side of the planned remedial excavation to assess soil conditions beyond the anticipated limits of the contamination at TE-02. Samples were recovered at different depths and maintained at the WSP office pending the receipt of confirmatory sample results from the remedial action. In addition, two other test pits were excavated to assess gaps that resulted from the previous Phase Two ESA, as follows:

- One test pit (TP16-5) in the vicinity of MW/BH16-8 to reassess the exceedance of electrical conductivity from 0.20 to 1.52 mbgs; and,
- One test pit (TP16-6) in the northwest corner of the property located at 3646 Innes Road (located on the northeast corner of the Site) where a fuel tank that reportedly contained heating oil was historically located.

Soil samples were recovered from each of the test pits, visually inspected and logged. The test pit logs are presented in Appendix B and locations of the test pits are presented in Figure 2.

Soil samples were collected with dedicated nitrile gloves to prevent cross contamination between sampling locations and were split into two portions: one placed into labeled polyethylene bags for field screening and another jarred into the appropriate laboratory-supplied sample containers and stored in a cooler with ice for possible chemical analysis. For samples considered for PHC fraction F1 analysis, a core of soil was placed in a pre-weighed laboratory prepared vial containing a measured amount of methanol. Soil samples considered to be representative of “worst-case” environmental conditions were selected for chemical analysis based on visual and olfactory observations and field vapour readings.

A total of two soil samples (including one field duplicate sample) were submitted to AGAT Laboratories in Ottawa, Ontario.

2.1.1.2 GROUNDWATER

On November 2, 2016, MW16-5 was purged of three well volumes and sampled for PHC F1-F4 including BTEX. The depth to groundwater and depth to the bottom of the well was measured with an oil/water interface probe.

2.1.2 REMEDIAL ACTIONS

Soil in the vicinity of TE-02 was removed with an excavator operated by Lacroix and disposed of off-Site at Green for Life's (GFL) Moosecreek facility. Based on weigh bills provided by the contractor, 78.36 metric tonnes of PHC F3-F4 impacted soil was removed during the remedial excavation. No soil was imported to the Site to backfill the excavation. The Pre-remediation and Post-remediation conditions are presented in Figure 6 and Figure 7.

2.2 FREE FLOWING PRODUCT

Free flowing product was not encountered during this remedial excavation and previous subsurface investigations completed at the Site.

3 DISCUSSION OF RESULTS

3.1 GENERAL

For completeness, results from previous investigations are included in Tables and Figures provided with this report. Tables 1 and 3 provide data from the 2013 investigation for parameters that include MI parameters, PAHs, PHCs and BTEX. Data for these parameters from the 2016 borehole and test pit programs are provided in Tables 2 and 4. Table 5 provides data for confirmatory sampling. Groundwater data are provided in Tables 6 and 7.

3.2 SOIL QUALITY RESULTS

3.2.1 TEST PITTING PROGRAM

A sample was submitted from TP16-5 from 1.00 to 1.14 m bgs as a duplicate sample to BH16-8-1 from June 2016 to assess the value of electrical conductivity in this area. The result from November was 0.906 mS/cm and when averaged with the June result (Table 2), the value of electrical conductivity in this area does not exceed Table 2 SCS (industrial commercial and community (ICC) property use).

The soil sample submitted from TP16-6 from 0.66 to 0.68 m bgs in the area of a former fuel tank indicated no evidence of impacts from this past use. The concentration of PHC F3 (Table 4) measured at 145 ug/g (average) did not exceed the MOECC Table 2 SCS for RPI and ICC property use.

3.2.2 CONFIRMATION SAMPLING AND ANALYSIS

Confirmatory soil samples were collected from the floor and walls of the excavation in accordance with MOECC requirements as documented in O. Reg. 153/04. Through the removal of the impacted soil, verification sampling (Table 5) confirmed that the PHC F1 to F4 including BTEX concentrations in the remaining soil at the completed limits of the excavation meet the Table 2 SCS for ICC property use.

3.3 GROUNDWATER QUALITY RESULTS

A comparison of the laboratory analytical results for the groundwater sampled from MW16-5 to the Table 2 SCS (All Property Uses) identified elevated concentrations of ethylbenzene and PHC F1 to F3 (Table 7).

3.4 QUALITY ASSURANCE AND QUALITY CONTROL RESULTS

AGAT completed a variety of QA/QC measures on the soil and groundwater samples submitted as part of the sampling program. These QA/QC measures include: sample replicates, matrix spiked laboratory blanks, and process blanks.

Soil samples were randomly selected by the WSP field staff for field duplicate testing. Duplicate samples were selected for every 10 samples submitted for analysis. WSP submitted the following field duplicate soil samples:

- TP16-6 SA101 was a blind field duplicate of TP16-6 SA1 (0.66 to 0.68 m) and analyzed for PHC F1 to F4 including BTEX; and,
- FL-101 was a blind field duplicate of FL-01 (0.91 m) and analyzed for PHC F1 to F4 including BTEX.

The results from the duplicate samples were used to assess the accuracy and reliability of the laboratory procedures and instruments.

A calculation of the relative percent difference (RPD) between the sample and its duplicate was performed and compared to the acceptance limits outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, April 2011 (Table 8 for Soil and Table 9 for Groundwater). The RPD calculation is only applicable when both the sample and the field duplicate concentrations are greater than five times the reported detection limit. Where the concentrations were sufficient to allow the calculation of the RPD, previous investigations indicated heterogeneity in soils assessed for metals and inorganics. For this investigation, acceptable concentrations were only achieved at one location, for a single parameter (PHC F3) and the correlation was acceptable.

3.5 CONCLUSIONS

Based on the Phase Two ESA Update and remediation conducted at the Site on November 2, 2016, impacted soils located in the vicinity of TE-02 were removed and soil remaining in this area at the Site meets the applicable SCS for ICC Property Use.

Impacts from the use of road salt in the commercial portion of the site are within standards established for ICC Property Use.

The groundwater in the vicinity of MW16-5 had an exceedance of ethylbenzene and PHC F1 to F4. Additional investigation with the installation of monitoring wells is recommended to delineate the impacts and assess the extent of groundwater contamination.

The elevated metal concentrations in soil in the former Phase Two ESAs can be managed through a risk assessment process to identify risk management measures that will allow this soil to remain onsite. This management of the contaminants, even though they may be naturally occurring will be required prior to filing a Record of Site Condition.

4

QUALIFICATIONS OF THE ASSESSORS

The Phase Two ESA was completed by **Ms. Kathryn Maton, C.E.T.**, Environmental Technologist. Kathryn has over 6 years of experience in environmental site assessments. She has conducted Phase One and Two Environmental Site Assessments for industrial, commercial and residential properties. In completing this work she has contributed to identifying, defining and quantifying potential environmental liabilities to satisfy due diligence and regulatory obligations.

The Phase Two ESA was managed and reviewed by **Ms. Carolyn Adams, M.A.Sc., P.Eng.**, Senior Project Manager at WSP. Carolyn is a Chemical Engineer with a Master of Applied Science degree in Environmental Engineering. She has 26 years of experience in completing environmental investigations and has the knowledge and experience to identify potential sources of contamination and the fate and behaviour of contaminants in the environment. Carolyn is a Qualified Person (QP_{ESA}) under the Ministry of the Environment O. Reg. 153/04.

4.1 SIGNATURES

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

Report prepared by
WSP Canada Inc.



Kathryn Maton, C.E.T.
Environmental Technologist

Reviewed by

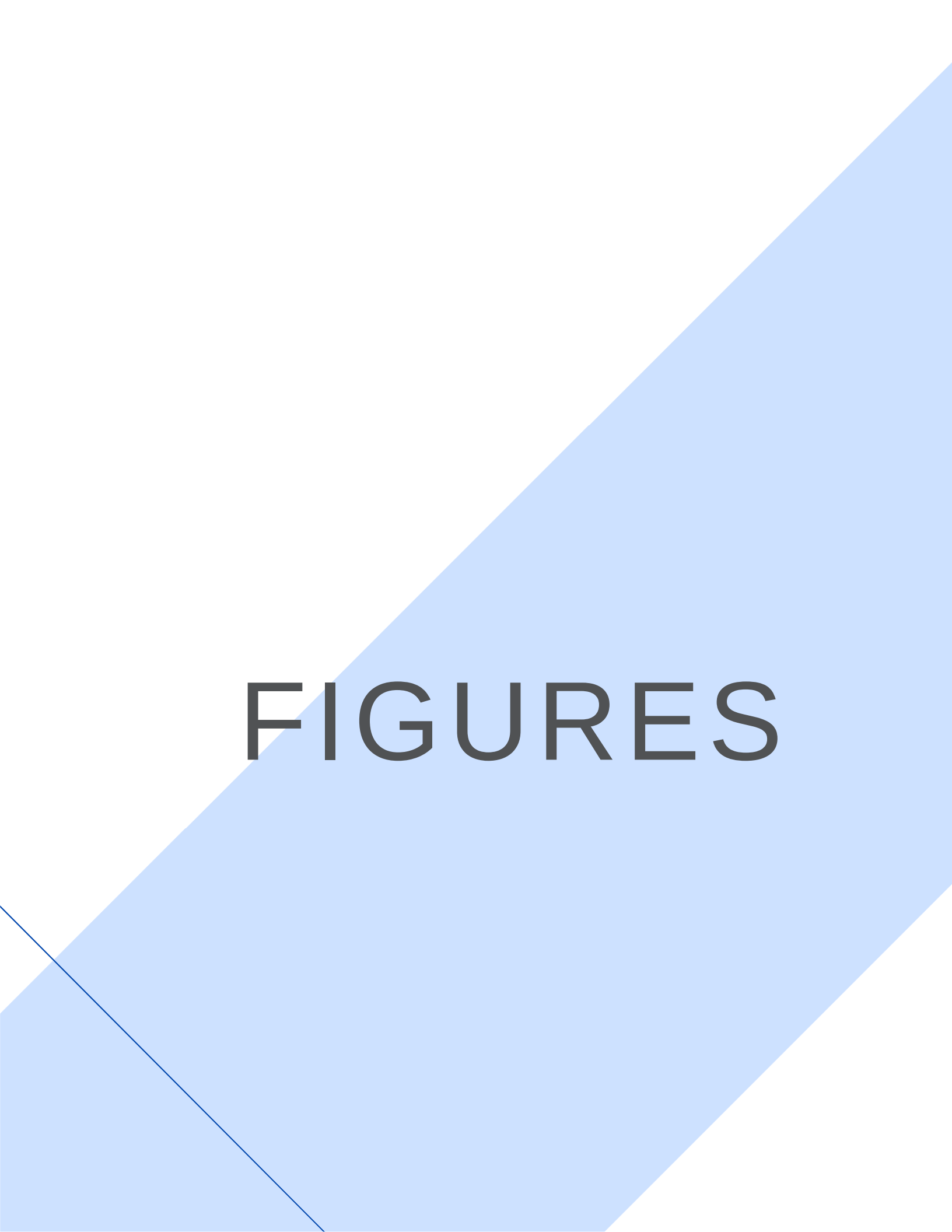


Carolyn Adams, M.A.Sc., P.Eng., QP_{ESA/RA}
Manager, Environmental Management

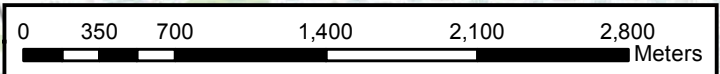
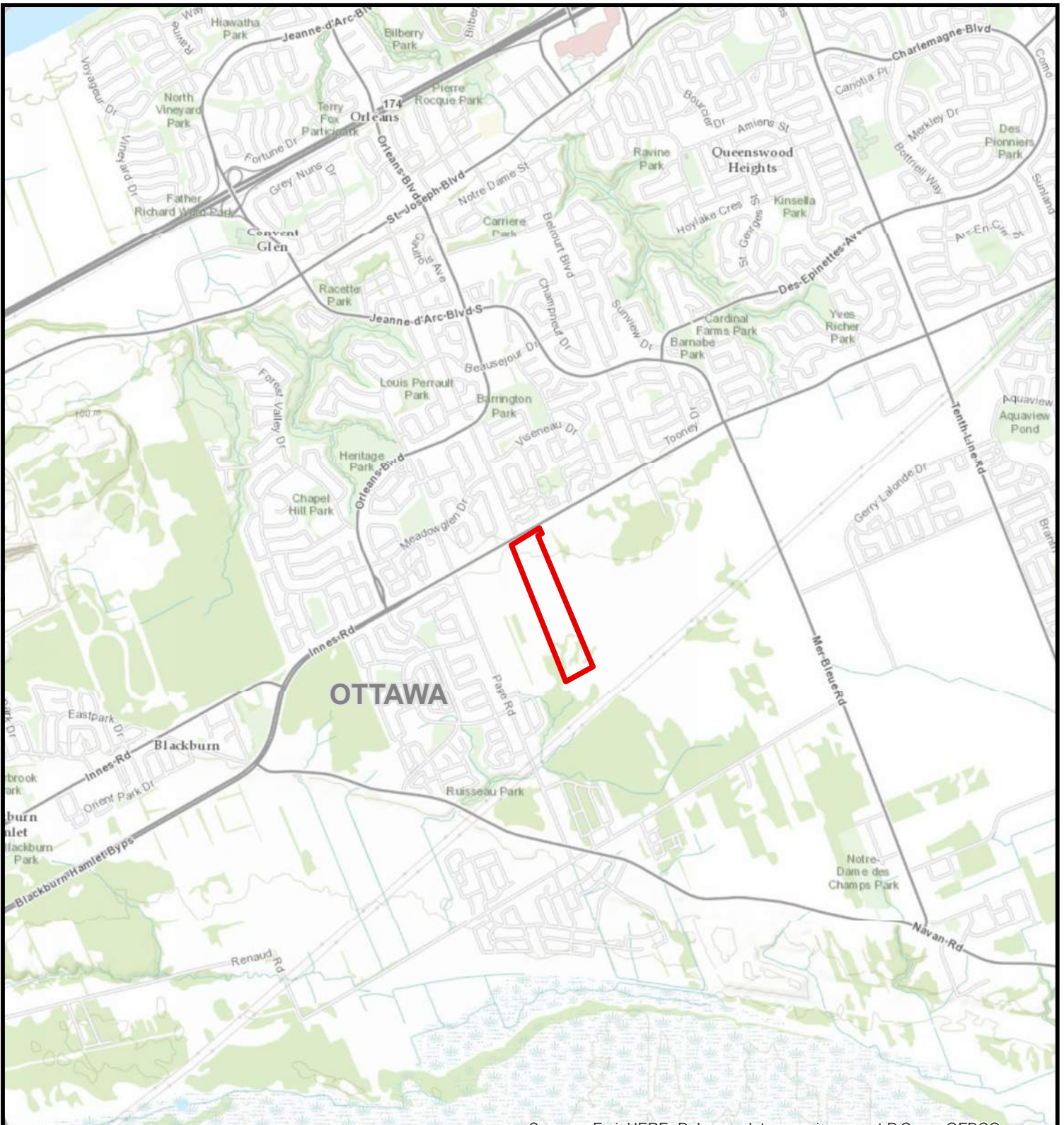
5

REFERENCES

- GENIVAR Inc., Juin 2013. Site 38 Orléans, 3636-3646, chemin Innes, Orléans (Ontario), Évaluation environnementale de site Phase I. Prepared for La Coop fédérée.
- GENIVAR Inc., Septembre 2013. Site 38 Orléans, 3636-3646, chemin Innes, Orléans (Ontario), Évaluation environnementale de site Phase II. Prepared for La Coop fédérée.
- Ontario Ministry of the Environment. 2014b. Ontario Regulation 153/04, Records of Site Condition – Part XV.1 of the Act. January 1, 2014.
- WSP Canada Inc., June 20, 2016. Phase One Environmental Site Assessment, Part of Lot 4, Concession 3, Parts 1, 2 3, 4, and 5, Gloucester, Ontario (3646, 3636 and 3604 Innes Road, Ottawa, Ontario).



FIGURES



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



500 BOULEVARD GRÉBER 3E ÉTAGE
GATINEAU, QUÉBEC,
CANADA, J8T 7W3
WWW.WSPGROUP.COM

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
PART OF LOT 4, CONCESSION 3, PARTS 1, 2, 3, 4 AND 5
GLOUCESTER, ONTARIO
(3646, 3636 AND 3604 INNES ROAD, OTTAWA, ONTARIO)
SITE LOCATION PLAN

LEGEND

 APPROXIMATE PROPERTY BOUNDARY

Scale	1:35,000
Date	JUNE 2016
Drawn By	JS
Job No.	161-06382-00

Drawing No.
FIG. 1





500 BOULEVARD GRÉBER 3E ÉTAGE
GATINEAU, QUÉBEC,
CANADA, J8T 7W3
WWW.WSPGROUP.COM

CLIENT:
THE BUILDERS WAREHOUSE LTD

PROJECT:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
PART OF LOT 4, CONCESSION 3 PARTS 1,2,3,4 AND 5
GLOUCESTER, ONTARIO
(3646, 3636 AND 3604 INNES ROAD, OTTAWA, ONTARIO)

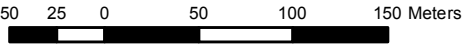
- LEGEND**
- Borehole (WSP, 2016)
 - Monitoring Well (WSP, 2016)
 - Test Pit (WSP, 2016)
 - Borehole (WSP, 2013)
 - Monitoring Well (WSP, 2013)
 - Test Pit (WSP, 2013)
 - Property Boundary

PROJECT NUMBER: 161-06382-00 DATE: NOVEMBER 2016

DRAWN BY: JS

CHECKED BY: KM

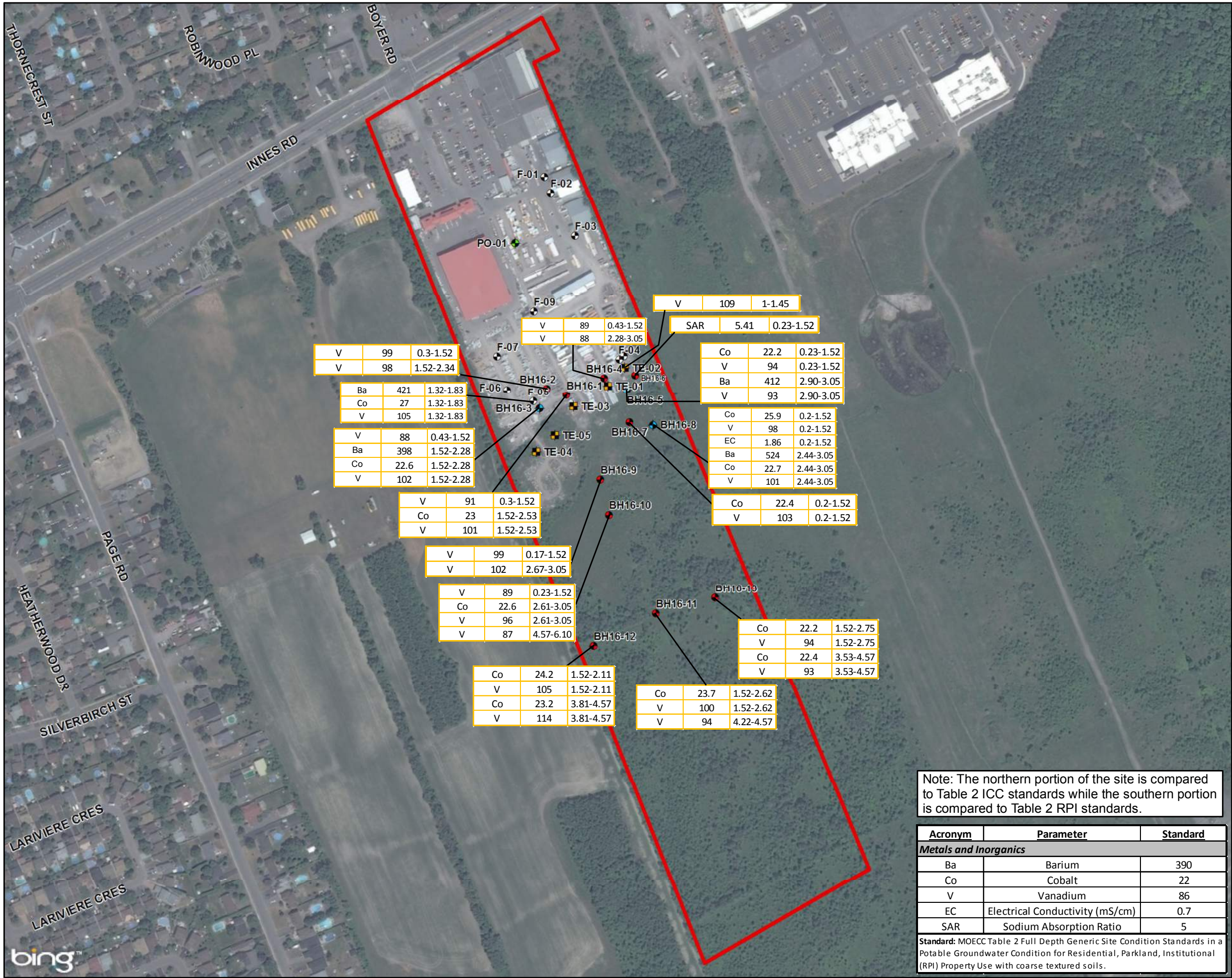
SCALE: 1:4,000



NAD1983 ZONE 18

TITLE
SITE PLAN AND STUDY AREA

FIGURE 2



500 BOULEVARD GRÉBER 3E ÉTAGE
GATINEAU, QUÉBEC,
CANADA, J8T 7W3
WWW.WSPGROUP.COM

CLIENT:
THE BUILDERS WAREHOUSE LTD

PROJECT:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
PART OF LOT 4, CONCESSION 3 PARTS 1,2,3,4 AND 5
GLOUCESTER, ONTARIO
(3646, 3636 AND 3604 INNES ROAD, OTTAWA, ONTARIO)

- LEGEND**
- Borehole (WSP, 2016)
 - Monitoring Well (WSP, 2016)
 - Borehole (WSP, 2013)
 - Monitoring Well (WSP, 2013)
 - Test Pit (WSP, 2013)
 - Property Boundary

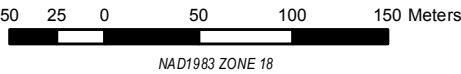
Ba	398	1.52-2.28
Parameter	Concentration (ug/g)	Depth (m)

PROJECT NUMBER: 161-06382-00 DATE: NOVEMBER 2016

DRAWN BY: JS

CHECKED BY: KM

SCALE: 1:4,000



TITLE
**CONTAMINANT DISTRIBUTION OF
METALS AND INORGANICS IN SOIL**

FIGURE 3



500 BOULEVARD GRÉBER 3E ÉTAGE
GATINEAU, QUÉBEC,
CANADA, J8T 7W3
WWW.WSPGROUP.COM

CLIENT:
THE BUILDERS WAREHOUSE LTD

PROJECT:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
PART OF LOT 4, CONCESSION 3 PARTS 1,2,3,4 AND 5
GLOUCESTER, ONTARIO
(3646, 3636 AND 3604 INNES ROAD, OTTAWA, ONTARIO)

- LEGEND**
- Borehole (WSP, 2016)
 - Monitoring Well (WSP, 2016)
 - Borehole (WSP, 2013)
 - Monitoring Well (WSP, 2013)
 - Test Pit (WSP, 2013)
 - Property Boundary

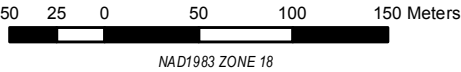
F3	31100	0-0.35
Parameter	Concentration (ug/g)	Depth (m)

PROJECT NUMBER: 161-06382-00 DATE: NOVEMBER 2016

DRAWN BY: JS

CHECKED BY: KM

SCALE: 1:4,000



TITLE
**CONTAMINANT DISTRIBUTION OF
PHCS IN SOIL**

FIGURE 4

Note: The northern portion of the site can be compared to Table 2 ICC standards. Refer to tables 3 and 4. The southern portion of the site can be compared to Table 2 RPI standards.

Acronym	Parameter	Standard
PHCs		
F3	Petroleum Hydrocarbons F3	300
F4	Petroleum Hydrocarbons F4	2800

Standard: MOECC Table 2 Full Depth Generic Site Condition Standards in a Potable Groundwater Condition for Residential, Parkland, Institutional (RPI) Property Use with coarse textured soils.



500 BOULEVARD GRÉBER 3E ÉTAGE
GATINEAU, QUÉBEC,
CANADA, J8T 7W3
WWW.WSPGROUP.COM

CLIENT:

THE BUILDERS WAREHOUSE LTD

PROJECT:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
PART OF LOT 4, CONCESSION 3 PARTS 1,2,3,4 AND 5
GLOUCESTER, ONTARIO
(3646, 3636 AND 3604 INNES ROAD, OTTAWA, ONTARIO)

- LEGEND
- Monitoring Well (WSP, 2016)
 - Monitoring Well (WSP, 2013)
 - Property Boundary

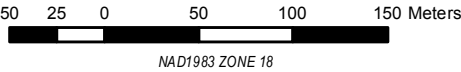
F2	530
Parameter	Concentration (ug/L)

PROJECT NUMBER: 161-06382-00 DATE: NOVEMBER 2016

DRAWN BY: JS

CHECKED BY: KM

SCALE: 1:4,000



TITLE

CONTAMINANT DISTRIBUTION OF
PHCS IN GROUNDWATER

FIGURE 5

Note: The northern portion of the site can be compared to Table 2 ICC standards. Refer to table 6. The southern portion of the site can be compared to Table 2 RPI standards.

Acronym	Parameter	Standard
PHCs + BTEX		
EB	Ethylbenzene	2.4
F2	F2 Hydrocarbon Fraction	150

Standard: MOECC Table 2 Full Depth Generic Site Condition Standards in a Potable Groundwater Condition for Residential, Parkland, Institutional (RPI) Property Use.



500 BOULEVARD GRÉBER 3E ÉTAGE
GATINEAU, QUÉBEC,
CANADA, J8T 7W3
WWW.WSPGROUP.COM

CLIENT:
THE BUILDERS WAREHOUSE LTD

PROJECT:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
PART OF LOT 4, CONCESSION 3 PARTS 1,2,3,4 AND 5
GLOUCESTER, ONTARIO
(3646, 3636 AND 3604 INNES ROAD, OTTAWA, ONTARIO)

- LEGEND**
- Borehole (WSP, 2016)
 - Monitoring Well (WSP, 2016)
 - Borehole (WSP, 2013)
 - Monitoring Well (WSP, 2013)
 - Test Pit (WSP, 2013)
 - Property Boundary

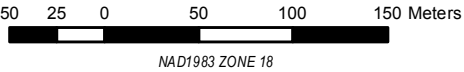
F3	31100	0-0.35
Parameter	Concentration (ug/g)	Depth (m)

PROJECT NUMBER: 161-06382-00 DATE: NOVEMBER 2016

DRAWN BY: JS

CHECKED BY: KM

SCALE: 1:4,000

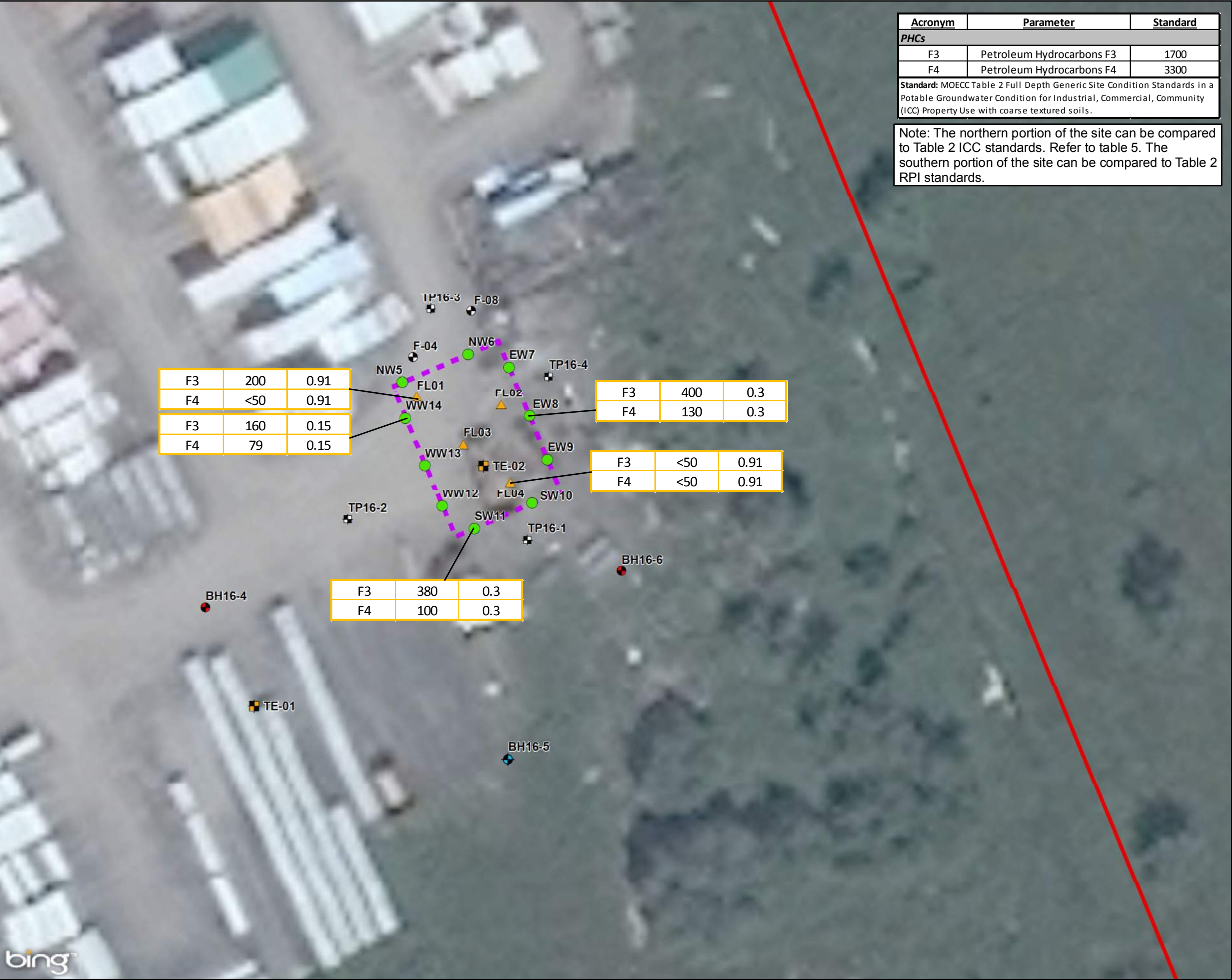


TITLE
**PRE-REMEDIATION CONTAMINANT
DISTRIBUTION IN SOIL**

FIGURE 6

Note: The northern portion of the site can be compared to Table 2 ICC standards. Refer to tables 3 and 4. The southern portion of the site can be compared to Table 2 RPI standards.

Acronym	Parameter	Standard
PHCs		
F3	Petroleum Hydrocarbons F3	1700
F4	Petroleum Hydrocarbons F4	3300
Standard: MOECC Table 2 Full Depth Generic Site Condition Standards in a Potable Groundwater Condition for Industrial, Commercial, Community (ICC) Property Use with coarse textured soils.		



500 BOULEVARD GRÉBER 3E ÉTAGE
GATINEAU, QUÉBEC,
CANADA, J8T 7W3
WWW.WSPGROUP.COM

CLIENT:
THE BUILDERS WAREHOUSE LTD

PROJECT:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
PART OF LOT 4, CONCESSION 3 PARTS 1,2,3,4 AND 5
GLOUCESTER, ONTARIO
(3646, 3636 AND 3604 INNES ROAD, OTTAWA, ONTARIO)

LEGEND

- Floor Verification Samples
- Wall Verification Samples
- Delineation Testpits
- Excavation Limits
- Borehole (WSP, 2016)
- Monitoring Well (WSP, 2016)
- Borehole (WSP, 2013)
- Monitoring Well (WSP, 2013)
- Test Pit (WSP, 2013)
- Property Boundary

Scale:

Parameter	Concentration (ug/g)	Depth (m)
F3	200	0.91

PROJECT NUMBER: 161-06382-00 DATE: NOVEMBER 2016

DRAWN BY: JS

CHECKED BY: KM

SCALE: 1:300

North Arrow

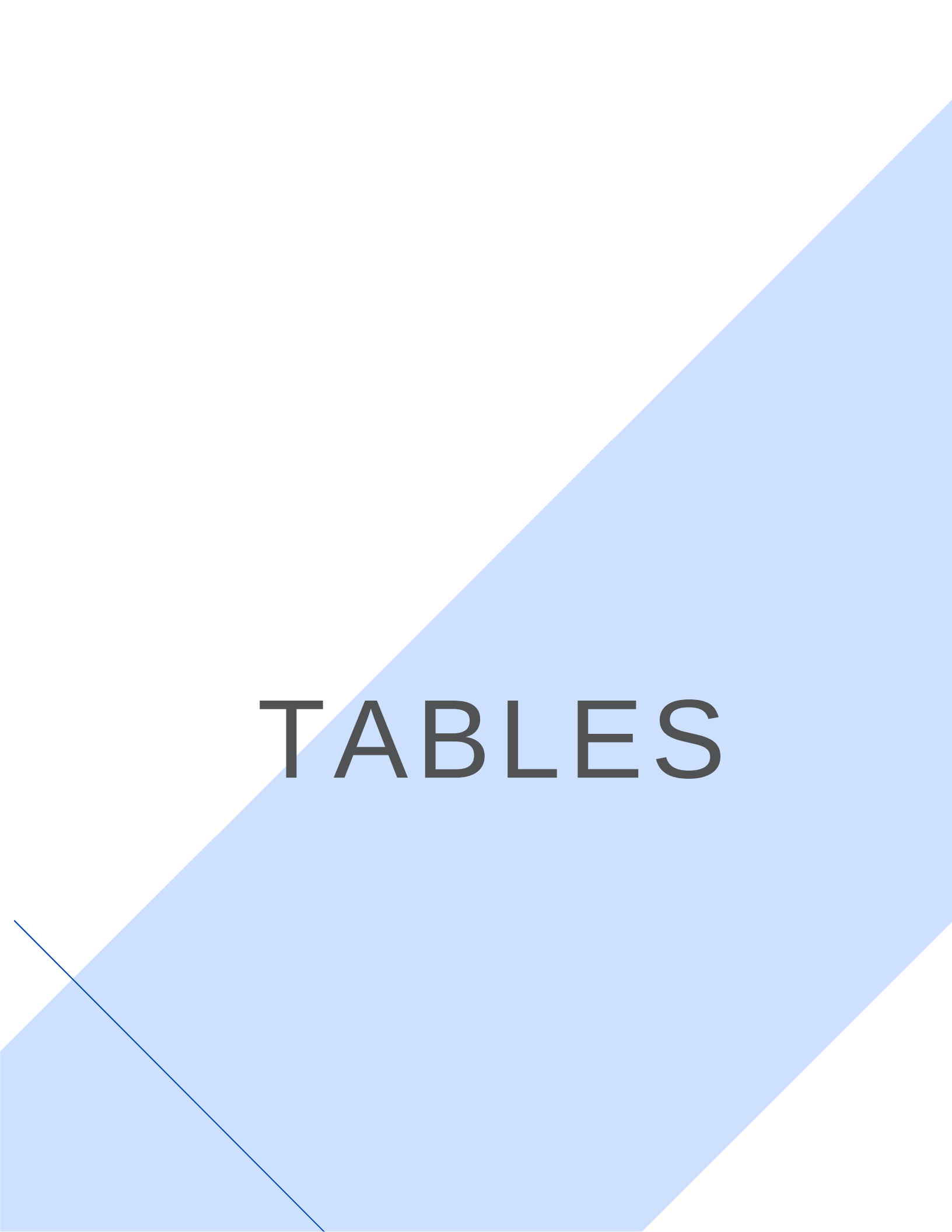
5 2.5 0 5 10 Meters

NAD1983 ZONE 18

TITLE

POST-REMEDIATION HOT SPOT REMOVAL

FIGURE 7



TABLES



Table 1: Summary of Analytical Results in Soil
Metals and Inorganics and PAHs (2013)
Part of Lot 4, Concession 3, Parts 1 to 5, Gloucester, Ontario
(3646, 3636 and 3604 Innes Road, Ottawa, Ontario)

Sample ID	MOECC Table 2 Standards (ICC)	MOECC Table 2 Standards (RPI)	Units	F-01 ¹ 0.40-0.50 6/27/13	F-02 ¹ 0.45-0.55 6/27/13	F-02 ¹ 0.55-0.75 6/27/13	F-03 ¹ 0.30-0.50 6/27/13	F-03 ¹ 0.50-0.91 6/27/13	F-03 ¹ 1.01-1.11 6/27/13	F-04 ¹ 0.61-1.22 6/27/13	F-05 ¹ 1.32-1.83 6/27/13	F-06 ¹ 0.00-0.61 6/27/13	F-07 ¹ 0.61-1.22 6/27/13	F-08 ¹ 0.61-1.22 6/27/13	F-09 ¹ 0.00-0.61 6/27/13
Depth (m) Lab Job # Sampling Date															
Metals and Inorganics															
Antimony	40	7.5	ug/g	<1	<1	na	<1	<1	<1	na	<1	na	na	na	na
Arsenic	18	18	ug/g	3	2	na	3	4	2	na	1	na	na	na	na
Barium	670	390	ug/g	99	65	na	177	132	61	na	421	na	na	na	na
Beryllium	8	4	ug/g	<1	<1	na	<1	<1	<1	na	<1	na	na	na	na
Boron (Hot Water Soluble)	2	1.5	ug/g	na	na	na	na	na	na	na	na	na	na	na	na
Cadmium	1.9	1.2	ug/g	<0.5	<0.5	na	<0.5	<0.5	<0.5	na	<0.5	na	na	na	na
Chromium	160	160	ug/g	41	36	na	22	33	18	na	112	na	na	na	na
Chromium VI	8	8	ug/g	na	na	na	na	na	na	na	na	na	na	na	na
Cobalt	80	22	ug/g	9	8	na	4	7	7	na	27	na	na	na	na
Copper	230	140	ug/g	15	11	na	5	11	15	na	61	na	na	na	na
Lead	120	120	ug/g	na	na	na	na	na	na	na	na	na	na	na	na
Mercury	3.9	0.27	ug/g	na	na	na	na	na	na	na	na	na	na	na	na
Molybdenum	40	6.9	ug/g	<1	<1	na	1	<1	<1	na	<1	na	na	na	na
Nickel	270	100	ug/g	23	19	na	16	21	16	na	70	na	na	na	na
Selenium	5.5	2.4	ug/g	na	na	na	na	na	na	na	na	na	na	na	na
Silver	40	20	ug/g	<0.2	<0.2	na	<0.2	<0.2	<0.2	na	<0.2	na	na	na	na
Thallium	3.3	1	ug/g	<1	<1	na	<1	<1	<1	na	<1	na	na	na	na
Vanadium	86	86	ug/g	39	36	na	10	32	27	na	105	na	na	na	na
Zinc	340	340	ug/g	54	33	na	10	35	24	na	140	na	na	na	na
pH (pH Units)	NV	NV	pH	na	na	na	na	na	na	na	na	na	na	na	na
Conductivity (ms/cm)	1.4	0.7	mS/cm	na	na	na	na	na	na	na	na	na	na	na	na
Sodium Absorption Ratio	12	5	N/A	na	na	na	na	na	na	na	na	na	na	na	na
Cyanide, Free	0.051	0.051	ug/g	na	na	na	na	na	na	na	na	na	na	na	na
Boron (Total)	120	120	ug/g	20	20	na	20	20	20	na	40	na	na	na	na
Uranium	33	23	ug/g	<0.5	<0.5	na	0.6	0.5	<0.5	na	0.6	na	na	na	na
Polycyclic Aromatic Hydrocarbons (PAHs)															
Acenaphthene	21	7.9	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.15	0.15	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.67	0.67	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	0.96	0.5	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	0.3	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b/f)fluoranthene	0.96	0.78	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(ghi)perylene	9.6	6.6	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	0.96	0.78	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	9.6	7	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenzo(a,h)anthracene	0.1	0.1	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	9.6	0.69	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	62	62	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.76	0.38	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene	NC	NC	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	NC	NC	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Methylnaphthalene	30	0.99	ug/g	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Naphthalene	9.6	0.6	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	12	6.2	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	96	78	ug/g	<0.05	<0.05	0.12	<0.05	<0.05	<0.05	0.16	<0.05	<0.05	<0.05	<0.05	<0.05

Notes:

'NV': No Standard established

na: Not analysed

MOECC Table 2: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act," March 2004, amended July 1, 2011. Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial, Commercial, Community (ICC) and Residential, Parkland, Institutional (RPI) Property Use with coarse textured soils.

¹ BH/TP location is on the north portion of the Site (ICC criteria may be used)

² BH/TP location is on the south portion of the Site (RPI criteria may be used)

100	Exceeds MOECC Table 2 ICC Standard Value
100	Exceeds MOECC Table 2 RPI Standard Value
100	Method Detection Limit Exceeds MOECC Standard



Table 1: Summary of Analytical Results in Soil
Metals and Inorganics and PAHs (2013)
Part of Lot 4, Concession 3, Parts 1 to 5, Gloucester, Ontario
(3646, 3636 and 3604 Innes Road, Ottawa, Ontario)

Sample ID	MOECC Table 2 Standards (ICC)	MOECC Table 2 Standards (RPI)	Units	PO-01 ¹ 0.61-0.86 6/27/13	TE-01 ¹ 0.30-0.60 7/2/13	TE-02 ¹ 0.00-0.35 7/2/13	TE-02 ¹ 0.35-1.00 7/2/13	TE-02 ¹ 1.00-1.45 7/2/13	Duplicate (TE-02) ¹ 1.00-1.45 7/3/13	TE-03 ¹ 0.30-1.00 7/2/13	TE-04 ¹ 1.00-2.30 7/2/13	TE-05 ¹ 0.15-2.30 7/2/13
Depth (m) Lab Job # Sampling Date												
Metals and Inorganics												
Antimony	40	7.5	ug/g	<1	<1	<1	<1	<1	<1	na	<1	na
Arsenic	18	18	ug/g	2	3	5	6	2	2	na	3	na
Barium	670	390	ug/g	111	153	98	150	347	383	na	175	na
Beryllium	8	4	ug/g	<1	<1	<1	<1	<1	<1	na	<1	na
Boron (Hot Water Soluble)	2	1.5	ug/g	na	na	na	na	na	na	na	na	na
Cadmium	1.9	1.2	ug/g	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	na	<0.5	na
Chromium	160	160	ug/g	60	59	41	62	111	122	na	82	na
Chromium VI	8	8	ug/g	na	na	na	na	na	na	na	na	na
Cobalt	80	22	ug/g	11	10	7	10	18	20.0	na	14.0	na
Copper	230	140	ug/g	19	21	19	24	50	65	na	28	na
Lead	120	120	ug/g	na	na	na	na	na	na	na	na	na
Mercury	3.9	0.27	ug/g	na	na	na	na	na	na	na	na	na
Molybdenum	40	6.9	ug/g	<1	<1	1	<1	<1	<1	na	<1	na
Nickel	270	100	ug/g	29	33	25	31	60	65	na	39	na
Selenium	5.5	2.4	ug/g	na	na	na	na	na	na	na	na	na
Silver	40	20	ug/g	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	na	<0.2	na
Thallium	3.3	1	ug/g	<1	<1	<1	<1	<1	<1	na	<1	na
Vanadium	86	86	ug/g	53	45	38	52	98	109	na	72	na
Zinc	340	340	ug/g	57	58	138	80	113	135	na	110	na
pH (pH Units)	NV	NV	pH	na	na	na	na	na	na	na	na	na
Conductivity (ms/cm)	1.4	0.7	mS/cm	na	na	na	na	na	na	na	na	na
Sodium Absorption Ratio	12	5	N/A	na	na	na	na	na	na	na	na	na
Cyanide, Free	0.051	0.051	ug/g	na	na	na	na	na	na	na	na	na
Boron (Total)	120	120	ug/g	20	10	20	30	40	40	na	30	na
Uranium	33	23	ug/g	0.6	<0.5	<0.5	0.6	0.9	0.9	na	1	na
Polycyclic Aromatic Hydrocarbons (PAHs)												
Acenaphthene	21	7.9	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05	<0.05	<0.05
Acenaphthylene	0.15	0.15	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05	<0.05	<0.05
Anthracene	0.67	0.67	ug/g	<0.05	<0.05	0.15	<0.05	<0.05	na	<0.05	<0.05	<0.05
Benzo(a)anthracene	0.96	0.5	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	0.3	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05	<0.05	<0.05
Benzo(b/j)fluoranthene	0.96	0.78	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05	<0.05	<0.05
Benzo(ghi)perylene	9.6	6.6	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	0.96	0.78	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05	<0.05	<0.05
Chrysene	9.6	7	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05	<0.05	<0.05
Dibenzo(a,h)anthracene	0.1	0.1	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05	<0.05	<0.05
Fluoranthene	9.6	0.69	ug/g	<0.05	<0.05	0.17	<0.05	<0.05	na	<0.05	<0.05	0.05
Fluorene	62	62	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.76	0.38	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05	<0.05	<0.05
1-Methylnaphthalene	NC	NC	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05	<0.05	<0.05
2-Methylnaphthalene	NC	NC	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05	<0.05	<0.05
1,2-Methylnaphthalene	30	0.99	ug/g	<0.10	<0.10	<0.10	<0.10	<0.10	na	<0.10	<0.10	<0.10
Naphthalene	9.6	0.6	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05	<0.05	<0.05
Phenanthrene	12	6.2	ug/g	<0.05	<0.05	0.07	<0.05	<0.05	na	<0.05	<0.05	<0.05
Pyrene	96	78	ug/g	<0.05	<0.05	0.17	<0.05	<0.05	na	<0.05	<0.05	<0.05

Notes:

'NV': No Standard established

na': Not analysed

MOECC Table 2: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, " March 2004, amended July 1, 2011. Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial, Commercial, Community (ICC) and Residential, Parkland, Institutional (RPI) Property Use with coarse textured soils.

¹ BH/TP location is on the north portion of the Site (ICC criteria may be used)

² BH/TP location is on the south portion of the Site (RPI criteria may be used)

100	Exceeds MOECC Table 2 ICC Standard Value
100	Exceeds MOECC Table 2 RPI Standard Value
100	Method Detection Limit Exceeds MOECC Standard



Table 2: Summary of Analytical Results in Soil
Metals and Inorganics and PAHs (2016)
Part of Lot 4, Concession 3, Parts 1 to 5, Gloucester, Ontario
(3646, 3636 and 3604 Innes Road, Ottawa, Ontario)

Sample ID	MOECC Table 2 Standards (ICC)	MOECC Table 2 Standards (RPI)	Units	BH16-1-1B ¹ 0.30-1.52 6/1/16	BH16-1-2A ¹ 1.52-2.53 6/1/16	BH16-1-2B ¹ 2.53-2.89 6/1/16	BH16-2-1B ¹ 0.30-1.52 6/1/16	BH16-2-2A ¹ 1.52-2.34 6/1/16	BH16-2-2B ¹ 2.34-2.44 6/1/16	BH16-3-1B ¹ 0.43-1.52 6/1/16	BH16-3-2A ¹ 1.52-2.28 6/1/16	BH16-3-3 ¹ 3.05-3.12 6/1/16	BH16-4-1B ¹ 0.43-1.52 6/1/16	BH16-4-2B ¹ 2.28-3.05 6/1/16	BH16-4-102B ¹ (Duplicate of BH16-4-2B) 2.28-3.05 6/1/16	BH16-5-1B ¹ 0.23-1.52 6/1/16	BH16-5-101B ¹ (Duplicate of BH16-5-1B) 0.23-1.52 6/1/16	BH16-5-2B ¹ 2.90-3.05 6/1/16
Depth (m) Sampling Date																		
Metals and Inorganics																		
Antimony	40	7.5	ug/g	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	18	ug/g	1	1	1	1	1	2	2	1	5	1	2	4	1	2	2
Barium	670	390	ug/g	325	347	198	345	355	271	286	398	346	254	347	250	129	266	412
Beryllium	8	4	ug/g	0.9	1	0.7	1	0.9	0.8	0.9	0.9	<0.5	0.8	1	0.8	0.6	0.9	1.0
Boron (Hot Water Soluble)	2	1.5	ug/g	0.13	na	na	0.15	na	na	0.24	na	na	0.12	na	na	0.29	na	na
Cadmium	1.9	1.2	ug/g	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	160	160	ug/g	101	108	45	116	99	65	113	111	26	87	70	57	59	125	72
Chromium VI	8	8	ug/g	<0.2	na	na	<0.2	na	na	<0.2	na	na	<0.2	na	na	<0.2	na	na
Cobalt	80	22	ug/g	19.7	23	10.7	22	20.4	16.7	21.6	22.6	6.8	16.3	20.2	18.2	11.2	22.2	19.1
Copper	230	140	ug/g	43	48	28	47	47	33	46	48	15	35	35	35	16	44	39
Lead	120	120	ug/g	7	7	6	8	7	6	7	7	8	6	7	8	8	8	8
Mercury	3.9	0.27	ug/g	<0.10	na	na	<0.10	na	na	<0.10	na	na	<0.10	na	na	<0.10	na	na
Molybdenum	40	6.9	ug/g	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	0.5	<0.5	<0.5	0.5	<0.5	<0.5
Nickel	270	100	ug/g	58	60	25	64	55	40	65	62	11	47	43	37	27	66	43
Selenium	5.5	2.4	ug/g	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Silver	40	20	ug/g	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	3.3	1	ug/g	0.4	0.5	<0.4	0.5	0.4	<0.4	<0.4	0.5	<0.4	<0.4	0.40	<0.4	<0.4	<0.4	0.50
Vanadium	86	86	ug/g	91	101	57	99	98	76	88	102	25	89	88	80	53	94	93
Zinc	340	340	ug/g	123	137	71	132	129	101	120	146	56	96	127	112	80	109	134
pH (pH Units)	NV	NV	pH	7.23	na	na	7.05	na	na	7.15	na	na	7.07	na	na	7.24	na	na
Conductivity (ms/cm)	1.4	0.7	mS/cm	0.458	na	na	0.419	na	na	0.465	na	na	0.363	na	na	0.325	na	na
Sodium Absorption Ratio	12	5	N/A	0.486	na	na	0.855	na	na	1.11	na	na	0.565	na	na	0.657	na	na
Cyanide, Free	0.051	0.051	ug/g	<0.040	na	na	<0.040	na	na	<0.040	na	na	<0.040	na	na	<0.040	na	na
Boron (Total)	120	120	ug/g	<5	<5	6	<5	<5	8	6	5	9	<5	8	9	<5	6	8
Uranium	33	23	ug/g	0.6	0.6	<0.5	0.7	0.6	0.6	0.6	0.7	0.6	1	0.6	0.6	0.9	1	0.6
Polycyclic Aromatic Hydrocarbons (PAHs)																		
Acenaphthene	21	7.9	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	<0.05
Acenaphthylene	0.15	0.15	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	<0.05
Anthracene	0.67	0.67	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	<0.05
Benzo(a)anthracene	0.96	0.5	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	<0.05
Benzo(a)pyrene	0.3	0.3	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	<0.05
Benzo(b)fluoranthene	0.96	0.78	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	<0.05
Benzo(ghi)perylene	9.6	6.6	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	<0.05
Benzo(k)fluoranthene	0.96	0.78	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	<0.05
Chrysene	9.6	7	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	<0.05
Dibenzo(a,h)anthracene	0.1	0.1	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	<0.05
Fluoranthene	9.6	0.69	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	<0.05
Fluorene	62	62	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0.11
Indeno(1,2,3-cd)pyrene	0.76	0.38	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	<0.05
1-Methylnaphthalene	NC	NC	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
2-Methylnaphthalene	NC	NC	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
1,2-Methylnaphthalene	30	0.99	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0.5
Naphthalene	9.6	0.6	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0.06
Phenanthrene	12	6.2	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0.17
Pyrene	96	78	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	<0.05

Notes:
'NV' : No Standard established
na: Not analysed
MOECC Table 2: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, " March 2004, amended July 1, 2011. Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial, Commercial, Community (ICC) and Residential. Parkland, Institutional (RPI) Property Use with coarse textured soils.

¹ BH/TP location is on the north portion of the Site (ICC criteria may be used)
² BH/TP location is on the south portion of the Site (RPI criteria may be used)

100	Exceeds MOECC Table 2 ICC Standard Value
100	Exceeds MOECC Table 2 RPI Standard Value
100	Method Detection Limit Exceeds MOECC Standard



Table 2: Summary of Analytical Results in Soil
Metals and Inorganics and PAHs (2016)
Part of Lot 4, Concession 3, Parts 1 to 5, Gloucester, Ontario
(3646, 3636 and 3604 Innes Road, Ottawa, Ontario)

Sample ID	MOECC Table 2 Standards (ICC)	MOECC Table 2 Standards (RPI)	Units	BH16-6-1B ¹	BH16-6-2B ¹	BH16-7-1 ¹	BH16-7-2B ¹	BH16-8-1 ¹	TP16-5 SA1 ¹	BH16-8-2B ²	BH16-9-1 ²	BH16-9-2B ²	BH16-9-4 ²	BH16-10-11 ²	BH16-10-2B ²	BH16-10-4A ²	BH16-11-2A ²	BH16-11-3B ²
Depth (m) Sampling Date				0.23-1.52 6/1/16	2.90-3.05 6/1/16	0.20-1.52 6/1/16	2.44-3.05 6/1/16	0.20-1.52 6/1/16	1.00-1.14 11/2/16	2.44-3.05 6/1/16	0.17-1.52 6/2/16	2.67-3.05 6/2/16	4.57-6.10 6/2/16	0.23-1.52 6/2/16	2.61-3.05 6/2/16	4.57-6.10 6/2/16	1.52-2.62 6/2/16	4.22-4.57 6/2/16
Metals and Inorganics																		
Antimony	40	7.5	ug/g	<0.8	<0.8	<0.8	<0.8	<0.8	na	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	18	ug/g	3	3	2	1	2	na	2	2	1	1	2	1	2	2	1
Barium	670	390	ug/g	180	285	302	338	296	na	524	263	304	84	268	303	294	290	297
Beryllium	8	4	ug/g	0.6	0.9	1.0	0.7	0.9	na	1.0	0.9	0.7	<0.5	0.8	0.8	0.7	0.8	0.7
Boron (Hot Water Soluble)	2	1.5	ug/g	0.55	na	0.11	na	<0.10	na	na	0.22	na	na	<0.10	na	na	0.25	na
Cadmium	1.9	1.2	ug/g	<0.5	<0.5	<0.5	<0.5	<0.5	na	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	160	160	ug/g	63	61	118	50	121	na	77	112	99	14	103	102	80	107	99
Chromium VI	8	8	ug/g	<0.2	na	<0.2	na	na	na	na	<0.2	na	na	<0.2	na	na	<0.2	na
Cobalt	80	22	ug/g	12.4	18.4	22.4	15.1	25.9	na	22.7	19.3	20.0	5.4	18.7	22.6	19.6	23.7	21.1
Copper	230	140	ug/g	27	35	50	30	44	na	47	47	46	11	44	45	40	48	47
Lead	120	120	ug/g	9	8	8	6	9	na	9	8	6	4	7	6	7	7	6
Mercury	3.9	0.27	ug/g	<0.10	na	<0.10	na	<0.10	na	na	<0.10	na	na	<0.10	na	na	<0.10	na
Molybdenum	40	6.9	ug/g	0.6	<0.5	<0.5	<0.5	0.5	na	0.5	0.6	<0.5	0.6	<0.5	<0.5	1	<0.5	0.7
Nickel	270	100	ug/g	34	37	67	32	67	na	49	60	56	10	58	59	47	62	56
Selenium	5.5	2.4	ug/g	<0.4	<0.4	<0.4	<0.4	<0.4	na	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Silver	40	20	ug/g	<0.2	<0.2	<0.2	<0.2	<0.2	na	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	3.3	1	ug/g	<0.4	<0.4	0.50	<0.4	0.40	na	0.60	<0.4	0.40	<0.4	<0.4	0.40	<0.4	0.40	<0.4
Vanadium	86	86	ug/g	60	83	103	68	98	na	101	99	102	21	89	96	87	100	94
Zinc	340	340	ug/g	85	118	128	94	126	na	149	114	126	21	106	123	117	124	123
pH (pH Units)	NV	NV	pH	7.42	na	7.13	na	7.25	na	na	7.15	na	na	6.77	na	na	7.05	na
Conductivity (ms/cm)	1.4	0.7	mS/cm	0.569	na	0.579	na	1.86	0.906	na	0.394	na	na	0.215	na	na	0.176	na
Sodium Absorption Ratio	12	5	N/A	5.41	na	1.02	na	4.79	na	na	1.1	na	na	1.04	na	na	0.622	na
Cyanide, Free	0.051	0.051	ug/g	<0.040	na	<0.040	na	<0.040	na	na	<0.040	na	na	<0.040	na	na	<0.040	na
Boron (Total)	120	120	ug/g	<5	9	<5	6	<5	na	8	<5	<5	<5	<5	<5	8	<5	5
Uranium	33	23	ug/g	0.6	0.6	0.8	0.6	0.9	na	0.7	1	0.9	<0.5	0.8	0.8	1.8	1	1
Polycyclic Aromatic Hydrocarbons (PAHs)																		
Acenaphthene	21	7.9	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Acenaphthylene	0.15	0.15	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Anthracene	0.67	0.67	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Benzo(a)anthracene	0.96	0.5	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Benzo(a)pyrene	0.3	0.3	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Benzo(b,j)fluoranthene	0.96	0.78	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Benzo(ghi)perylene	9.6	6.6	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Benzo(k)fluoranthene	0.96	0.78	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Chrysene	9.6	7	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Dibenzo(a,h)anthracene	0.1	0.1	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Fluoranthene	9.6	0.69	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Fluorene	62	62	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Indeno(1,2,3-cd)pyrene	0.76	0.38	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
1-Methylnaphthalene	NC	NC	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
2-Methylnaphthalene	NC	NC	ug/g	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
1,2-Methylnaphthalene	30	0.99	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Naphthalene	9.6	0.6	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Phenanthrene	12	6.2	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na
Pyrene	96	78	ug/g	na	na	<0.05	na	<0.05	na	na	na	na	na	na	na	na	na	na

Notes:
'NV' : No Standard established
na': Not analysed
MOECC Table 2: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, " March 2004, amended July 1, 2011. Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial, Commercial, Community (ICC) and Residential. Parkland, Institutional (RPI) Property Use with coarse textured soils.

¹ BH/TP location is on the north portion of the Site (ICC criteria may be used)
² BH/TP location is on the south portion of the Site (RPI criteria may be used)

100	Exceeds MOECC Table 2 ICC Standard Value
100	Exceeds MOECC Table 2 RPI Standard Value
100	Method Detection Limit Exceeds MOECC Standard



Table 2: Summary of Analytical Results in Soil
Metals and Inorganics and PAHs (2016)
Part of Lot 4, Concession 3, Parts 1 to 5, Gloucester, Ontario
(3646, 3636 and 3604 Innes Road, Ottawa, Ontario)

Sample ID	MOECC Table 2 Standards (ICC)	MOECC Table 2 Standards (RPI)	Units	BH16-12-2A ² 1.52-2.11 6 / 2 / 16	BH16-12-3B ² 3.81-4.57 6 / 2 / 16	BH16-13-2A ² 1.52-2.75 6 / 2 / 16	BH16-13-102A ² (Duplicate of BH16-13-2A) 1.52-2.75 6 / 2 / 16	BH16-13-3B ² 3.53-4.57 6 / 2 / 16
Depth (m) Sampling Date								
Metals and Inorganics								
Antimony	40	7.5	ug/g	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	18	ug/g	2	1	2	2	2
Barium	670	390	ug/g	288	369	273	272	246
Beryllium	8	4	ug/g	0.7	0.7	0.8	0.7	0.7
Boron (Hot Water Soluble)	2	1.5	ug/g	0.37	na	0.34	na	na
Cadmium	1.9	1.2	ug/g	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	160	160	ug/g	116	99	112	109	84
Chromium VI	8	8	ug/g	<0.2	na	<0.2	na	na
Cobalt	80	22	ug/g	24.2	23.2	22.2	22.4	18.2
Copper	230	140	ug/g	51	50	47	46	38
Lead	120	120	ug/g	8	7	7	7	6
Mercury	3.9	0.27	ug/g	<0.10	na	<0.10	na	na
Molybdenum	40	6.9	ug/g	<0.5	1	<0.5	<0.5	0.9
Nickel	270	100	ug/g	66	58	64	63	48
Selenium	5.5	2.4	ug/g	<0.4	<0.4	<0.4	<0.4	<0.4
Silver	40	20	ug/g	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	3.3	1	ug/g	0.40	0.50	<0.4	<0.4	<0.4
Vanadium	86	86	ug/g	105	114	94	93	82
Zinc	340	340	ug/g	129	141	123	120	108
pH (pH Units)	NV	NV	pH	7.13	na	7.13	na	na
Conductivity (ms/cm)	1.4	0.7	mS/cm	0.091	na	0.075	na	na
Sodium Absorption Ratio	12	5	N/A	0.436	na	0.416	na	na
Cyanide, Free	0.051	0.051	ug/g	<0.040	na	<0.040	na	na
Boron (Total)	120	120	ug/g	<5	5	5	<5	7
Uranium	33	23	ug/g	1.2	0.9	0.9	0.9	1.9
Polycyclic Aromatic Hydrocarbons (PAHs)								
Acenaphthene	21	7.9	ug/g	na	na	na	na	na
Acenaphthylene	0.15	0.15	ug/g	na	na	na	na	na
Anthracene	0.67	0.67	ug/g	na	na	na	na	na
Benzo(a)anthracene	0.96	0.5	ug/g	na	na	na	na	na
Benzo(a)pyrene	0.3	0.3	ug/g	na	na	na	na	na
Benzo(b)fluoranthene	0.96	0.78	ug/g	na	na	na	na	na
Benzo(ghi)perylene	9.6	6.6	ug/g	na	na	na	na	na
Benzo(k)fluoranthene	0.96	0.78	ug/g	na	na	na	na	na
Chrysene	9.6	7	ug/g	na	na	na	na	na
Dibenzo(a,h)anthracene	0.1	0.1	ug/g	na	na	na	na	na
Fluoranthene	9.6	0.69	ug/g	na	na	na	na	na
Fluorene	62	62	ug/g	na	na	na	na	na
Indeno(1,2,3-cd)pyrene	0.76	0.38	ug/g	na	na	na	na	na
1-Methylnaphthalene	NC	NC	ug/g	na	na	na	na	na
2-Methylnaphthalene	NC	NC	ug/g	na	na	na	na	na
1,2-Methylnaphthalene	30	0.99	ug/g	na	na	na	na	na
Naphthalene	9.6	0.6	ug/g	na	na	na	na	na
Phenanthrene	12	6.2	ug/g	na	na	na	na	na
Pyrene	96	78	ug/g	na	na	na	na	na

Notes:

'NV' : No Standard established

na': Not analysed

MOECC Table 2: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, " March 2004, amended July 1, 2011. Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial, Commercial, Community (ICC) and Residential. Parkland, Institutional (RPI) Property Use with coarse textured soils.

¹ BH/TP location is on the north portion of the Site (ICC criteria may be used)

² BH/TP location is on the south portion of the Site (RPI criteria may be used)

100	Exceeds MOECC Table 2 ICC Standard Value
100	Exceeds MOECC Table 2 RPI Standard Value
100	Method Detection Limit Exceeds MOECC Standard



Table 3: Summary of Analytical Results in Soil
PHCs and BTEX (2013)
Part of Lot 4, Concession 3, Parts 1 to 5, Gloucester, Ontario
(3646, 3636 and 3604 Innes Road, Ottawa, Ontario)

Sample ID Depth (m) Sampling Date	MOECC Table 2 Standards (ICC)	MOECC Table 2 Standards (RPI)	Units	F-01 ¹ 0.40-0.50 6/27/13	F-02 ¹ 0.45-0.55 6/27/13	F-02 ¹ 0.55-0.75 6/27/13	F-03 ¹ 0.30-0.50 6/27/13	F-03 ¹ 0.50-0.91 6/27/13	F-03 ¹ 1.01-1.11 6/27/13	F-04 ¹ 0.61-1.22 6/27/13	F-05 ¹ 1.32-1.83 6/27/13
Petroleum Hydrocarbon Compounds (PHCs)											
F1 (C6-C10)	55	55	ug/g	<10	20	<10	<10	<10	<10	<10	<10
F1 (C6-C10) - BTEX	55	55	ug/g	<10	na	<10	<10	<10	<10	<10	<10
F2 (C10-C16)	230	98	ug/g	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16-C34)	1700	300	ug/g	<20	<20	<20	<20	<20	<20	<20	<20
F4 (C34-C50)	3300	2800	ug/g	40	100	60	20	<20	<20	20	<20
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)											
Benzene	0.32	0.21	ug/g	<0.02	na	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	1.1	1.1	ug/g	<0.05	na	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	6.4	2.3	ug/g	<0.02	na	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
m-Xylene & p-Xylene	NV	NV	ug/g	<0.05	na	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	NV	NV	ug/g	<0.05	na	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Xylenes	300	3.1	ug/g	<0.05	na	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Notes:

'NV' : No Standard established

na': Not analysed

MOECC Table 2: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, " March 2004, amended July 1, 2011. Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial, Commercial, Community (ICC) and Residential. Parkland, Institutional (RPI) Property Use with coarse textured soils.

¹ BH/TP location is on the north portion of the Site (ICC criteria may be used)

² BH/TP location is on the south portion of the Site (RPI criteria may be used)

100	Exceeds MOECC Table 2 ICC Standard Value
100	Exceeds MOECC Table 2 RPI Standard Value
100	Method Detection Limit Exceeds MOECC Standard



Table 3: Summary of Analytical Results in Soil
PHCs and BTEX (2013)
Part of Lot 4, Concession 3, Parts 1 to 5, Gloucester, Ontario
(3646, 3636 and 3604 Innes Road, Ottawa, Ontario)

Sample ID Depth (m) Sampling Date	MOECC Table 2 Standards (ICC)	MOECC Table 2 Standards (RPI)	Units	F-06 ¹ 0.00-0.61 6/27/13	F-07 ¹ 0.61-1.22 6/27/13	F-08 ¹ 0.61-1.22 6/27/13	F-09 ¹ 0.00-0.61 6/27/13	PO-01 ¹ 0.61-0.86 6/27/13	TE-01 ¹ 0.30-0.60 7/2/13	TE-02 ¹ 0.00-0.35 7/2/13	TE-02 ¹ 0.35-1.00 7/2/13
Petroleum Hydrocarbon Compounds (PHCs)											
F1 (C6-C10)	55	55	ug/g	<10	<10	30	<10	<10	<10	<10	<10
F1 (C6-C10) - BTEX	55	55	ug/g	<10	<10	30	<10	<10	<10	<10	<10
F2 (C10-C16)	230	98	ug/g	<10	<10	<10	<10	<10	<10	20	<10
F3 (C16-C34)	1700	300	ug/g	30	<20	80	60	<20	<20	31100	100
F4 (C34-C50)	3300	2800	ug/g	60	<20	30	240	140	70	10400	160
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)											
Benzene	0.32	0.21	ug/g	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	1.1	1.1	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	6.4	2.3	ug/g	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
m-Xylene & p-Xylene	NV	NV	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	NV	NV	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Xylenes	300	3.1	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<1	<0.05

Notes:

'NV' : No Standard established

na': Not analysed

MOECC Table 2: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, " March 2004, amended July 1, 2011. Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial, Commercial, Community (ICC) and Residential. Parkland, Institutional (RPI) Property Use with coarse textured soils.

¹ BH/TP location is on the north portion of the Site (ICC criteria may be used)

² BH/TP location is on the south portion of the Site (RPI criteria may be used)

100	Exceeds MOECC Table 2 ICC Standard Value
100	Exceeds MOECC Table 2 RPI Standard Value
100	Method Detection Limit Exceeds MOECC Standard



Table 3: Summary of Analytical Results in Soil
PHCs and BTEX (2013)
Part of Lot 4, Concession 3, Parts 1 to 5, Gloucester, Ontario
(3646, 3636 and 3604 Innes Road, Ottawa, Ontario)

Sample ID Depth (m) Sampling Date	MOECC Table 2 Standards (ICC)	MOECC Table 2 Standards (RPI)	Units	TE-02 ¹ 1.00-1.45 7/2/13	TE-03 ¹ 0.30-1.00 7/2/13	TE-04 ¹ 1.00-2.30 7/2/13	TE-05 ¹ 0.15-2.30 7/2/13
Petroleum Hydrocarbon Compounds (PHCs)							
F1 (C6-C10)	55	55	ug/g	<10	<10	<10	<10
F1 (C6-C10) - BTEX	55	55	ug/g	<10	na	na	na
F2 (C10-C16)	230	98	ug/g	<10	<10	<10	<10
F3 (C16-C34)	1700	300	ug/g	110	<20	30	<20
F4 (C34-C50)	3300	2800	ug/g	60	<20	40	<20
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)							
Benzene	0.32	0.21	ug/g	<0.02	na	na	na
Ethylbenzene	1.1	1.1	ug/g	<0.05	na	na	na
Toluene	6.4	2.3	ug/g	<0.2	na	na	na
m-Xylene & p-Xylene	NV	NV	ug/g	<0.05	na	na	na
o-Xylene	NV	NV	ug/g	<0.05	na	na	na
Total Xylenes	300	3.1	ug/g	<0.05	na	na	na

Notes:
'NV ' : No Standard established
na': Not analysed
MOECC Table 2: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, " March 2004, amended July 1, 2011. Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial, Commercial, Community (ICC) and Residential. Parkland, Institutional (RPI) Property Use with coarse textured soils.

¹ BH/TP location is on the north portion of the Site (ICC criteria may be used)
² BH/TP location is on the south portion of the Site (RPI criteria may be used)

100	Exceeds MOECC Table 2 ICC Standard Value
100	Exceeds MOECC Table 2 RPI Standard Value
100	Method Detection Limit Exceeds MOECC Standard



**Table 4: Summary of Analytical Results in Soil
PHCs and BTEX (2016)**
Part of Lot 4, Concession 3, Parts 1 to 5, Gloucester, Ontario
(3646, 3636 and 3604 Innes Road, Ottawa, Ontario)

Sample ID	MOECC Table 2 Standards (ICC)	MOECC Table 2 Standards (RPI)	Units	BH16-4-1B ¹	BH16-5-1B ¹	BH16-5-101B ¹ (Duplicate of BH16-5-1B)	BH16-5-2B ¹	BH16-6-1B ¹	BH16-7-1 ¹	BH16-8-1 ¹	TP16-6 SA1 ¹	TP16-6 SA101 ¹ (Duplicate of TP16-6 SA1)
Depth (m) Sampling Date				0.43-1.52 6/1/16	0.23-1.52 6/1/16	0.23-1.52 6/1/16	2.9-3.05 6/1/16	0.23-1.52 6/1/16	0.20-1.52 6/1/16	0.20-1.53 6/1/16	0.66-0.68 11/2/16	0.66-0.68 11/2/16
Petroleum Hydrocarbon Compounds (PHCs)												
F1 (C6-C10)	55	55	ug/g	na	na	na	11	<5	<5	<5	<5	<5
F1 (C6-C10) - BTEX	55	55	ug/g	na	na	na	11	<5	<5	<5	<5	<5
F2 (C10-C16)	230	98	ug/g	<10	<10	<10	34	<10	<10	<10	<10	<10
F3 (C16-C34)	1700	300	ug/g	<50	<50	<50	<50	<50	<50	<50	130	160
F4 (C34-C50)	3300	2800	ug/g	<50	<50	<50	<50	<50	<50	<50	<50	<50
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)												
Benzene	0.32	0.21	ug/g	na	na	na	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	1.1	1.1	ug/g	na	na	na	0.16	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	6.4	2.3	ug/g	na	na	na	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
m-Xylene & p-Xylene	NV	NV	ug/g	na	na	na	na	na	na	na	na	na
o-Xylene	NV	NV	ug/g	na	na	na	na	na	na	na	na	na
Total Xylenes	300	3.1	ug/g	na	na	na	0.06	<0.05	<0.05	<0.05	<0.05	<0.05

Notes:

'NV' : No Standard established

na: Not analysed

MOECC Table 2: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, " March 2004, amended July 1, 2011. Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial, Commercial, Community (ICC) and Residential. Parkland, Institutional (RPI) Property Use with coarse textured soils.

¹ BH/TP location is on the north portion of the Site (ICC criteria may be used)

² BH/TP location is on the south portion of the Site (RPI criteria may be used)

100	Exceeds MOECC Table 2 RPI Standard Value
100	Method Detection Limit Exceeds MOE Standard



Table 5: Summary of Analytical Results in Soil (Confirmatory Sampling)
PHCs and BTEX
Part of Lot 4, Concession 3, Parts 1 to 5, Gloucester, Ontario
(3646, 3636 and 3604 Innes Road, Ottawa, Ontario)

Sample ID	MOECC Table 2 Standards (ICC)	Units	FL-01 ¹	FL-101 ¹ (Duplicate of FL-01)	FL-04 ¹	WW-14 ¹	SW-11 ¹	EW-8 ¹
Depth (m) Sampling Date			0.91 11/2/16	0.91 11/2/16	0.91 11/2/16	1-Jan 11/2/16	0.3 11/2/16	0.3 11/2/16
Petroleum Hydrocarbon Compounds (PHCs)								
F1 (C6-C10)	55	ug/g	<5	<5	<5	<5	<5	<5
F1 (C6-C10) - BTEX	55	ug/g	<5	<5	<5	<5	<5	<5
F2 (C10-C16)	230	ug/g	<10	<10	<10	<10	<10	<10
F3 (C16-C34)	1700	ug/g	200	68	<50	160	380	400
F4 (C34-C50)	3300	ug/g	<50	<50	<50	79	100	130
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)								
Benzene	0.32	ug/g	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	1.1	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	6.4	ug/g	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Total Xylenes	26	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Notes:

'NV': No Standard established

na: Not analysed

MOECC Table 2: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act," March 2004, amended July 1, 2011. Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial, Commercial, Community (ICC) and Residential. Parkland, Institutional (RPI) Property Use with coarse textured soils.

¹ Location is on the north portion of the Site (ICC criteria may be used)

² Location is on the south portion of the Site (RPI criteria may be used)

100	Exceeds MOECC Table 2 ICC Standard Value
100	Method Detection Limit Exceeds MOECC Standard



**Table 6: Summary of Analytical Results in Groundwater
Metals and Inorganics and PAHs
Part of Lot 4, Concession 3, Parts 1 to 5, Gloucester, Ontario
(3646, 3636 and 3604 Innes Road, Ottawa, Ontario)**

Sample ID Sampling Date	MOECC Table 2 Standards	Units	MW16-3 6/7/16	MW16-5 6/7/16	MW16-8 6/7/16	MW16-108 (Duplicate of MW16-8) 6/7/16
Metals and Inorganics						
Antimony	6	ug/L	<1.0	<1.0	<1.0	<1.0
Arsenic	25	ug/L	<1.0	1.9	<1.0	<1.0
Barium	1000	ug/L	89.7	166	224	187
Beryllium	4	ug/L	<0.5	<0.5	<0.5	<0.5
Boron (Total)	5000	ug/L	48.5	41.9	21.5	16.3
Cadmium	2.7	ug/L	<0.2	<0.2	<0.2	<0.2
Chromium	50	ug/L	2.4	4.9	2.6	5
Chromium VI	25	ug/L	<5	<5	<5	<5
Cobalt	3.8	ug/L	<0.5	3.3	0.9	0.8
Copper	87	ug/L	2	<1.0	1.1	<1.0
Lead	10	ug/L	<0.5	<0.5	<0.5	<0.5
Mercury	0.29	ug/L	<0.02	<0.02	<0.02	<0.02
Molybdenum	70	ug/L	0.6	1.2	<0.5	<0.5
Nickel	100	ug/L	1.3	<1.0	1.4	<1.0
Selenium	10	ug/L	1.6	<1.0	<1.0	<1.0
Silver	1.5	ug/L	<0.2	<0.2	<0.2	<0.2
Thallium	2	ug/L	<0.3	<0.3	<0.3	<0.3
Vanadium	6.2	ug/L	2.4	1.5	4.8	4.8
Zinc	1100	ug/L	<5.0	<5.0	<5.0	<5.0
Cyanide, Free	66	ug/L	<2	<2	<2	<2
Chloride	790000	ug/L	133000	286000	341000	358000
Uranium	20	ug/L	1.3	5	4.4	3.7
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	4.1	ug/L	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	1	ug/L	<0.20	<0.20	<0.20	<0.20
Anthracene	2.4	ug/L	<0.10	<0.10	<0.10	<0.10
Benzo(a)anthracene	1	ug/L	<0.20	<0.20	<0.20	<0.20
Benzo(a)pyrene	0.01	ug/L	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	0.1	ug/L	<0.10	<0.10	<0.10	<0.10
Benzo(ghi)perylene	0.2	ug/L	<0.20	<0.20	<0.20	<0.20
Benzo(k)fluoranthene	0.1	ug/L	<0.10	<0.10	<0.10	<0.10
Chrysene	0.1	ug/L	<0.10	<0.10	<0.10	<0.10
Dibenzo(a,h)anthracene	0.2	ug/L	<0.20	<0.20	<0.20	<0.20
Fluoranthene	0.41	ug/L	<0.20	<0.20	<0.20	<0.20
Fluorene	120	ug/L	<0.20	<0.20	<0.20	<0.20
Indeno(1,2,3-cd)pyrene	0.2	ug/L	<0.20	<0.20	<0.20	<0.20
1-Methylnaphthalene	NV	ug/L	NA	NA	NA	NA
2-Methylnaphthalene	NV	ug/L	NA	NA	NA	NA
1,2-Methylnaphthalene	3.2	ug/L	<0.20	<0.20	<0.20	<0.20
Naphthalene	11	ug/L	<0.20	<0.20	<0.20	<0.20
Phenanthrene	1	ug/L	<0.10	<0.10	<0.10	<0.10
Pyrene	4.1	ug/L	<0.20	<0.20	<0.20	<0.20

Notes:

'NV': No Standard established

NA: Parameter not analyzed

na: Not analysed

MOECC Table 2: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act," March 2004, amended July 1, 2011. Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for All Types of Property Uses

100	Exceeds MOECC Table 2 RPI Standard Value
100	Method Detection Limit Exceeds MOE Standard

**Table 7: Summary of Analytical Results in Groundwater
PHCs and VOCs
Part of Lot 4, Concession 3, Parts 1 to 5, Gloucester, Ontario
(3646, 3636 and 3604 Innes Road, Ottawa, Ontario)**

Sample ID	MOECC Table 2 Standards	Units	MW16-3	MW16-5	MW16-8	MW16-108 (Duplicate of MW16-8)	MW16-5
Sampling Date			6 / 7 / 16	6 / 7 / 16	6 / 7 / 16	6 / 7 / 16	11 / 2 / 16
Petroleum Hydrocarbon Compounds (PHCs)							
F1 (C6-C10)	750	ug/L	<25	360	<25	<25	<u>1000</u>
F1 (C6-C10) - BTEX	750	ug/L	<25	360	<25	<25	<u>960</u>
F2 (C10-C16)	150	ug/L	<100	<u>530</u>	<100	<100	<u>4000</u>
F3 (C16-C34)	500	ug/L	<100	390	<100	<100	<u>3300</u>
F4 (C34-C50)	500	ug/L	<100	<100	<100	<100	<100
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)							
Benzene	5	ug/L	<0.20	1.1	<0.20	<0.20	1.9
Ethylbenzene	2.4	ug/L	<0.10	<u>15</u>	<0.10	<0.10	<u>31</u>
Toluene	24	ug/L	<0.20	0.39	<0.20	<0.20	0.32
m-Xylene & p-Xylene	NV	ug/L	-	-	-	-	-
o-Xylene	NV	ug/L	-	-	-	-	-
Total Xylenes	300	ug/L	<0.20	4.2	<0.20	<0.20	9.5

Notes:

'NV' : No Standard established

NA': Not analysed

MOECC Table 2: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, " March 2004, amended July 1, 2011.
Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for All Types of Property Use

<u>100</u>	Exceeds MOECC Table 2 RPI Standard Value
<u>100</u>	Method Detection Limit Exceeds MOE Standard



Table 8: Summary of Relative Percent Differences (RPDs) in Soil
Part of Lot 4, Concession 3, Parts 1 to 5, Gloucester, Ontario
(3646, 3636 and 3604 Innes Road, Ottawa, Ontario)

Parameter	MOECC Alert Criteria	Sample ⁽¹⁾	Duplicate	% Difference	Sample ⁽¹⁾	Duplicate	% Difference	Sample ⁽¹⁾	Duplicate	% Difference	Sample ⁽¹⁾	Duplicate	% Difference
		BH16-4-2B	BH16-4-102B		BH16-5-1B	BH16-5-101B		BH16-13-2A	BH16-13-102A		TE-02	Duplicate	
Metals and Inorganics													
Antimony	30%	<0.8	<0.8	-	<0.8	<0.8	-	<0.8	<0.8	-	<1	<1	-
Arsenic	30%	2	4	66.7%	1	2	66.7%	2	2	0.0%	2	2	0.0%
Barium	30%	347	250	32.5%	129	266	69.4%	273	272	0.4%	347	383	9.9%
Beryllium	30%	1	0.8	22.2%	0.6	0.9	40.0%	0.8	0.7	13.3%	<1	<1	-
Boron (Hot Water Soluble)	40%	na	na	-	0.29	na	-	0.34	na	-	na	na	-
Cadmium	30%	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Chromium	30%	70	57	20.5%	59	125	71.7%	112	109	2.7%	111	122	9.4%
Chromium VI	35%	na	na	-	<0.2	na	-	<0.2	na	-	na	na	-
Cobalt	30%	20.2	18.2	10.4%	11.2	22.2	65.9%	22.2	22.4	0.9%	18	20	10.5%
Copper	30%	35	35	0.0%	16	44	93.3%	47	46	2.2%	50	65	26.1%
Lead	30%	7	8	13.3%	8	8	0.0%	7	7	0.0%	na	na	-
Mercury	30%	na	na	-	<0.10	na	-	<0.10	na	-	na	na	-
Molybdenum	30%	<0.5	<0.5	-	0.5	<0.5	-	<0.5	<0.5	-	<1	<1	-
Nickel	30%	43	37	15.0%	27	66	83.9%	64	63	1.6%	60	65	8.0%
Selenium	30%	<0.4	<0.4	-	<0.4	<0.4	-	<0.4	<0.4	-	na	na	-
Silver	30%	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2	-
Thallium	30%	0.4	<0.4	-	<0.4	<0.4	-	<0.4	<0.4	-	<1	<1	-
Vanadium	30%	88	80	9.5%	53	94	55.8%	94	93	1.1%	98	109	10.6%
Zinc	30%	127	112	12.6%	80	109	30.7%	123	120	2.5%	113	135	17.7%
pH (pH Units)	0.3	na	na	-	7.24	na	-	7.13	na	-	na	na	-
Conductivity (ms/cm)	10%	na	na	-	0.325	na	-	0.075	na	-	na	na	-
Sodium Absorption Ratio	30%	na	na	-	0.657	na	-	0.416	na	-	na	na	-
Cyanide, Free	35%	na	na	-	<0.040	na	-	<0.040	na	-	na	na	-
Chloride	30%	0	0	-	0	0	-	0	0	-	0	0	-
Boron (Total)	30%	8	9	11.8%	<5	6	-	5	<5	-	40	40	0.0%
Uranium	30%	0.6	0.6	0.0%	0.9	1	10.5%	0.9	0.9	0.0%	0.9	0.9	0.0%

Parameter	MOECC Alert Criteria	Sample ⁽¹⁾	Duplicate	% Difference	Sample ⁽¹⁾	Duplicate	% Difference	Sample ⁽¹⁾	Duplicate	% Difference
		BH16-5-1B	BH16-5-101B		TP16-6 SA1	TP16-6 SA101		FL-01	FL-101	
Petroleum Hydrocarbon Compounds (PHCs)										
F1 (C6-C10)	30%	na	na	-	<5	<5	-	<5	<5	-
F1 (C6-C10) - BTEX	30%	na	na	-	<5	<5	-	<5	<5	-
F2 (C10-C16)	30%	<10	<10	-	<10	<10	-	<10	<10	-
F3 (C16-C34)	30%	<50	<50	-	130	160	20.7%	200	68	-
F4 (C34-C50)	30%	<50	<50	-	<50	<50	-	<50	<50	-

Parameter	MOECC Alert Criteria	Sample ⁽¹⁾	Duplicate	% Difference	Sample ⁽¹⁾	Duplicate	% Difference
		TP16-6 SA1	TP16-6 SA101		FL-01	FL-101	
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)							
Benzene	50%	<0.02	<0.02	-	<0.02	<0.02	-
Ethylbenzene	50%	<0.05	<0.05	-	<0.05	<0.05	-
Toluene	50%	<0.08	<0.08	-	<0.08	<0.08	-
Total Xylenes	50%	<0.05	<0.05	-	<0.05	<0.05	-

Notes:	
(1)	All results reported in micrograms per gram (µg/g) unless otherwise noted.
<	Parameter not detected above value specified
% Difference	Relative Percent Difference = (X-Y)/Average(X,Y) x 100% where X is the sample and Y is the duplicate
-	RPD could not be calculated
40.5%	RPD exceeds MOECC Alert Criteria



Table 9: Summary of Relative Percent Differences (RPDs) in Groundwater
Part of Lot 4, Concession 3, Parts 1 to 5, Gloucester, Ontario
(3646, 3636 and 3604 Innes Road, Ottawa, Ontario)

Parameter	MOECC Alert Criteria	Sample ⁽¹⁾	Duplicate	% Difference
		MW16-8	MW16-108	
Metals and Inorganics				
Antimony	20%	<1.0	<1.0	-
Arsenic	20%	<1.0	<1.0	-
Barium	20%	224	187	18.0%
Beryllium	20%	<0.5	<0.5	-
Boron (Total)	20%	21.5	16.3	27.5%
Cadmium	20%	<0.2	<0.2	-
Chromium	20%	2.6	5	63.2%
Chromium VI	20%	<5	<5	-
Cobalt	20%	0.9	0.8	11.8%
Copper	20%	1.1	<1.0	-
Lead	20%	<0.5	<0.5	-
Mercury	20%	<0.02	<0.02	-
Molybdenum	20%	<0.5	<0.5	-
Nickel	20%	1.4	<1.0	-
Selenium	20%	<1.0	<1.0	-
Silver	20%	<0.2	<0.2	-
Thallium	20%	<0.3	<0.3	-
Vanadium	20%	4.8	4.8	0.0%
Zinc	20%	<5.0	<5.0	-
pH (pH Units)	0.3	0	0	-
Conductivity (ms/cm)	10%	0	0	-
Cyanide, Free	20%	<2	<2	-
Chloride	20%	341000	358000	4.9%
Uranium	20%	4.4	3.7	17.3%

Parameter	MOECC Alert Criteria	Sample ⁽¹⁾	Duplicate	% Difference
		MW16-8	MW16-108	
PAHs				
Acenaphthene	30%	<0.20	<0.20	-
Acenaphthylene	30%	<0.20	<0.20	-
Anthracene	30%	<0.10	<0.10	-
Benzo(a)anthracene	30%	<0.20	<0.20	-
Benzo(a)pyrene	30%	<0.01	<0.01	-
Benzo(b/j)fluoranthene	30%	<0.10	<0.10	-
Benzo(ghi)perylene	30%	<0.20	<0.20	-
Benzo(k)fluoranthene	30%	<0.10	<0.10	-
Chrysene	30%	<0.10	<0.10	-
Dibenzo(a,h)anthracene	30%	<0.20	<0.20	-
Fluoranthene	30%	<0.20	<0.20	-
Fluorene	30%	<0.20	<0.20	-
Indeno(1,2,3-cd)pyrene	30%	<0.20	<0.20	-
1,2-Methylnaphthalene	30%	<0.20	<0.20	-
Naphthalene	30%	<0.20	<0.20	-
Phenanthrene	30%	<0.10	<0.10	-
Pyrene	30%	<0.20	<0.20	-

Parameter	MOECC Alert Criteria	Sample ⁽¹⁾	Duplicate	% Difference
		MW16-8	MW16-108	
BTEX and PHCs				
F1 (C6-C10)	30%	<25	<25	-
F1 (C6-C10) - BTEX	30%	<25	<25	-
F2 (C10-C16)	30%	<100	<100	-
F3 (C16-C34)	30%	<100	<100	-
F4 (C34-C50)	30%	<100	<100	-

Parameter	MOECC Alert Criteria	Sample ⁽¹⁾	Duplicate	% Difference
		MW16-8	MW16-108	
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)				
Benzene	30%	<0.20	<0.20	-
Ethylbenzene	30%	<0.10	<0.10	-
Toluene	30%	<0.20	<0.20	-
Total Xylenes	30%	<0.20	<0.20	-

Notes:				
(1)	All results reported in micrograms per gram (µg/g) unless otherwise noted.			
<	Parameter not detected above value specified			
% Difference	Relative Percent Difference = (X-Y)/Average(X,Y) x 100% where X is the sample and Y is the duplicate			
-	RPD could not be calculated			
27.5%	RPD exceeds MOECC Alert Criteria			

Appendix A

BOREHOLE/TEST PIT LOGS

Préparé par : Catherine Tardy Laporte
Vérifié par : Annie GauthierDate début : 2013-06-27
Date fin : 2013-06-27

Nom du projet : Évaluation Environnementale de site (ÉES) Phase II

Site : Site # 38 Orléans

Secteur : 3636-3646, chemin Innes, Orléans (Ontario)

Client : La Coop fédérée

Numéro de projet :

131-13558-00

Coordonnées géographiques : X = 75.5191369842 °O

Y = 45.4458564224 °N

Élévation surface :

90.69 m ()

Élévation marginale :

Entrepreneur forage : Marathon Drilling Co. Ltd.

Type de foreuse : CME 75

Équipement de forage : Tarière tige pleine /

Diamètre du forage : 200 mm

Fluide forage : Aucun

Équip. d'échantillonnage : Carottier fendu

ODEUR

F - Faible odeur

M - Odeur moyenne

P - Odeur persistante

VISUEL

D - Produit disséminé

S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants

CF - Cuillère fendue

PS - Échantillonneur à piston

TC - Tube creux

TM - Tarière manuelle

TR - Truelle

TS - Tube Shelby

TT - Tube transparent

ANALYSES CHIMIQUES

BPC Biphényles polychlorés

BTX Benzène, toluène, éthylbenzène, xylène

COT Carbone organique total

C. Inorg. Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)

C. Phénol. Composés phénoliques

COV Hydrocarbures HAM et HAC

Diox. & Fur. Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₂₀

HP F1-F4

Mercure

Métaux

RMD

Hydrocarb. aliphatiques chlorés

Hydrocarbures aromatiques monocycliques

Hydrocarbures aromatiques polycycliques

Hydrocarbures pétroliers C₁₀-C₂₀Hydrocarb. pétrol. F1-F4 (C₁₀-C₂₀)

Mercure

Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc.

Lixiviation (mat. dangereuses)

Niveau d'eau

Phase libre

RMD

PROFONDEUR ÉLÉVATION (m)	STRATIGRAPHIE	GÉOLOGIE / STRATIGRAPHIE DESCRIPTION	OBSERVATIONS CONC. VAPEUR (ppm OU % LIE)	ODEUR					VISUEL	TYPE ÉCHANTILLON	% RÉCUPÉRATION	N (Coups/6")	NUMÉRO	ANALYSES	DUPLICATA	PUITS D'OBSERVATION		REMARQUES
				F	M	P	D	S								DIAGRAMME	DESCRIPTION	
		Surface du terrain.																
0.10 90.59		Asphalte.																
		Remblai : Gravier sableux sec.																
0.50 90.19		Sol naturel : Gravier sableux.																
1.06 89.63		Fin du forage à 1.06 m de profondeur.																



Préparé par : Catherine Tardy Laporte
Vérifié par : Annie Gauthier

Date début : 2013-06-27
Date fin : 2013-06-27

Nom du projet : Évaluation Environnementale de site (ÉES) Phase II

Site : Site # 38 Orléans

Secteur : 3636-3646, chemin Innes, Orléans (Ontario)

Client : La Coop fédérée

Numéro de projet :

131-13558-00

Coordonnées géographiques : X = 75.5189257577 °O

Y = 45.445930007 °N

Élévation surface :

90.64 m ()

Élévation margelle :

Entrepreneur forage : Marathon Drilling Co. Ltd.

Type de foreuse : CME 75

Équipement de forage : Tarière tige pleine /

Diamètre du forage : 200 mm

Fluide forage : Aucun

Équip. d'échantillonnage : Carottier fendu

ODEUR

F - Faible odeur

M - Odeur moyenne

P - Odeur persistante

VISUEL

D - Produit disséminé

S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants

CF - Cuillère fendue

PS - Échantillonneur à piston

TC - Tube creux

TM - Tarière manuelle

TR - Truelle

TS - Tube Shelby

TT - Tube transparent

ANALYSES CHIMIQUES

BPC Biphényles polychlorés

BTEX Benzène, toluène, éthylbenzène, xylène

COT Carbone organique total

C. Inorg. Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)

C. Phénol. Composés phénoliques

COV Hydrocarbures HAM et HAC

Diox. & Fur. Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₂₀

HP F1-F4

Mercur

Métaux

RMD

Hydrocarb. aliphatiques chlorés

Hydrocarbures aromatiques monocycliques

Hydrocarbures aromatiques polycycliques

Hydrocarbures pétroliers C₁₀-C₂₀

Hydrocarb. pétrol. F1-F4 (C₁₀-C₂₀)

Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc.

Lixiviation (mat. dangereuses)

▽ Niveau d'eau

▽ Phase libre

PROFONDEUR ÉLÉVATION (m)		STRATIGRAPHIE	GÉOLOGIE / STRATIGRAPHIE DESCRIPTION	OBSERVATIONS					ÉCHANTILLONS					PUITS D'OBSERVATION		REMARQUES	
				CONC. VAPEUR (ppm OU % LIE)	ODEUR			VISUEL	TYPE ÉCHANTILLON	% RÉCUPÉRATION	N (Coupes/6")	NUMÉRO	ANALYSES	DUPLICATA	DIAGRAMME		DESCRIPTION
					F	M	P										
			Surface du terrain.														
0.10			Asphalte.														
90.54			Remblai : Gravier sableux brun gris sec.														
0.45									CF	41	3 11 6	F-02 (0.30-0.45)	HP F1-F4 HAP Métaux (R153) HP F1-F4 HAP BTEX				0.5
0.55			Sol naturel : Sable silteux noir.									F-02 (0.45-0.55)					
90.09			Sol naturel : Sable silteux brun sec.									F-02 (0.55-0.75)					
0.75			Sol naturel : Sable graveleux.									F-02 (0.75-0.91)					
89.89																	
1.0									CF	66	3 6 R/1.2	F-02 (0.91-1.02)					1.0
1.21			Fin du forage à 1.21 m de profondeur.									F-02 (1.02-1.12)					
89.43																	

Préparé par : Catherine Tardy Laporte
Vérifié par : Annie GauthierDate début : 2013-06-27
Date fin : 2013-06-27

Nom du projet : Évaluation Environnementale de site (ÉES) Phase II

Site : Site # 38 Orléans

Secteur : 3636-3646, chemin Innes, Orléans (Ontario)

Client : La Coop fédérée

Numéro de projet :

131-13558-00

Coordonnées géographiques : X = 75.5196137735 °O

Y = 45.4456012321 °N

Élévation surface :

90.39 m ()

Élévation margelle :

Entrepreneur forage : Marathon Drilling Co. Ltd.

Type de foreuse : CME 75

Équipement de forage : Tarière tige pleine /

Diamètre du forage : 200 mm

Fluide forage : Aucun

Équip. d'échantillonnage : Carottier fendu

ODEUR

F - Faible odeur

M - Odeur moyenne

P - Odeur persistante

VISUEL

D - Produit disséminé

S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants

CF - Cuillère fendue

PS - Échantillonneur à piston

TC - Tube creux

TM - Tarière manuelle

TR - Truelle

TS - Tube Shelby

TT - Tube transparent

ANALYSES CHIMIQUES

BPC

Biphényles polychlorés

BTX

Benzène, toluène, éthylbenzène, xylène

COT

Carbone organique total

C. Inorg.

Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)

C. Phénol.

Composés phénoliques

COV

Hydrocarbures HAM et HAC

Diox. & Fur.

Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₂₀

HP F1-F4

Mercure

Métaux

RMD

Lixiviation (mat. dangereuses)

Hydrocarb. aliphatiques chlorés

Hydrocarbures aromatiques monocycliques

Hydrocarbures aromatiques polycycliques

Hydrocarbures pétroliers C₁₀-C₂₀Hydrocarb. pétrol. F1-F4 (C₁₀-C₂₀)

Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc.

PROFONDEUR ÉLÉVATION (m)		STRATIGRAPHIE	GÉOLOGIE / STRATIGRAPHIE	DESCRIPTION	CONC. VAPEUR (ppm OU % LIE)	OBSERVATIONS					ÉCHANTILLONS					PUITS D'OBSERVATION			REMARQUES
						ODEUR				VISUEL	TYPE ÉCHANTILLON	% RÉCUPÉRATION	N (Coups/6")	NUMÉRO	ANALYSES	DUPLICATA	DIAGRAMME	DESCRIPTION	
						F	M	P	D										
				Surface du terrain.															
0.10 90.29				Asphalte.															
0.30 90.09				Remblai : Gravier sableux sec.															
0.50 89.89				Sol naturel : Sable graveleux gris.						CF	49	12	F-03 (0.30-0.50)	HP F1-F4 HAP BTEX Métaux (R153)					0.5
				Sol naturel : Sable silteux avec trace de gravier.									F-03 (0.50-0.91)	HP F1-F4 HAP BTEX Métaux (R153)					
0.91 89.48				Sol naturel : Sable silteux.						CF	33		F-03 (0.91-1.01) F-03 (1.01-1.11)	HP F1-F4 HAP BTEX Métaux (R153)					1.0
1.52 88.87				Fin du forage à 1.52 m de profondeur.															1.5
2.0																			2.0
2.5																			2.5
3.0																			3.0
3.5																			3.5
4.0																			4.0

Préparé par : Catherine Tardy Laporte
Vérifié par : Annie GauthierDate début : 2013-06-27
Date fin : 2013-06-27

Nom du projet : Évaluation Environnementale de site (ÉES) Phase II

Site : Site # 38 Orléans

Secteur : 3636-3646, chemin Innes, Orléans (Ontario)

Client : La Coop fédérée

Numéro de projet :

131-13558-00

Coordonnées géographiques : X = 75.5201167458 °O

Y = 45.4451939281 °N

Élévation surface :

89.29 m ()

Élévation margelle :

Entrepreneur forage : Marathon Drilling Co. Ltd.

Type de foreuse : CME 75

Équipement de forage : Tarière tige pleine /

Diamètre du forage : 200 mm

Fluide forage : Aucun

Équip. d'échantillonnage : Carottier fendu

ODEUR

F - Faible odeur

M - Odeur moyenne

P - Odeur persistante

VISUEL

D - Produit disséminé

S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants

CF - Cuillère fendue

PS - Échantillonneur à piston

TC - Tube creux

TM - Tarière manuelle

TR - Truelle

TS - Tube Shelby

TT - Tube transparent

Niveau d'eau

Phase libre

ANALYSES CHIMIQUES

BPC Biphényles polychlorés

BTEX Benzène, toluène, éthylbenzène, xylène

COT Carbone organique total

C. Inorg. Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)

C. Phénol. Composés phénoliques

COV Hydrocarbures HAM et HAC

Diox. & Fur. Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₂₀

HP F1-F4

Mercure

Métaux

RMD

Hydrocarb. aliphatiques chlorés

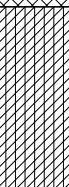
Hydrocarbures aromatiques monocycliques

Hydrocarbures aromatiques polycycliques

Hydrocarbures pétroliers C₁₀-C₂₀Hydrocarb. pétrol. F1-F4 (C₁₀-C₂₀)

Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc,

Lixiviation (mat. dangereuses)

PROFONDEUR ÉLÉVATION (m)		STRATIGRAPHIE		GÉOLOGIE / STRATIGRAPHIE	DESCRIPTION	CONC. VAPEUR (ppm OU % LIÉ)	OBSERVATIONS					ÉCHANTILLONS					PUITS D'OBSERVATION			REMARQUES
							ODEUR	VISUEL	TYPE ÉCHANTILLON	% RÉCUPÉRATION	N (Coupes/6")	NUMÉRO	ANALYSES	DUPLICATA	DIAGRAMME	DESCRIPTION				
																	F	M	P	
				Surface du terrain.																
0.5	89.29		Remblai : Sable graveleux gris et blanc.							CF	74	85 35 55 30 18	F-04 (0.00-0.20)							0.5
	0.20																			
	89.09	Remblai : Gravier sableux saturé											F-04 (0.20-0.61)							
	0.61																			
	88.68	Sol naturel : Argile silteuse brune grise.								CF	90	1 1 2 6	F-04 (0.61-1.22)	HP F1-F4 HAP BTEX						
1.0	1.22																			1.0
1.5	88.07	Fin du forage à 1.22 m de profondeur.																		1.5
2.0																				2.0
2.5																				2.5
3.0																				3.0
3.5																				3.5
4.0																				4.0



GENIVAR

RAPPORT DE FORAGE : F-05

Page 1 de 1

Préparé par : **Catherine Tardy Laporte**
Vérifié par : **Annie Gauthier**

Date début : **2013-06-27**
Date fin : **2013-06-27**

Nom du projet : **Évaluation Environnementale de site (ÉES) Phase II**

Site : **Site # 38 Orléans**

Secteur : **3636-3646, chemin Innes, Orléans (Ontario)**

Client : **La Coop fédérée**

Numéro de projet :

131-13558-00

Coordonnées géographiques : X = 75.5198284892 °O

Y = 45.4453512328 °N

Élévation surface :

89.21 m ()

Élévation margelle :

Entrepreneur forage : **Marathon Drilling Co. Ltd.**

Type de foreuse : **CME 75**

Équipement de forage : **Tarière tige pleine /**

Diamètre du forage : **200 mm**

Fluide forage : **Aucun**

Équip. d'échantillonnage : **Carottier fendu**

ODEUR

F - Faible odeur

M - Odeur moyenne

P - Odeur persistante

VISUEL

D - Produit disséminé

S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants

CF - Cuillère fendue

PS - Échantillonneur à piston

TC - Tube creux

TM - Tarière manuelle

TR - Truelle

TS - Tube Shelby

TT - Tube transparent

ANALYSES CHIMIQUES

BPC

Biphényles polychlorés

BTEX

Benzène, toluène, éthylbenzène, xylène

COT

Carbone organique total

C. Inorg.

Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)

C. Phénol.

Composés phénoliques

COV

Hydrocarbures HAM et HAC

Diox. & Fur.

Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₂₀

HP F1-F4

Mercur

Métaux

RMD

Lixiviation (mat. dangereuses)

Hydrocarb. aliphatiques chlorés

Hydrocarbures aromatiques monocycliques

Hydrocarbures aromatiques polycycliques

Hydrocarbures pétroliers C₁₀-C₂₀

Hydrocarb. pétrol. F1-F4 (C₁₀-C₂₀)

Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc,



GENIVAR

RAPPORT DE FORAGE : F-06

Page 1 de 1

Préparé par : **Catherine Tardy Laporte**
Vérifié par : **Annie Gauthier**

Date début : **2013-06-27**
Date fin : **2013-06-27**

Nom du projet : **Évaluation Environnementale de site (ÉES) Phase II**

Site : **Site # 38 Orléans**

Secteur : **3636-3646, chemin Innes, Orléans (Ontario)**

Client : **La Coop fédérée**

Numéro de projet : **131-13558-00**

Coordonnées géographiques : **X = 75.5200570318 °O**

Y = 45.4478309683 °N

Élévation surface : **89.22 m ()**

Élévation margelle :

Entrepreneur forage : **Marathon Drilling Co. Ltd.**

Type de foreuse : **CME 75**

Équipement de forage : **Tarière tige pleine /**

Diamètre du forage : **200 mm**

Fluide forage : **Aucun**

Équip. d'échantillonnage : **Carottier fendu**

ODEUR

F - Faible odeur

M - Odeur moyenne

P - Odeur persistante

VISUEL

D - Produit disséminé

S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants

CF - Cuillère fendue

PS - Échantillonneur à piston

TC - Tube creux

TM - Tarière manuelle

TR - Truelle

TS - Tube Shelby

TT - Tube transparent

ANALYSES CHIMIQUES

BPC Biphényles polychlorés

BTEX Benzène, toluène, éthylbenzène, xylène

COT Carbone organique total

C. Inorg. Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)

C. Phénol. Composés phénoliques

COV Hydrocarbures HAM et HAC

Diox. & Fur. Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₅₀

HP F1-F4

Mercur

Métaux

RMD

Hydrocarb. aliphatiques chlorés

Hydrocarbures aromatiques monocycliques

Hydrocarbures aromatiques polycycliques

Hydrocarbures pétroliers C₁₀-C₅₀

Hydrocarb. pétrol. F1-F4 (C₁₀-C₅₀)

Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc,

Lixiviation (mat. dangereuses)

▽ Niveau d'eau

▽ Phase libre

PROFONDEUR ÉLÉVATION (m)		STRATIGRAPHIE	GÉOLOGIE / STRATIGRAPHIE	DESCRIPTION	CONC. VAPEUR (ppm OU % LIE)	OBSERVATIONS					ÉCHANTILLONS					PUITS D'OBSERVATION			REMARQUES
						ODEUR	VISUEL	TYPE ÉCHANTILLON	% RÉCUPÉRATION	N (Coups/6")	NUMÉRO	ANALYSES	DUPLICATA	DIAGRAMME	DESCRIPTION				
																F	M	P	
				Surface du terrain.															
89.22				Remblai : Sable graveleux gris-brun et sec.						CF	100	1 3 4 7	F-06 (0.00-0.61)	HP F1-F4 HAP BTEX					
0.61				Sol naturel : Argile silteuse grise.						CF	100	1 4 4 6	F-06 (0.61-1.22)						
88.61																			
										CF	49	56 36 19 10	F-06 (1.22-1.83)						
87.70																			
1.83				Fin du forage à 1.52 m de profondeur.															
													</						

Préparé par : Catherine Tardy Laporte
Vérifié par : Annie GauthierDate début : 2013-06-27
Date fin : 2013-06-27

Nom du projet : Évaluation Environnementale de site (ÉES) Phase II

Site : Site # 38 Orléans

Secteur : 3636-3646, chemin Innes, Orléans (Ontario)

Client : La Coop fédérée

Numéro de projet :

131-13558-00

Coordonnées géographiques : X = 75.5199577902 °O

Y = 45.4476971365 °N

Élévation surface :

89.47 m ()

Élévation margelle :

Entrepreneur forage : Marathon Drilling Co. Ltd.

Type de foreuse : CME 75

Équipement de forage : Tarière tige pleine /

Diamètre du forage : 200 mm

Fluide forage : Aucun

Équip. d'échantillonnage : Carottier fendu

ODEUR

F - Faible odeur
M - Odeur moyenne
P - Odeur persistante

VISUEL

D - Produit disséminé
S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants
CF - Cuillère fendue
PS - Échantillonneur à piston
TC - Tube creux
TM - Tarière manuelle
TR - Truelle
TS - Tube Shelby
TT - Tube transparent

▽ Niveau d'eau

▽ Phase libre

ANALYSES CHIMIQUES

BPC Biphényles polychlorés
BTX Benzène, toluène, éthylbenzène, xylène
COT Carbone organique total
C. Inorg. Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)
C. Phénol. Composés phénoliques
COV Hydrocarbures HAM et HAC
Diox. & Fur. Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₂₀

HP F1-F4

Mercure

Métaux

RMD

Hydrocarb. aliphatiques chlorés
Hydrocarbures aromatiques monocycliques
Hydrocarbures aromatiques polycycliques
Hydrocarbures pétroliers C₁₀-C₂₀
Hydrocarb. pétrol. F1-F4 (C₁₀-C₂₀)
Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc, Lixiviation (mat. dangereuses)

PROFONDEUR ÉLÉVATION (m)		STRATIGRAPHIE	GÉOLOGIE / STRATIGRAPHIE DESCRIPTION	OBSERVATIONS CONC. VAPEUR (ppm OU % LIE)	OBSERVATIONS					ÉCHANTILLONS					PUITS D'OBSERVATION			REMARQUES
					ODEUR	VISUEL	TYPE ÉCHANTILLON	% RÉCUPÉRATION	N (Coups/6")	NUMÉRO	ANALYSES	DUPLICATA	DIAGRAMME	DESCRIPTION				
															F	M	P	
			Surface du terrain.															
89.47			Remblai : Sable graveleux gris-blanc et sec.						CF	57	110 54 13 11	F-07 (0.00-0.50)						
0.50																		
0.60			Remblai : Sable graveleux gris-blanc et humide.						CF	90	1 3 4 6	F-07 (0.50-0.61)						
88.87																		
			Sol naturel : Argile silteuse.										HP F1-F4 HAP BTX					
									CF			F-07 (1.22-1.83)						
87.95																		
1.83																		
			Fin du forage à 1.52 m de profondeur.															

Préparé par : Catherine Tardy Laporte
Vérifié par : Annie GauthierDate début : 2013-06-27
Date fin : 2013-06-27

Nom du projet : Évaluation Environnementale de site (ÉES) Phase II

Site : Site # 38 Orléans

Secteur : 3636-3646, chemin Innes, Orléans (Ontario)

Client : La Coop fédérée

Numéro de projet :

131-13558-00

Coordonnées géographiques : X = 75.5196453839 °O

Y = 45.4472729549 °N

Élévation surface :

89.2 m ()

Élévation margelle :

Entrepreneur forage : Marathon Drilling Co. Ltd.

Type de foreuse : CME 75

Équipement de forage : Tarière tige pleine /

Diamètre du forage : 200 mm

Fluide forage : Aucun

Équip. d'échantillonnage :

ODEUR

F - Faible odeur

M - Odeur moyenne

P - Odeur persistante

VISUEL

D - Produit disséminé

S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants

CF - Cuillère fendue

PS - Échantillonneur à piston

TC - Tube creux

TM - Tarière manuelle

TR - Truelle

TS - Tube Shelby

TT - Tube transparent

Niveau d'eau

Phase libre

ANALYSES CHIMIQUES

BPC Biphényles polychlorés

BTX Benzène, toluène, éthylbenzène, xylène

COT Carbone organique total

C. Inorg. Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)

C. Phénol. Composés phénoliques

COV Hydrocarbures HAM et HAC

Diox. & Fur. Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₂₀

HP F1-F4

Mercure

Métaux

RMD

Hydrocarb. aliphatiques chlorés

Hydrocarbures aromatiques monocycliques

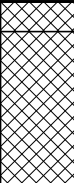
Hydrocarbures aromatiques polycycliques

Hydrocarbures pétroliers C₁₀-C₂₀Hydrocarb. pétrol. F1-F4 (C₁₀-C₂₀)

Mercure

Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc.

Lixiviation (mat. dangereuses)

PROFONDEUR ÉLÉVATION (m)		GÉOLOGIE / STRATIGRAPHIE		OBSERVATIONS				ÉCHANTILLONS				PUITS D'OBSERVATION					
		STRATIGRAPHIE	DESCRIPTION	CONC. VAPEUR (ppm OU % LIE)	ODEUR			VISUEL	TYPE ÉCHANTILLON	% Récupération	N (Coups/6")	NUMÉRO	ANALYSES	DUPLICATA	DIAGRAMME	DESCRIPTION	REMARQUES
					F	M	P										
			Surface du terrain.														
0.10 89.10		Remblai : Argile graveleuse.						CF	41	2 11 8 22		HP F1-F4 HAP BTEX					
		Remblai : Sable graveleux gris.															
0.5 0.61 88.59		Fin du forage à 0.61 m de profondeur.															Refus à 0.61 m sur bloc ou roc.
1.0																	
1.5																	
2.0																	
2.5																	
3.0																	
3.5																	
4.0																	

Préparé par : Catherine Tardy Laporte
Vérifié par : Annie GauthierDate début : 2013-06-27
Date fin : 2013-06-27

Nom du projet : Évaluation Environnementale de site (ÉES) Phase II

Site : Site # 38 Orléans

Secteur : 3636-3646, chemin Innes, Orléans (Ontario)

Client : La Coop fédérée

Numéro de projet :

131-13558-00

Coordonnées géographiques : X = 75.5190143537 °O

Y = 45.4460829513 °N

Élévation surface :

89.71 m ()

Élévation margelle :

Entrepreneur forage : Marathon Drilling Co. Ltd.

Type de foreuse : CME 75

Équipement de forage : Tarière tige pleine /

Diamètre du forage : 200 mm

Fluide forage : Aucun

Équip. d'échantillonnage :

ODEUR

F - Faible odeur

M - Odeur moyenne

P - Odeur persistante

VISUEL

D - Produit disséminé

S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants

CF - Cuillère fendue

PS - Échantillonneur à piston

TC - Tube creux

TM - Tarière manuelle

TR - Truelle

TS - Tube Shelby

TT - Tube transparent

Niveau d'eau

Phase libre

ANALYSES CHIMIQUES

BPC Biphényles polychlorés

BTX Benzène, toluène, éthylbenzène, xylène

COT Carbone organique total

C. Inorg. Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)

C. Phénol. Composés phénoliques

COV Hydrocarbures HAM et HAC

Diox. & Fur. Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₂₀

HP F1-F4

Mercure

Métaux

RMD

Hydrocarb. aliphatiques chlorés

Hydrocarbures aromatiques monocycliques

Hydrocarbures aromatiques polycycliques

Hydrocarbures pétroliers C₁₀-C₂₀Hydrocarb. pétrol. F1-F4 (C₁₀-C₂₀)

Mercure

Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc,

Lixiviation (mat. dangereuses)

PROFONDEUR ÉLÉVATION (m)		STRATIGRAPHIE	GÉOLOGIE / STRATIGRAPHIE	DESCRIPTION	CONC. VAPEUR (ppm OU % LIE)	OBSERVATIONS					ÉCHANTILLONS					PUITS D'OBSERVATION			REMARQUES
						ODEUR		VISUEL	TYPE ÉCHANTILLON	% RÉCUPÉRATION	N (Coups/6")	NUMÉRO	ANALYSES	DUPLICATA	DIAGRAMME	DESCRIPTION			
						F	M										P	D	
				Surface du terrain.															
89.71				Remblai : Sable et gravier. Gris blanc sec devenant humide.							CF	74	64 60 24 16		HP F1-F4 HAP BTX	DUP7			
0.61											CF	25	1 2 3 4						
89.10											CF	100	5 3 3 2						
88.19				Sol naturel : Argile silteuse avec un peu de sable humide.															
1.83																			
				Fin du forage à 1.52 m de profondeur.															



Préparé par : Catherine Tardy Laporte
Vérifié par : Annie Gauthier

Date début : 2013-06-27
Date fin : 2013-06-27

Nom du projet : Évaluation Environnementale de site (ÉES) Phase II

Site : Site # 38 Orléans

Secteur : 3636-3646, chemin Innes, Orléans (Ontario)

Client : La Coop fédérée

Numéro de projet : 131-13558-00

Coordonnées géographiques : X = 75.5189110706 °O

Y = 45.446095328 °N

Élévation surface : 89.99 m ()

Élévation margelle : 89.99 m ()

Entrepreneur forage : Marathon Drilling Co. Ltd.

Type de foreuse : CME 75

Équipement de forage : Tarière tige pleine /

Diamètre du forage : 200 mm

Fluide forage : Aucun

Équip. d'échantillonnage : Carottier fendu

ODEUR

F - Faible odeur

M - Odeur moyenne

P - Odeur persistante

VISUEL

D - Produit disséminé

S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants

CF - Cuillère fendue

PS - Échantillonneur à piston

TC - Tube creux

TM - Tarière manuelle

TR - Truelle

TS - Tube Shelby

TT - Tube transparent

ANALYSES CHIMIQUES

BPC

Biphényles polychlorés

BTEX

Benzène, toluène, éthylbenzène, xylène

COT

Carbone organique total

C. Inorg. Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)

C. Phénol. Composés phénoliques

COV Hydrocarbures HAM et HAC

Diox. & Fur. Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₂₀

HP F1-F4

Mercure

Métaux

RMD

Lixiviation (mat. dangereuses)

Hydrocarb. aliphatiques chlorés

Hydrocarbures aromatiques monocycliques

Hydrocarbures aromatiques polycycliques

Hydrocarbures pétroliers C₁₀-C₂₀

Hydrocarb. pétrol. F1-F4 (C₁₀-C₂₀)

Mercure

Mercure

Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc.

Lixiviation (mat. dangereuses)

▽ Niveau d'eau

▽ Phase libre

PROFONDEUR ÉLÉVATION (m)		GÉOLOGIE / STRATIGRAPHIE		OBSERVATIONS					ÉCHANTILLONS					PUITS D'OBSERVATION			REMARQUES	
		STRATIGRAPHIE	DESCRIPTION	CONC. VAPEUR (ppm OU % LIE)	ODEUR				VISUEL	TYPE ÉCHANTILLON	% RÉCUPÉRATION	N (Coups/6")	NUMÉRO	ANALYSES	DUPLICATA	DIAGRAMME		DESCRIPTION
					F	M	P	D										
			Surface du terrain.															
89.99			Remblai : Sable graveleux gris avec trace d'oxydation.							CF	57	60	PO-01 (0.00-0.61)					
0.61																		
89.38			Sol naturel : Argile silteuse brune.							CF	90	2	PO-01 (0.61-0.86)	HP F1-F4 HAP BTEX Métaux (R153)				
0.86			Sol naturel : Sable silteux humide.										PO-01 (0.86-1.22)					
89.13																		
1.22			Sol naturel : Argile silteuse grise et humide.							CF	100	2	PO-01 (1.22-1.83)					
88.77																		
1.83			Fin du forage à 2.08 m de profondeur.															
87.91																		


Préparé par : **Catherine Tardy Laporte**
Vérifié par : **Annie Gauthier**

Date début : **2013-07-02**
Date fin : **2013-07-02**

Nom du projet : **Évaluation Environnementale de site (ÉES) Phase II**

Site : **Site # 38 Orléans**

Secteur : **3636-3646, chemin Innes, Orléans (Ontario)**

Client : **La Coop fédérée**

Numéro de projet : **131-13558-00**

Coordonnées géographiques : **X = 75.5199533185 °O**
Y = 45.4457572743 °N

Élévation surface : **89.57 m ()**

Élévation margelle :

Entrepreneur forage : **Denis Ladouceur Excavation Ltée**

Type de foreuse : **Rétrocaveuse**

Équipement de forage : **Manuelle /**

Diamètre du forage :

Fluide forage :

Équip. d'échantillonnage : **Carottier fendu**

ODEUR

F - Faible odeur

M - Odeur moyenne

P - Odeur persistante

VISUEL

D - Produit disséminé

S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants

CF - Cuillère fendue

PS - Échantillonneur à piston

TC - Tube creux

TM - Tarière manuelle

TR - Truelle

TS - Tube Shelby

TT - Tube transparent

Niveau d'eau

Phase libre

ANALYSES CHIMIQUES

BPC Biphényles polychlorés

BTX Benzène, toluène, éthylbenzène, xylène

COT Carbone organique total

C. Inorg. Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)

C. Phénol. Composés phénoliques

COV Hydrocarbures HAM et HAC

Diox. & Fur. Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₂₀

HP F1-F4

Mercure

Métaux

RMD

Hydrocarb. aliphatiques chlorés

Hydrocarbures aromatiques monocycliques

Hydrocarbures aromatiques polycycliques

Hydrocarbures pétroliers C₁₀-C₂₀

Hydrocarb. pétrol. F1-F4 (C₁₀-C₂₀)

Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc,

Lixiviation (mat. dangereuses)

GÉOLOGIE / STRATIGRAPHIE			OBSERVATIONS					ÉCHANTILLONS				PUITS D'OBSERVATION		REMARQUES				
PROFONDEUR ÉLÉVATION (m)	STRATIGRAPHIE	DESCRIPTION	CONC. VAPEUR (ppm OU % LIE)	ODEUR				VISUEL	TYPE ÉCHANTILLON	% RÉCUPÉRATION	N (Coups/6")	NUMÉRO	ANALYSES		DUPLICATA	DIAGRAMME	DESCRIPTION	
				F	M	P	D											S
		Surface du terrain.																
89.57		Remblai : Gravier sableux avec trace de silt. Gris et humide.							TR			TE-01 (0.00-0.30)						
0.30																		
89.27		Remblai : Silt sableux brun avec trace de matière résiduelle (bois brûlé).											TE-01 (0.30-0.60)	HP F1-F4 HAP BTEX Métaux (R153)				0.5
0.60																		
88.97		Infiltration d'eau à 0.6 m.										TE-01 (0.60-1.00)						
		Sol naturel : Silt argileux gris humide.																
1.00		Sol naturel : Silt sableux graveleux avec trace d'argile. Gris humide.										TE-01 (1.00-3.50)					1.0	
88.57																		
1.5																	1.5	
2.0																	2.0	
2.5																	2.5	
3.0																	3.0	
3.50		Infiltration d'eau.																
86.07		Fin de la tranchée															3.5	
		Roc atteint																
4.0																	4.0	


Préparé par : **Catherine Tardy Laporte**
Vérifié par : **Annie Gauthier**

Date début : **2013-07-02**
Date fin : **2013-07-02**

Nom du projet : **Évaluation Environnementale de site (ÉES) Phase II**

Numéro de projet : **131-13558-00**

Site : **Site # 38 Orléans**

Coordonnées géographiques : **X = 75.5205637155 °O**

Secteur : **3636-3646, chemin Innes, Orléans (Ontario)**
Y = 45.4458202359 °N

Client : **La Coop fédérée**

Élévation surface : **89.59 m ()**

Élévation margelle :

Entrepreneur forage : **Denis Ladouceur Excavation Ltée**

Type de foreuse : **Rétrocaveuse**

Équipement de forage : **Manuelle /**

Diamètre du forage :

Fluide forage :

Équip. d'échantillonnage : **Carottier fendu**

ODEUR

F - Faible odeur

M - Odeur moyenne

P - Odeur persistante

VISUEL

D - Produit disséminé

S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants

CF - Cuillère fendue

PS - Échantillonneur à piston

TC - Tube creux

TM - Tarière manuelle

TR - Truelle

TS - Tube Shelby

TT - Tube transparent

Niveau d'eau

Phase libre

ANALYSES CHIMIQUES

BPC Biphényles polychlorés

BTEX Benzène, toluène, éthylbenzène, xylène

COT Carbone organique total

C. Inorg. Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)

C. Phénol. Composés phénoliques

COV Hydrocarbures HAM et HAC

Diox. & Fur. Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₂₀

HP F1-F4

Mercure

Métaux

RMD

Hydrocarb. aliphatiques chlorés

Hydrocarbures aromatiques monocycliques

Hydrocarbures aromatiques polycycliques

Hydrocarbures pétroliers C₁₀-C₂₀

Hydrocarb. pétrol. F1-F4 (C₁₀-C₂₀)

Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc,

Lixiviation (mat. dangereuses)

PROFONDEUR ÉLÉVATION (m)	STRATIGRAPHIE	GÉOLOGIE / STRATIGRAPHIE DESCRIPTION	OBSERVATIONS					ÉCHANTILLONS				PUITS D'OBSERVATION		
			CONC. VAPEUR (ppm ou % Lie)	ODEUR	VISUEL	TYPE ÉCHANTILLON	% RÉCUPÉRATION	N (Coupes/6")	NUMÉRO	ANALYSES	DUPLICATA	DIAGRAMME	DESCRIPTION	REMARQUES
		Surface du terrain.												
89.59		Remblai : Matière résiduelle (55%) (brique, bois, bois brûlé et plastique) et silt sableux avec trace de matière organique. Brun humide.				TR			TE-02 (0.00-0.35)	HP F1-F4 HAP BTEX Métaux (R153)				
0.35														
89.24		Sol naturel : Silt avec un peu de sable et trace de matière organique.							TE-02 (0.35-1.00)	HP F1-F4 HAP BTEX Métaux (R153)				0.5
1.00														
88.59		Sol naturel : Silt argileux avec traces de gravier brun-beige.							TE-02 (1.00-1.45)	HP F1-F4 HAP BTEX Métaux (R153)				1.0
1.45														
88.14		Sol naturel : Silt argileux gris avec traces de gravier.							TE-02 (1.45-3.30)					1.5
2.0														2.0
2.5														2.5
3.0														3.0
3.30		Infiltration d'eau.												
86.29		Fin de la tranchée												
		Roc atteint												3.5
4.0														4.0


Préparé par : **Catherine Tardy Laporte**
Vérifié par : **Annie Gauthier**

Date début : **2013-07-02**
Date fin : **2013-07-02**

Nom du projet : **Évaluation Environnementale de site (ÉES) Phase II**

Numéro de projet : **131-13558-00**

Site : **Site # 38 Orléans**

Coordonnées géographiques : **X = 75.5206801071 °O**

Secteur : **3636-3646, chemin Innes, Orléans (Ontario)**
Y = 45.4461519033 °N

Client : **La Coop fédérée**

Élévation surface : **88.98 m ()**

Élévation marginale :

Entrepreneur forage : **Denis Ladouceur Excavation Ltée**

Type de foreuse : **Rétrocaveuse**

Équipement de forage : **Manuelle /**

Diamètre du forage :

Fluide forage :

Équip. d'échantillonnage : **Carottier fendu**

ODEUR

F - Faible odeur

M - Odeur moyenne

P - Odeur persistante

VISUEL

D - Produit disséminé

S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants

CF - Cuillère fendue

PS - Échantillonneur à piston

TC - Tube creux

TM - Tarière manuelle

TR - Truelle

TS - Tube Shelby

TT - Tube transparent

Niveau d'eau

Phase libre

ANALYSES CHIMIQUES

BPC Biphényles polychlorés

BTX Benzène, toluène, éthylbenzène, xylène

COT Carbone organique total

C. Inorg. Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)

C. Phénol. Composés phénoliques

COV Hydrocarbures HAM et HAC

Diox. & Fur. Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₅₀

HP F1-F4

Mercure

Métaux

RMD

Hydrocarb. aliphatiques chlorés

Hydrocarbures aromatiques monocycliques

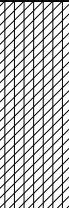
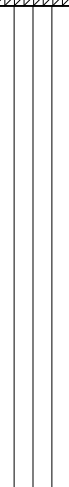
Hydrocarbures aromatiques polycycliques

Hydrocarbures pétroliers C₁₀-C₅₀

Hydrocarb. pétrol. F1-F4 (C₁₀-C₅₀)

Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc,

Lixiviation (mat. dangereuses)

GÉOLOGIE / STRATIGRAPHIE			OBSERVATIONS					ÉCHANTILLONS				PUITS D'OBSERVATION		REMARQUES		
PROFONDEUR ÉLÉVATION (m)	STRATIGRAPHIE	DESCRIPTION	CONC. VAPEUR (ppm OU % LIE)	ODEUR			VISUEL	TYPE ÉCHANTILLON	% RÉCUPÉRATION	N (Coups/6")	NUMÉRO	ANALYSES	DUPLICATA		DIAGRAMME	DESCRIPTION
				F	M	P										
		Surface du terrain.														
88.98		Remblai : Gravier sableux gris saturé. <i>Eau à la surface.</i>						TR			TE-03 (0.00-0.30)					
0.30																
88.68		Sol naturel : Silt argileux gris humide.									TE-03 (0.30-1.00)	HP F1-F4 HAP	DUP8			0.5
0.5																
1.00		Sol naturel : Silt avec un peu d'argile gris humide.									TE-03 (1.00-2.60)					1.0
87.98																
1.5																1.5
2.0																2.0
2.5																2.5
2.60		Fin de la tranchée														
86.38																
		Roc atteint														
3.0																3.0
3.5																3.5
4.0																4.0


Préparé par : Catherine Tardy Laporte
Vérifié par : Annie Gauthier

Date début : 2013-07-02
Date fin : 2013-07-02

Nom du projet : Évaluation Environnementale de site (ÉES) Phase II

Site : Site # 38 Orléans

Secteur : 3636-3646, chemin Innes, Orléans (Ontario)

Client : La Coop fédérée

Numéro de projet : 131-13558-00

Coordonnées géographiques : X = 75.5202005926 °O

Y = 45.4465543177 °N

Élévation surface : 90.77 m ()

Élévation margelle :

Entrepreneur forage : Denis Ladouceur Excavation Ltée

Type de foreuse : Rétrocaveuse

Équipement de forage : Manuelle /

Diamètre du forage :

Fluide forage :

Équip. d'échantillonnage : Carottier fendu

ODEUR

F - Faible odeur

M - Odeur moyenne

P - Odeur persistante

VISUEL

D - Produit disséminé

S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants

CF - Cuillère fendue

PS - Échantillonneur à piston

TC - Tube creux

TM - Tarière manuelle

TR - Truelle

TS - Tube Shelby

TT - Tube transparent

Niveau d'eau

Phase libre

ANALYSES CHIMIQUES

BPC Biphényles polychlorés

BTEX Benzène, toluène, éthylbenzène, xylène

COT Carbone organique total

C. Inorg. Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)

C. Phénol. Composés phénoliques

COV Hydrocarbures HAM et HAC

Diox. & Fur. Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₅₀

HP F1-F4

Mercure

Métaux

RMD

Hydrocarb. aliphatiques chlorés

Hydrocarbures aromatiques monocycliques

Hydrocarbures aromatiques polycycliques

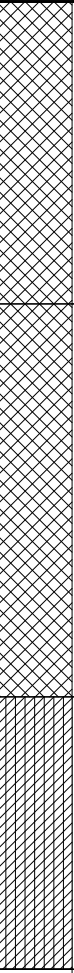
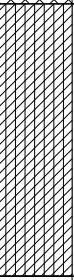
Hydrocarbures pétroliers C₁₀-C₅₀

Hydrocarb. pétrol. F1-F4 (C₁₀-C₅₀)

Mercure

Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc,

Lixiviation (mat. dangereuses)

GÉOLOGIE / STRATIGRAPHIE			OBSERVATIONS					ÉCHANTILLONS				PUITS D'OBSERVATION		REMARQUES		
PROFONDEUR ÉLÉVATION (m)	STRATIGRAPHIE	DESCRIPTION	CONC. VAPEUR (ppm OU % LIE)	ODEUR			VISUEL	TYPE ÉCHANTILLON	% RÉCUPÉRATION	N (Coups/6")	NUMÉRO	ANALYSES	DUPLICATA		DIAGRAMME	DESCRIPTION
				F	M	P										
		Surface du terrain.														
90.77		Remblai : Sable graveleux avec trace de matière organique. Brun sec.						TR			TE-04 (0.00-1.00)					
0.5																0.5
1.00																
89.77		Remblai : Silt argileux avec trace de matière organique. Brun noir humide.									TE-04 (1.00-2.30)	HP F1-F4 HAP Métaux (R153)				
1.5																1.5
2.0																2.0
2.30		Sol naturel : Silt avec un peu d'argile gris humide.									TE-04 (2.30-3.20)					
88.47																2.5
2.5																2.5
3.0																3.0
3.20		Infiltration d'eau														
87.57		Fin de la tranchée														
3.5																3.5
4.0																4.0


Préparé par : **Catherine Tardy Laporte**
Vérifié par : **Annie Gauthier**

Date début : **2013-07-02**
Date fin : **2013-07-02**

Nom du projet : **Évaluation Environnementale de site (ÉES) Phase II**

Numéro de projet : **131-13558-00**

Site : **Site # 38 Orléans**

Coordonnées géographiques : **X = 75.5204743629 °O**

Secteur : **3636-3646, chemin Innes, Orléans (Ontario)**
Y = 45.4472004843 °N

Client : **La Coop fédérée**

Élévation surface : **92.43 m ()**

Élévation margelle :

Entrepreneur forage : **Denis Ladouceur Excavation Ltée**

Type de foreuse : **Rétrocaveuse**

Équipement de forage : **Manuelle /**

Diamètre du forage :

Fluide forage :

Équip. d'échantillonnage : **Carottier fendu**

ODEUR

F - Faible odeur
M - Odeur moyenne
P - Odeur persistante

VISUEL

D - Produit disséminé
S - Sol saturé de produit

TYPE D'ÉCHANTILLON

CD - Carottier à diamants
CF - Cuillère fendue
PS - Échantillonneur à piston
TC - Tube creux
TM - Tarière manuelle
TR - Truelle
TS - Tube Shelby
TT - Tube transparent

ANALYSES CHIMIQUES

BPC Biphényles polychlorés
BTEX Benzène, toluène, éthylbenzène, xylène
COT Carbone organique total
C. Inorg. Autres composés inorganiques (cyanure, fluorure, bromure, soufre total)
C. Phénol. Composés phénoliques
COV Hydrocarbures HAM et HAC
Diox. & Fur. Dioxines et furanes

HAC

HAM

HAP

HP C₁₀-C₅₀

HP F1-F4

Mercure

Métaux

RMD

Hydrocarb. aliphatiques chlorés
Hydrocarbures aromatiques monocycliques
Hydrocarbures aromatiques polycycliques
Hydrocarbures pétroliers C₁₀-C₅₀
Hydrocarb. pétrol. F1-F4 (C₁₀-C₅₀)
Mercure
Argent, arsenic, baryum, cadmium, cobalt, chrome, cuivre, étain, manganèse, molybdène, nickel, plomb, sélénium, zinc
Lixiviation (mat. dangereuses)

Niveau d'eau

Phase libre

RMD

GÉOLOGIE / STRATIGRAPHIE

OBSERVATIONS

ÉCHANTILLONS

PUITS D'OBSERVATION

PROFONDEUR ÉLÉVATION (m)	STRATIGRAPHIE	DESCRIPTION	CONC. VAPEUR (ppm ou % Lie)	ODEUR					VISUEL	TYPE ÉCHANTILLON	% RÉCUPÉRATION	N (Coups/6")	NUMÉRO	ANALYSES	DUPLICATA	DIAGRAMME	DESCRIPTION	REMARQUES
				F	M	P	D	S										
92.43		Surface du terrain.																
0.15		Terre végétale et un peu de matière résiduelle (20%) (brique).								TR								
92.28		Remblai : Silt sableux graveleux avec trace de matière résiduelle (bois) brun.											TE-05 (0.15-2.30)	HP F1-F4 HAP				0.5
0.5																		
1.0																		1.0
1.5																		1.5
2.0																		2.0
2.30																		
90.13		Remblai : Silt argileux avec trace de matière organique brun noir.											TE-05 (2.30-3.00)					2.5
2.5																		
3.0																		3.0
3.5													TE-05 (3.00-3.60)					3.5
3.60																		
88.83		Fin de la tranchée																4.0
4.0																		4.0

BOREHOLE DRILLING RECORD : **BH16-1**

BOREHOLE DRILLING RECORD : **BH16-2**

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): 1/6/2016
Date (End): 1/6/2016

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
Geographic Coordinates: X = 5032622 mE
Y = 4593337 mN
Surface Elevation: m ()
Top of PVC Elevation:

Drilling Company:	Strata Drilling Group
Drilling Equipment:	Geomachine GS100
Drilling Method:	Probe rod
Borehole Diameter:	50 mm
Drilling Fluid:	None
Sampling Method:	

ODOUR
F - Light
M - Medium
P - Persistent

VISUAL
D - Disseminated Product
S - Saturated with Product

SAMPLE TYPE
DC - Diamond Core
SS - Split Spoon
MA - Manual Auger
TR - Trowel
ST - Shelby Tube
TU - DT32 Liner
MC - Macro Core Liner

CHEMICAL ANALYSIS			
PCB	Poly-Chlorinated Biphenyls	MAH	Monocyclic Aromatic Hydrocarbons
BTEX	Benzene, Toluene, Ethylbenzene, Xylene	PAH	Polycyclic Aromatic Hydrocarbons
		PH C ₁₂ -C ₃₀	Petroleum Hydrocarbons C ₁₂ -C ₃₀
Inorg. C.	Inorganic Compounds	PH F1-F4	Petroleum Hydrocarbons F1-F4 (C ₁₀ -C ₃₀)
Phenol. C.	Phenolic Compounds	Metals	Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Silver, Tin, Zinc.
VOC	Volatile Organic Compounds (MAH & CAH)		Leachate Tests (Haz. Waste Reg.)
Diox. & Fur.	Dioxins & Furans	HWR	
CAH	Chlorinated Aliphatic Hydrocarbons		

▽ Water Level ▼ Free Phase

[illegible]

BOREHOLE DRILLING RECORD : **BH/MW16-3**

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): 1/6/2016
Date (End): 2/6/2016

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
Geographic Coordinates: X = 5011286 mE
Y = 472354 mN
Surface Elevation: 87.23 m (*Relative*)
Top of PVC Elevation:

Drilling Company:	Strata Drilling Group
Drilling Equipment:	Geomachine GS100
Drilling Method:	Probe rod
Borehole Diameter:	50 mm
Drilling Fluid:	Air
Sampling Method:	

ODOUR
F - Light
M - Medium
P - Persistent

VISUAL
D - Disseminated Product
S - Saturated with Product

SAMPLE TYPE
DC - Diamond Corer
SS - Split Spoon
MA - Manual Auger
TR - Trowel
ST - Shelby Tube
TU - DT32 Liner
MC - Macro Core Line

CHEMICAL ANALYSIS	
PCB	Poly-Chlorinated Biphenyls
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
Inorg. C.	Inorganic Compounds
Phenol. C.	Phenolic Compounds
VOC	Volatil Organic Compounds (MAH & CAH)
Diox. & Fur.	Dioxins & Furans
CAH	Chlorinated Aliphatic Hydrocarbons

MAH	Monocyclic Aromatic Hydrocarbons
PAH	Polycyclic Aromatic Hydrocarbons
PH C ₁₀ -C ₅₀	Petroleum Hydrocarbons C ₁₀ -C ₅₀
PH F1-F4	Petroleum Hydrocarbons F1-F4 (C ₁₀ -C ₅₀)
Metals	Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Silver, Tin, Zinc.
HWR	Leachate Tests (Haz. Waste Reg.)

[illegible]

BOREHOLE DRILLING RECORD : **BH16-4**

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): 1/6/2016
Date (End): 1/6/2016

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
Geographic Coordinates: X = 5032619 mE
Y = 459397 mN
Surface Elevation: m ()
Top of PVC Elevation:

Drilling Company:	Strata Drilling Group
Drilling Equipment:	Geomachine GS100
Drilling Method:	Probe rod
Borehole Diameter:	50 mm
Drilling Fluid:	None
Sampling Method:	

ODOUR
F - Light
M - Medium
P - Persistent

VISUAL
D - Disseminated Product
S - Saturated with Product

SAMPLE TYPE
DC - Diamond Core
SS - Split Spoon
MA - Manual Auger
TR - Trowel
ST - Shelby Tube
TU - DT32 Liner
MC - Macro Core Liner

CHEMICAL ANALYSIS			
PCB	Poly-Chlorinated Biphenyls	MAH	Monocyclic Aromatic Hydrocarbons
BTEX	Benzene, Toluene, Ethylbenzene, Xylene	PAH	Polycyclic Aromatic Hydrocarbons
		PH C ₁₂ -C ₃₀	Petroleum Hydrocarbons C ₁₂ -C ₃₀
Inorg. C.	Inorganic Compounds	PH F1-F4	Aromatic Hydrocarbons F1-F4 (C ₁₂ -C ₃₀)
Phenol. C.	Phenolic Compounds	Metals	Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Silver, Tin, Zinc.
VOC	Volatile Organic Compounds (MAH & CAH)		Leachate Tests (Haz. Waste Reg.)
Diox. & Fur.	Dioxins & Furans	HWR	
CAH	Chlorinated Aliphatic Hydrocarbons		

[illegible]



BOREHOLE DRILLING RECORD : BH/MW16-5

Page 1 of 1

Prepared by: Kathryn Maton
Reviewed by: Carolyn Adams

Date (Start): 1/6/2016
Date (End): 2/6/2016

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
Geographic Coordinates: X = 5032607 mE
Y = 459421 mN
Surface Elevation: 87.47 m (Relative)
Top of PVC Elevation:

Drilling Company: Strata Drilling Group
Drilling Equipment: Geomachine GS100
Drilling Method: Probe rod
Borehole Diameter: 50 mm
Drilling Fluid: Air
Sampling Method:

ODOUR
F - Light
M - Medium
P - Persistent

VISUAL
D - Disseminated Product
S - Saturated with Product

SAMPLE TYPE
DC - Diamond Corer
SS - Split Spoon
MA - Manual Auger
TR - Trowel
ST - Shelby Tube
TU - DT32 Liner
MC - Macro Core Liner

CHEMICAL ANALYSIS
PCB Poly-Chlorinated Biphenyls
BTEX Benzene, Toluene, Ethylbenzene, Xylene
Inorg. C. Inorganic Compounds
Phenol. C. Phenolic Compounds
VOC Volatile Organic Compounds (MAH & CAH)
Diox. & Fur. Dioxins & Furans
CAH Chlorinated Aliphatic Hydrocarbons

MAH Monocyclic Aromatic Hydrocarbons
PAH Polycyclic Aromatic Hydrocarbons
PH C₁₀-C₅₀ Petroleum Hydrocarbons C₁₀-C₅₀
PH F1-F4 Petroleum Hydrocarbons F1-F4 (C₁₀-C₅₀)
Metals Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Silver, Tin, Zinc.
HWR Leachate Tests (Haz. Waste Reg.)

Water Level Free Phase

Project : 161-06382-00 PHASE TWO ESA - 3636 INNES ROAD.GPJ Type rapport : WSP_EN_WELL-ENVIRONMENTAL Data Template : WSP_TEMPLATE_GEOTECH.GDT 6/10/2016

DEPTH ELEVATION (m)		GEOLOGY / LITHOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS			
		LITHOLOGY	DESCRIPTION	VAPOR CONC. I - Isobutylene (ppm) H - Hexane (ppm)	ODOUR					SAMPLE TYPE	% RECOVERY	N (Blow/6")	NUMBER	ANALYSIS		DUPLICATE	DIAGRAM	DESCRIPTION
					F	M	P	D	S									
			Ground surface.															
87.47			FILL sand and gravel, brown, dry	H - 0, I - 0						MC	76		BH/MW16-5 1A					
0.23																		
87.24			CLAYEY SILT brown, moist, stiff	H - 0, I - 0									BH/MW16-5 1B	Metals and Inorganics PHCs F2-F4	BH16- 5- 101B			
0.5																		0.5
																		1.0
1.52			SILTY CLAY grey-brown, moist, stiff	H - 0, I - 30						MC	83		BH/MW16-5 2A					1.5
85.95																		2.0
																		2.5
3.05			← becoming wet and soft															3.0
84.42				BEDROCK	H - 0, I - 35									BH/MW16-5 2B	Metals and Inorganics PH F ₁ -F ₄ BTEX PAH			3.0
																		3.5
4.57			End of borehole at 4.57 m.															4.5
82.90																		5.0

← Bentonite

← Sand

← Slotted PVC pipe

SCREEN

Diam.: 51 mm
Open: 0.25 mm
Length: 3.05 m

WATER
Depth: 2.27 m
Elev.: m
Date: 6/7/2016

← Bentonite

← Sand

← Slotted PVC pipe

SCREEN
Diam.: 51 mm
Open.: 0.25 m
Length: 3.05 m

WATER
Depth: 2.27 m
Elev.: m
Date: 6/7/2016

BOREHOLE DRILLING RECORD : **BH16-6**

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): 1/6/2016
Date (End): 1/6/2016

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
 Geographic Coordinates: X = 5032622 mE
 Y = 459430 mN
 Surface Elevation: m ()
 Top of PVC Elevation:

Drilling Company:	Strata Drilling Group
Drilling Equipment:	Geomachine GS100
Drilling Method:	Probe rod
Borehole Diameter:	50 mm
Drilling Fluid:	None
Sampling Method:	

ODOUR
F - Light
M - Medium
P - Persistent

VISUAL
D - Disseminated Product
S - Saturated with Product

SAMPLE TYPE
DC - Diamond Core
SS - Split Spoon
MA - Manual Auger
TR - Trowel
ST - Shelby Tube
TU - DT32 Liner
MC - Macro Core Liner

CHEMICAL ANALYSIS			
PCB	Poly-Chlorinated Biphenyls	MAH	Monocyclic Aromatic Hydrocarbons
BTEX	Benzene, Toluene, Ethylbenzene, Xylene	PAH	Polycyclic Aromatic Hydrocarbons
		PH C ₁₀ -C ₃₀	Petroleum Hydrocarbons C ₁₀ -C ₃₀
Inorg. C.	Inorganic Compounds	PH F1-F4	Petroleum Hydrocarbons F1-F4 (C ₁₀ -C ₃₀)
Phenol. C.	Phenolic Compounds	Metals	Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Silver, Tin, Zinc.
VOC	Volatile Organic Compounds (MAH & CAH)		Leachate Tests (Haz. Waste Reg.)
Diox. & Fur.	Dioxins & Furans	HWR	
CAH	Chlorinated Aliphatic Hydrocarbons		

 Water Level Free Phase

[illegible]

BOREHOLE DRILLING RECORD : **BH16-7**

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): 1/6/2016
Date (End): 1/6/2016

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
Geographic Coordinates: X = 5032572 mE
Y = 459424 mN
Surface Elevation: m ()
Top of PVC Elevation:

Drilling Company:	Strata Drilling Group
Drilling Equipment:	Geomachine GS100
Drilling Method:	Probe rod
Borehole Diameter:	50 mm
Drilling Fluid:	None
Sampling Method:	

ODOUR
F - Light
M - Medium
P - Persistent

VISUAL
D - Disseminated Product
S - Saturated with Product

SAMPLE TYPE
DC - Diamond Corer
SS - Split Spoon
MA - Manual Auger
TR - Trowel
ST - Shelby Tube
TU - DT32 Liner
MC - Macro Core Liner

CHEMICAL ANALYSIS	
PCB	Poly-Chlorinated Biphenyls
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
Inorg. C.	Inorganic Compounds
Phenol. C.	Phenolic Compounds
VOC	Volatil Organic Compounds (MAH & CAH)
Diox. & Fur.	Dioxins & Furans
CAH	Chlorinated Aliphatic Hydrocarbons

MAH	Monocyclic Aromatic Hydrocarbons
PAH	Polycyclic Aromatic Hydrocarbons
PH C ₁₀ -C ₅₀	Petroleum Hydrocarbons C ₁₀ -C ₅₀
PH F1-F4	Petroleum Hydrocarbons F1-F4 (C ₁₀ -C ₅₀)
Metals	Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Silver, Tin, Zinc.
HWR	Leachate Tests (Haz. Waste Reg.)

 Water Level

 Free Phase

[illegible]

BOREHOLE DRILLING RECORD : **BH/MW16-8**

BOREHOLE DRILLING RECORD : BH16-10

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): 2/6/2016
Date (End): 2/6/2016

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
Geographic Coordinates: X = 5032473 mE
Y = 4594402 mN
Surface Elevation: m ()
Top of PVC Elevation:

Drilling Company:	Strata Drilling Group
Drilling Equipment:	Geomachine GS100
Drilling Method:	Probe rod
Borehole Diameter:	50 mm
Drilling Fluid:	None
Sampling Method:	

ODOUR
F - Light
M - Medium
P - Persistent

VISUAL
D - Disseminated Product
S - Saturated with Product

SAMPLE TYPE
DC - Diamond Core
SS - Split Spoon
MA - Manual Auger
TR - Trowel
ST - Shelby Tube
TU - DT32 Liner
MC - Macro Core Liner

▽ Water Level ▼ Free Phase

CHEMICAL ANALYSIS

PCB	Polychlorinated Biphenyls
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
Inorg. C.	Inorganic Compounds
Phenol. C.	Phenolic Compounds
VOC	Volatile Organic Compounds (MAH & CAH)
Diox. & Fur.	Dioxins & Furans
CAH	Chlorinated Aliphatic Hydrocarbons

MAH	Monocyclic Aromatic Hydrocarbons
PAH	Polycyclic Aromatic Hydrocarbons
PH C ₁₀ -C ₅₀	Petroleum Hydrocarbons C ₁₀ -C ₅₀
PH F1-F4	Petroleum Hydrocarbons F1-F4 (C ₁₀ -C ₅₀)
Metals	Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Silver, Tin, Zinc.
HWR	Leachate Tests (Haz. Waste Reg.)

[illegible]

BOREHOLE DRILLING RECORD : BH16-11

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): 2/6/2016
Date (End): 2/6/2016

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
 Geographic Coordinates: X = 5032342 mE
 Y = 459432 mN
 Surface Elevation: m ()
 Top of PVC Elevation:

Drilling Company:	Strata Drilling Group
Drilling Equipment:	Geomachine GS100
Drilling Method:	Probe rod
Borehole Diameter:	50 mm
Drilling Fluid:	None
Sampling Method:	

ODOUR
F - Light
M - Medium
P - Persistent

VISUAL
D - Disseminated Product
S - Saturated with Product

SAMPLE TYPE
DC - Diamond Core
SS - Split Spoon
MA - Manual Auger
TR - Trowel
ST - Shelby Tube
TU - DT32 Liner
MC - Macro Core Liner

▼ Free Phase

CHEMICAL ANALYSIS

PCB	Poly-Chlorinated Biphenyls
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
Inorg. C.	Inorganic Compounds
Phenol. C.	Phenolic Compounds
VOC	Volatile Organic Compounds (MAH & CAH)
Diox. & Fur.	Dioxins & Furans
CAH	Chlorinated Aliphatic Hydrocarbons

MAH	Monocyclic Aromatic Hydrocarbons
PAH	Polycyclic Aromatic Hydrocarbons
PH C ₁₀ -C ₅₀	Petroleum Hydrocarbons C ₁₀ -C ₅₀
PH F1-F4	Petroleum Hydrocarbons F1-F4 (C ₁₀ -C ₅₀)
Metals	Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Silver, Tin, Zinc.
HWR	Leachate Tests (Haz. Waste Req.)

HWF

[illegible]

BOREHOLE DRILLING RECORD : BH16-12

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): 2/6/2016
Date (End): 2/6/2016

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
Geographic Coordinates: X = 5032334 mE
Y = 459386 mN
Surface Elevation: m ()
Top of PVC Elevation:

Drilling Company:	Strata Drilling Group
Drilling Equipment:	Geomachine GS100
Drilling Method:	Probe rod
Borehole Diameter:	50 mm
Drilling Fluid:	None
Sampling Method:	

ODOUR
F - Light
M - Medium
P - Persistent

VISUAL
D - Disseminated Product
S - Saturated with Product

SAMPLE TYPE
DC - Diamond Core
SS - Split Spoon
MA - Manual Auger
TR - Trowel
ST - Shelby Tube
TU - DT32 Liner
MC - Macro Core Liner

CHEMICAL ANALYSIS	
PCB	Poly-Chlorinated Biphenyls
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
Inorg. C.	Inorganic Compounds
Phenol. C.	Phenolic Compounds
VOC	Volatile Organic Compounds (MAH & CAH)
Diox. & Fur.	Dioxins & Furans
CAH	Chlorinated Aliphatic Hydrocarbons

MAH	Monocyclic Aromatic Hydrocarbons
PAH	Polycyclic Aromatic Hydrocarbons
PH C ₁₀ -C ₅₀	Petroleum Hydrocarbons C ₁₀ -C ₅₀
PH F1-F4	Petroleum Hydrocarbons F1-F4 (C ₁₀ -C ₅₀)
Metals	Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Silver, Tin, Zinc.
HWR	Leachate Tests (Haz. Waste Reg.)

▽ Water Level ▼ Free Phase

[illegible]

BOREHOLE DRILLING RECORD : **BH16-13**

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): 2/6/2016
Date (End): 2/6/2016

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
Geographic Coordinates: X = 5032385 mE
Y = 459515 mN
Surface Elevation: m ()
Top of PVC Elevation:

Drilling Company:	Strata Drilling Group
Drilling Equipment:	Geomachine GS100
Drilling Method:	Probe rod
Borehole Diameter:	50 mm
Drilling Fluid:	None
Sampling Method:	

ODOUR
F - Light
M - Medium
P - Persistent

VISUAL
D - Disseminated Product
S - Saturated with Product

SAMPLE TYPE
DC - Diamond Core
SS - Split Spoon
MA - Manual Auger
TR - Trowel
ST - Shelby Tube
TU - DT32 Liner
MC - Macro Core Liner

CHEMICAL ANALYSIS

PCB	Poly-Chlorinated Biphenyls
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
Inorg. C.	Inorganic Compounds
Phenol. C.	Phenolic Compounds
VOC	Volatile Organic Compounds (MAH & CAH)
Diox. & Fur.	Dioxins & Furans
CAH	Chlorinated Aliphatic Hydrocarbons

MAH	Monocyclic Aromatic Hydrocarbons
PAH	Polycyclic Aromatic Hydrocarbons
PH C ₁₀ -C ₅₀	Petroleum Hydrocarbons C ₁₀ -C ₅₀
PH F1-F4	Petroleum Hydrocarbons F1-F4 (C ₁₀ -C ₅₀)
Metals	Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Silver, Tin, Zinc.
HWR	Leachate Tests (Haz. Waste Req.)

▽ Water Level ▼ Free Phase

[illegible]

TEST PIT RECORD : TP16-1

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): 2/11/2016
Date (End): 2/11/2016

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
 Geographic Coordinates: X = 5032612 mE
 Y = 459421 mN
 Surface Elevation: m ()

Contractor: **A.Lacroix Equipment Rentals Ltd.**
Equipment: **Excavator**

CHEMICAL ANALYSIS

VAPOUR READINGS

I - Isobutylene
H - Hexane

SAMPLE TYPE

TM - Manual Auger
TR - Trowel

▽ Water Sepage ▼ Free Phase

PCB	Poly-Chlorinated Biphenyls	MAH	Monocyclic Aromatic Hydrocarbons
BTEX	Benzene, Toluene, Ethylbenzene, Xylene	PAH	Polycyclic Aromatic Hydrocarbons
Inorg. C.	Inorganic Compounds	PH C ₁₀ -C ₅₀	Petroleum Hydrocarbons C ₁₀ -C ₅₀
Phenol. C.	Phenolic Compounds	PH F ₁ -F ₄	Petroleum Hydrocarbons F ₁ -F ₄ (C ₁₀ -C ₅₀)
VOC	Volatil Organic Compounds (MAH & CAH)	Metals	Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Silver, Tin, Zinc.
Diox. & Fur.	Dioxins & Furans		
EC	Electrical Conductivity	HWR	Leachate Tests (Haze, Waste Reg.)

[illegible]

TEST PIT RECORD : TP16-2

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): 2/11/2016
Date (End): 2/11/2016

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
 Geographic Coordinates: X = 5032619 mE
 Y = 459408 mN
 Surface Elevation: m ()

Contractor:	A.Lacroix Equipment Rentals Ltd.
Equipment:	Excavator

CHEMICAL ANALYSIS

PCB	Poly-Chlorinated Biphenyls
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
Inorg. C.	Inorganic Compounds
Phenol. C.	Phenolic Compounds
VOC	Volatil Organic Compounds (MAH & CAH)
Diox. & Fur.	Dioxins & Furans
EC	Electrical Conductivity

MAH
PAH
PH C₁₀-C₅₀
PH F₁-F₄
Metals

Monocyclic Aromatic Hydrocarbons
Polycyclic Aromatic Hydrocarbons
Petroleum Hydrocarbons C₁₀-C₅₀
Petroleum Hydrocarbons F1-F4 (C₁₀-C₅₀)
Arsenic, Barium, Cadmium, Chromium, Cobalt,
Copper, Lead, Manganese, Molybdenum,
Nickel, Silver, Tin, Zinc.
Leachate Tests (Haz. Waste Reg.)

VAPOUR READINGS

I - Isobutylene
H - Hexane

SAMPLE TYPE

TM - Manual Auger
TR - Trowel

▽ Water Sepage ▼ Free Phase

[illegible]

TEST PIT RECORD : **TP16-3**

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): 2/11/2016
Date (End): 2/11/2016

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
Geographic Coordinates: X = 5032631 mE
Y = 459412 mN
Surface Elevation: m ()

Contractor:	A.Lacroix Equipment Rentals Ltd.
Equipment:	Excavator

CHEMICAL ANALYSIS

VAPOUR READINGS

I - Isobutylene
H - Hexane

SAMPLE TYPE

TM - Manual Auger
TB - Trowel

▽ Water Sepage ▼ Free Phase

PCB	Poly-Chlorinated Biphenyls
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
Inorg. C.	Inorganic Compounds
Phenol. C.	Phenolic Compounds
VOC	Volatil Organic Compounds (MAH & CAH)
Diox. & Fur.	Dioxins & Furans
EC	Electrical Conductivity

MAH
PAH
PH C₁₀⁺
PH F₁-F₁₀
Metals

Monocyclic Aromatic Hydrocarbons
Polycyclic Aromatic Hydrocarbons
Petroleum Hydrocarbons C₁₀-C₅₀
Petroleum Hydrocarbons F1-F4 (C₁₀-C₅₀)
Arsenic, Barium, Cadmium, Chromium, Cobalt,
Copper, Lead, Manganese, Molybdenum,
Nickel, Silver, Tin, Zinc.
Leachate Tests (Haz. Waste Reg.)

[illegible]

TEST PIT RECORD : TP16-4

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): **2/11/2016**
Date (End): **2/11/2016**

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
Geographic Coordinates: X = 5032626 mE
Y = 459424 mN
Surface Elevation: m ()

Contractor: **A.Lacroix Equipment Rentals Ltd.**
Equipment: **Excavator**

CHEMICAL ANALYSIS

PCB	Poly-Chlorinated Biphenyls
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
Inorg. C.	Inorganic Compounds
Phenol. C.	Phenolic Compounds
VOC	Volatil Organic Compounds (MAH & CAH)
Diox. & Fur.	Dioxins & Furans
EC	Electrical Conductivity

MAH	Monocyclic Aromatic Hydrocarbons
PAH	Polycyclic Aromatic Hydrocarbons
PH C ₁₀ -C ₅₀	Petroleum Hydrocarbons C ₁₀ -C ₅₀
PH F ₁ -F ₄	Petroleum Hydrocarbons F1-F4 (C ₁₀ -C ₅₀)
Metals	Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Silver, Tin, Zinc.
HWR	Leachate Tests (Haz. Waste Reg.)

VAPOUR READINGS

I - Isobutylene
H - Hexane

SAMPLE TYPE

TM - Manual Auger
TB - Trowel

▽ Water Sepage ▼ Free Phase

[illegible]



TEST PIT RECORD : TP16-5

Page 1 of 1

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): **2/11/2016**
Date (End): **2/11/2016**

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
Geographic Coordinates: **X = 5032559 mE**
Y = 459440 mN
Surface Elevation: **m ()**

Contractor: **A.Lacroix Equipment Rentals Ltd.**
Equipment: **Excavator**

VAPOUR READINGS

I - Isobutylene
H - Hexane

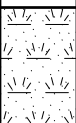
SAMPLE TYPE

TM - Manual Auger
TR - Trowel

Water Sepage Free Phase

CHEMICAL ANALYSIS

PCB	Poly-Chlorinated Biphenyls	MAH	Monocyclic Aromatic Hydrocarbons
BTEX	Benzene, Toluene, Ethylbenzene, Xylene	PAH	Polycyclic Aromatic Hydrocarbons
Inorg. C.	Inorganic Compounds	PH C ₁₀ -C ₂₀	Petroleum Hydrocarbons C ₁₀ -C ₂₀
Phenol. C.	Phenolic Compounds	PH F ₁ -F ₄	Petroleum Hydrocarbons F1-F4 (C ₁₀ -C ₂₀)
VOC	Volatil Organic Compounds (MAH & CAH)	Metals	Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Silver, Tin, Zinc.
Diox. & Fur.	Dioxins & Furans		Leacheate Tests (Haz. Waste Reg.)
EC	Electrical Conductivity	HWR	

Projet : 161-08368-00 PHASE TWO ESA - 3636 INNES ROAD.GPJ Type rapport : WSP_EN_TEST PIT Data Template : WSP_TEMPLATE_GEOTECH.GDT 11/14/2016	0.20		TOP SOIL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</
--	------	---	----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

TEST PIT RECORD : TP16-6

Prepared by: **Kathryn Maton**
Reviewed by: **Carolyn Adams**

Date (Start): 2/11/2016
Date (End): 2/11/2016

Project Name: **Phase Two Environmental Site Assessment**
Site: **Part of Lot 4, Concession 3, Parts 1-5, Gloucester, Ontario**
Sector:
Client: **The Builders Warehouse Inc.**

Project Number: **161-06382-00**
Geographic Coordinates: X = 5032988 mE
Y = 459317 mN
Surface Elevation: m ()

Contractor: **A.Lacroix Equipment Rentals Ltd.**
Equipment: **Excavator**

CHEMICAL ANALYSIS		
PCB	Poly-Chlorinated Biphenyls	MAH Monocyclic Aromatic Hydrocarbons
BTEX	Benzene, Toluene, Ethylbenzene, Xylene	PAH Polycyclic Aromatic Hydrocarbons
Inorg. C.	Inorganic Compounds	PH C ₁₀ -C ₅₀ Petroleum Hydrocarbons C ₁₀ -C ₅₀
Phenol. C.	Phenolic Compounds	PH F ₁ -F ₄ Petroleum Hydrocarbons F1-F4 (C ₁₀ -C ₅₀)
VOC	Volatil Organic Compounds (MAH & CAH)	Metals Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Silver, Tin, Zinc.
Diox. & Fur.	Dioxins & Furans	
EC	Electrical Conductivity	HWR Leachate Tests (Haz. Waste Reg.)

VAPOUR READINGS

I - Isobutylene
H - Hexane

SAMPLE TYPE

TM - Manual Auger
TR - Trowel

▽ Water Sepage ▼ Free Phase

[illegible]

Appendix B

CERTIFICATES OF ANALYSIS

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313177
Date Submitted: 2013-06-28
Date Reported: 2013-07-10
Project: 131-13558-00-700
COC #: 157780

Page 1 of 13

Dear David Feghali:

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

Report Comments:

APPROVAL: _____

Lorna Wilson
Laboratory Supervisor, Inorganics

APPROVAL: _____

Charlie (Long) Qu
Laboratory Supervisor, Organics

Exova (Ottawa) is certified and accredited for specific parameters by:

CALA, Canadian Association for Laboratory Accreditation (to ISO 17025), OMAFRA, Ontario Ministry of Agriculture, Food and Rural Affairs (for farm soils), Licensed by Ontario MOE for specific tests in drinking water.

Exova (Mississauga) is certified and accredited for specific parameters by:

SCC, Standards Council of Canada (to ISO 17025)

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only.

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313177
Date Submitted: 2013-06-28
Date Reported: 2013-07-10
Project: 131-13558-00-700
COC #: 157780

Group	Analyte	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sampling Date	Sample I.D.
					1037902	1037903	1037904	1037905	
					Soil	Soil	Soil	Soil	
					2013-06-27	2013-06-27	2013-06-27	2013-06-27	
					P0-1 (0.61-0.86)	F-09 (0-0.61)	DUP-7	F-02 (0.45-0.55)	
Inorganics	Antimony	1	ug/g	STD-7.5	<1			<1	
	Arsenic	1	ug/g	STD-18	2			2	
	Barium	1	ug/g	STD-390	111			65	
	Beryllium	1	ug/g	STD-4	<1			<1	
	Boron (total)	10	ug/g	STD-120	20			20	
	Cadmium	0.5	ug/g	STD-1.2	<0.5			<0.5	
	Chromium Total	1	ug/g	STD-160	60			36	
	Cobalt	1	ug/g	STD-22	11			8	
	Copper	1	ug/g	STD-140	19			11	
	Lead	1	ug/g	STD-120	7			4	
	Molybdenum	1	ug/g	STD-6.9	<1			<1	
	Nickel	1	ug/g	STD-100	29			19	
	Selenium	1	ug/g	STD-2.4	<1			<1	
	Silver	0.2	ug/g	STD-20	<0.2			<0.2	
	Thallium	1	ug/g	STD-1	<1			<1	
	Uranium	0.5	ug/g	STD-23	0.6			<0.5	
	Vanadium	2	ug/g	STD-86	53			36	
	Zinc	2	ug/g	STD-340	57			33	
Moisture	Moisture	0.1	%		15.6	1.2	2.6	312.0	
Petroleum Hydrocarbons	Petroleum Hydrocarbons F1	10	ug/g	STD-55	<10	<10	<10	20	
	Petroleum Hydrocarbons F1-BTEX	10	ug/g		<10	<10	<10		
	Petroleum Hydrocarbons F2	10	ug/g	STD-98	<10	<10	<10	<10	
	Petroleum Hydrocarbons F3	20	ug/g	STD-300	<20	60	120	<20	
	Petroleum Hydrocarbons F4	20	ug/g	STD-2800	140	240	440	100	
	Petroleum Hydrocarbons F4g	500	ug/g				1400		
Semi-Volatiles	Acenaphthene	0.05	ug/g	STD-7.9	<0.05	<0.05	<0.05	<0.05	

Guideline = O.Reg 153-T7-Res/Park-Coarse

* = Guideline Exceedence

** - Analysis completed in Mississauga

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313177
Date Submitted: 2013-06-28
Date Reported: 2013-07-10
Project: 131-13558-00-700
COC #: 157780

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1037902 Soil 2013-06-27 P0-1 (0.61-0.86)	1037903 Soil 2013-06-27 F-09 (0-0.61)	1037904 Soil 2013-06-27 DUP-7	1037905 Soil 2013-06-27 F-02 (0.45-0.55)
Group	Analyte	MRL	Units	Guideline					
Semi-Volatiles	Acenaphthylene	0.05	ug/g	STD-0.15		<0.05	<0.05	<0.05	<0.05
	Anthracene	0.05	ug/g	STD-0.67		<0.05	<0.05	<0.05	<0.05
	Benz[a]anthracene	0.05	ug/g	STD-0.5		<0.05	<0.05	<0.05	<0.05
	Benzo[a]pyrene	0.05	ug/g	STD-0.3		<0.05	<0.05	<0.05	<0.05
	Benzo[b]fluoranthene	0.05	ug/g	STD-0.78		<0.05	<0.05	<0.05	<0.05
	Benzo[ghi]perylene	0.05	ug/g	STD-6.6		<0.05	<0.05	<0.05	<0.05
	Benzo[k]fluoranthene	0.05	ug/g	STD-0.78		<0.05	<0.05	<0.05	<0.05
	Chrysene	0.05	ug/g	STD-7		<0.05	<0.05	<0.05	<0.05
	Dibenz[a h]anthracene	0.05	ug/g	STD-0.1		<0.05	<0.05	<0.05	<0.05
	Fluoranthene	0.05	ug/g	STD-0.69		<0.05	<0.05	<0.05	<0.05
	Fluorene	0.05	ug/g	STD-62		<0.05	<0.05	<0.05	<0.05
	Indeno[1 2 3-cd]pyrene	0.05	ug/g	STD-0.38		<0.05	<0.05	<0.05	<0.05
	Methlynaphthalene, 1-	0.05	ug/g	STD-0.99		<0.05	<0.05	<0.05	<0.05
	Methlynaphthalene, 2-	0.05	ug/g	STD-0.99		<0.05	<0.05	<0.05	<0.05
	Naphthalene	0.05	ug/g	STD-0.6		<0.05	<0.05	<0.05	<0.05
	Phenanthrene	0.05	ug/g	STD-6.2		<0.05	<0.05	<0.05	<0.05
	Pyrene	0.05	ug/g	STD-78		<0.05	<0.05	<0.05	<0.05
VOCs	Benzene	0.02	ug/g	STD-0.21		<0.02	<0.02	<0.02	
	Ethylbenzene	0.05	ug/g	STD-2		<0.05	<0.05	<0.05	
	m/p-xylene	0.05	ug/g			<0.05	<0.05	<0.05	
	o-xylene	0.05	ug/g			<0.05	<0.05	<0.05	
	Toluene	0.20	ug/g	STD-2.3		<0.20	<0.20	<0.20	
	Xylene Mixture	0.05	ug/g	STD-3.1		<0.05	<0.05	<0.05	
VOCs Surrogates (%)	Toluene-d8	0	%			98	99	97	

Guideline = O.Reg 153-T7-Res/Park-Coarse

* = Guideline Exceedence

** - Analysis completed in Mississauga

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313177
Date Submitted: 2013-06-28
Date Reported: 2013-07-10
Project: 131-13558-00-700
COC #: 157780

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1037906	1037907	1037908	1037909
						Soil 2013-06-27 F-02 (0.55-0.75)	Soil 2013-06-27 F-01 (0.4-0.5)	Soil 2013-06-27 F-04 (0.61-1.22)	Soil 2013-06-27 F-03 (0.3-0.5)
Inorganics	Antimony	1	ug/g	STD-7.5			<1		<1
	Arsenic	1	ug/g	STD-18			3		3
	Barium	1	ug/g	STD-390			99		177
	Beryllium	1	ug/g	STD-4			<1		<1
	Boron (total)	10	ug/g	STD-120			20		20
	Cadmium	0.5	ug/g	STD-1.2			<0.5		<0.5
	Chromium Total	1	ug/g	STD-160			41		22
	Cobalt	1	ug/g	STD-22			9		4
	Copper	1	ug/g	STD-140			15		5
	Lead	1	ug/g	STD-120			13		7
	Molybdenum	1	ug/g	STD-6.9			<1		1
	Nickel	1	ug/g	STD-100			23		16
	Selenium	1	ug/g	STD-2.4			<1		<1
	Silver	0.2	ug/g	STD-20			<0.2		<0.2
	Thallium	1	ug/g	STD-1			<1		<1
	Uranium	0.5	ug/g	STD-23			<0.5		0.6
	Vanadium	2	ug/g	STD-86			39		10
	Zinc	2	ug/g	STD-340			54		10
Moisture	Moisture	0.1	%			14.8	15.5	15.7	3.6
Petroleum Hydrocarbons	Petroleum Hydrocarbons F1	10	ug/g	STD-55		<10	<10	<10	<10
	Petroleum Hydrocarbons F1-BTEX	10	ug/g			<10	<10	<10	<10
	Petroleum Hydrocarbons F2	10	ug/g	STD-98		<10	<10	<10	<10
	Petroleum Hydrocarbons F3	20	ug/g	STD-300		<20	<20	<20	<20
	Petroleum Hydrocarbons F4	20	ug/g	STD-2800		60	40	20	20
Semi-Volatiles	Acenaphthene	0.05	ug/g	STD-7.9		<0.05	<0.05	<0.05	<0.05
	Acenaphthylene	0.05	ug/g	STD-0.15		<0.05	<0.05	<0.05	<0.05

Guideline = O.Reg 153-T7-Res/Park-Coarse

* = Guideline Exceedence

** - Analysis completed in Mississauga

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313177
Date Submitted: 2013-06-28
Date Reported: 2013-07-10
Project: 131-13558-00-700
COC #: 157780

					1037906 Soil 2013-06-27 F-02 (0.55-0.75)	1037907 Soil 2013-06-27 F-01 (0.4-0.5)	1037908 Soil 2013-06-27 F-04 (0.61-1.22)	1037909 Soil 2013-06-27 F-03 (0.3-0.5)
Group	Analyte	MRL	Units	Guideline				
Semi-Volatiles	Anthracene	0.05	ug/g	STD-0.67	<0.05	<0.05	<0.05	<0.05
	Benz[a]anthracene	0.05	ug/g	STD-0.5	<0.05	<0.05	<0.05	<0.05
	Benzo[a]pyrene	0.05	ug/g	STD-0.3	<0.05	<0.05	<0.05	<0.05
	Benzo[b]fluoranthene	0.05	ug/g	STD-0.78	<0.05	<0.05	<0.05	<0.05
	Benzo[ghi]perylene	0.05	ug/g	STD-6.6	<0.05	<0.05	<0.05	<0.05
	Benzo[k]fluoranthene	0.05	ug/g	STD-0.78	<0.05	<0.05	<0.05	<0.05
	Chrysene	0.05	ug/g	STD-7	<0.05	<0.05	<0.05	<0.05
	Dibenz[a h]anthracene	0.05	ug/g	STD-0.1	<0.05	<0.05	<0.05	<0.05
	Fluoranthene	0.05	ug/g	STD-0.69	<0.05	<0.05	<0.05	<0.05
	Fluorene	0.05	ug/g	STD-62	<0.05	<0.05	<0.05	<0.05
	Indeno[1 2 3-cd]pyrene	0.05	ug/g	STD-0.38	<0.05	<0.05	<0.05	<0.05
	Methlynaphthalene, 1-	0.05	ug/g	STD-0.99	<0.05	<0.05	<0.05	<0.05
	Methlynaphthalene, 2-	0.05	ug/g	STD-0.99	<0.05	<0.05	<0.05	<0.05
	Naphthalene	0.05	ug/g	STD-0.6	<0.05	<0.05	<0.05	<0.05
	Phenanthrene	0.05	ug/g	STD-6.2	<0.05	<0.05	<0.05	<0.05
VOCs	Pyrene	0.05	ug/g	STD-78	0.12	<0.05	0.16	<0.05
	Benzene	0.02	ug/g	STD-0.21	<0.02	<0.02	<0.02	<0.02
	Ethylbenzene	0.05	ug/g	STD-2	<0.05	<0.05	<0.05	<0.05
	m/p-xylene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	o-xylene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Toluene	0.20	ug/g	STD-2.3	<0.20	<0.20	<0.20	<0.20
	Xylene Mixture	0.05	ug/g	STD-3.1	<0.05	<0.05	<0.05	<0.05
VOCs Surrogates (%)	Toluene-d8	0	%		98	97	97	100

Guideline = O.Reg 153-T7-Res/Park-Coarse

* = Guideline Exceedence

** - Analysis completed in Mississauga

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313177
Date Submitted: 2013-06-28
Date Reported: 2013-07-10
Project: 131-13558-00-700
COC #: 157780

Group	Analyte	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sampling Date	Sample I.D.
					1037910	1037911	1037912	1037913	
					Soil	Soil	Soil	Soil	
					2013-06-27	2013-06-27	2013-06-27	2013-06-27	
					F-03 (0.5-0.91)	F-08 (0.10-0.61)	F-07 (0.61-1.22)	F-06 (0-0.61)	
Inorganics	Antimony	1	ug/g	STD-7.5	<1				
	Arsenic	1	ug/g	STD-18	4				
	Barium	1	ug/g	STD-390	132				
	Beryllium	1	ug/g	STD-4	<1				
	Boron (total)	10	ug/g	STD-120	20				
	Cadmium	0.5	ug/g	STD-1.2	<0.5				
	Chromium Total	1	ug/g	STD-160	33				
	Cobalt	1	ug/g	STD-22	7				
	Copper	1	ug/g	STD-140	11				
	Lead	1	ug/g	STD-120	7				
	Molybdenum	1	ug/g	STD-6.9	<1				
	Nickel	1	ug/g	STD-100	21				
	Selenium	1	ug/g	STD-2.4	<1				
	Silver	0.2	ug/g	STD-20	<0.2				
	Thallium	1	ug/g	STD-1	<1				
	Uranium	0.5	ug/g	STD-23	0.5				
	Vanadium	2	ug/g	STD-86	32				
	Zinc	2	ug/g	STD-340	35				
Moisture	Moisture	0.1	%		14.1	3.8	26.8	3.2	
Petroleum Hydrocarbons	Petroleum Hydrocarbons F1	10	ug/g	STD-55	<10	30	<10	<10	
	Petroleum Hydrocarbons F1-BTEX	10	ug/g		<10	30	<10	<10	
	Petroleum Hydrocarbons F2	10	ug/g	STD-98	<10	<10	<10	<10	
	Petroleum Hydrocarbons F3	20	ug/g	STD-300	<20	80	<20	30	
	Petroleum Hydrocarbons F4	20	ug/g	STD-2800	<20	30	<20	60	
Semi-Volatiles	Acenaphthene	0.05	ug/g	STD-7.9	<0.05	<0.05	<0.05	<0.05	
	Acenaphthylene	0.05	ug/g	STD-0.15	<0.05	<0.05	<0.05	<0.05	

Guideline = O.Reg 153-T7-Res/Park-Coarse

* = Guideline Exceedence

** - Analysis completed in Mississauga

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313177
Date Submitted: 2013-06-28
Date Reported: 2013-07-10
Project: 131-13558-00-700
COC #: 157780

					1037910 Soil 2013-06-27 F-03 (0.5-0.91)	1037911 Soil 2013-06-27 F-08 (0.10-0.61)	1037912 Soil 2013-06-27 F-07 (0.61-1.22)	1037913 Soil 2013-06-27 F-06 (0-0.61)
Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D. Guideline				
Semi-Volatiles	Anthracene	0.05	ug/g	STD-0.67	<0.05	<0.05	<0.05	<0.05
	Benz[a]anthracene	0.05	ug/g	STD-0.5	<0.05	<0.05	<0.05	<0.05
	Benzo[a]pyrene	0.05	ug/g	STD-0.3	<0.05	<0.05	<0.05	<0.05
	Benzo[b]fluoranthene	0.05	ug/g	STD-0.78	<0.05	<0.05	<0.05	<0.05
	Benzo[ghi]perylene	0.05	ug/g	STD-6.6	<0.05	<0.05	<0.05	<0.05
	Benzo[k]fluoranthene	0.05	ug/g	STD-0.78	<0.05	<0.05	<0.05	<0.05
	Chrysene	0.05	ug/g	STD-7	<0.05	<0.05	<0.05	<0.05
	Dibenz[a h]anthracene	0.05	ug/g	STD-0.1	<0.05	<0.05	<0.05	<0.05
	Fluoranthene	0.05	ug/g	STD-0.69	<0.05	<0.05	<0.05	<0.05
	Fluorene	0.05	ug/g	STD-62	<0.05	<0.05	<0.05	<0.05
	Indeno[1 2 3-cd]pyrene	0.05	ug/g	STD-0.38	<0.05	<0.05	<0.05	<0.05
	Methlynaphthalene, 1-	0.05	ug/g	STD-0.99	<0.05	<0.05	<0.05	<0.05
	Methlynaphthalene, 2-	0.05	ug/g	STD-0.99	<0.05	<0.05	<0.05	<0.05
	Naphthalene	0.05	ug/g	STD-0.6	<0.05	<0.05	<0.05	<0.05
	Phenanthrene	0.05	ug/g	STD-6.2	<0.05	<0.05	<0.05	<0.05
	Pyrene	0.05	ug/g	STD-78	<0.05	<0.05	<0.05	<0.05
VOCs	Benzene	0.02	ug/g	STD-0.21	<0.02	<0.02	<0.02	<0.02
	Ethylbenzene	0.05	ug/g	STD-2	<0.05	<0.05	<0.05	<0.05
	m/p-xylene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	o-xylene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Toluene	0.20	ug/g	STD-2.3	<0.20	<0.20	<0.20	<0.20
	Xylene Mixture	0.05	ug/g	STD-3.1	<0.05	<0.05	<0.05	<0.05
VOCs Surrogates (%)	Toluene-d8	0	%		97	96	100	99

Guideline = O.Reg 153-T7-Res/Park-Coarse

* = Guideline Exceedence

** - Analysis completed in Mississauga

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313177
Date Submitted: 2013-06-28
Date Reported: 2013-07-10
Project: 131-13558-00-700
COC #: 157780

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 0 Analysis Date 2013-07-08 Method CCME			
Petroleum Hydrocarbons F1-BTEX			
Xylene Mixture			
Run No 253766 Analysis Date 2013-07-08 Method C SM2540B			
Moisture	<0.1 %	102	80-120
Run No 253770 Analysis Date 2013-07-08 Method CCME			
Petroleum Hydrocarbons F2	<10 ug/g	83	50-120
Petroleum Hydrocarbons F3	<20 ug/g	83	50-120
Petroleum Hydrocarbons F4	<20 ug/g	83	50-120
Run No 253806 Analysis Date 2013-07-08 Method CCME			
Petroleum Hydrocarbons F4g	<500 ug/g		
Run No 253828 Analysis Date 2013-07-08 Method EPA 200.8			
Silver	<0.2 ug/g	87	70-130
Arsenic	<1 ug/g	103	70-130
Barium	<1 ug/g	103	70-130

Guideline = O.Reg 153-T7-Res/Park-Coarse

* = Guideline Exceedence

** - Analysis completed in Mississauga

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313177
Date Submitted: 2013-06-28
Date Reported: 2013-07-10
Project: 131-13558-00-700
COC #: 157780

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Beryllium	<1 ug/g	102	70-130
Cadmium	<0.5 ug/g	98	70-130
Cobalt	<1 ug/g	105	70-130
Chromium Total	<1 ug/g	103	70-130
Copper	<1 ug/g	108	70-130
Molybdenum	<1 ug/g	106	70-130
Nickel	<1 ug/g	106	70-130
Lead	<1 ug/g	92	70-130
Antimony	<1 ug/g	90	70-130
Selenium	<1 ug/g	103	70-130
Thallium	<1 ug/g	92	70-130
Uranium	<0.5 ug/g	87	70-130
Vanadium	<2 ug/g	114	70-130
Zinc	<2 ug/g	113	70-130
Run No 253831 Analysis Date 2013-07-05 Method V 8260B			
Benzene	<0.02 ug/g	96	80-120
Ethylbenzene	<0.05 ug/g	94	80-120

Guideline = O.Reg 153-T7-Res/Park-Coarse

*** = Guideline Exceedence**

** - Analysis completed in Mississauga

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313177
Date Submitted: 2013-06-28
Date Reported: 2013-07-10
Project: 131-13558-00-700
COC #: 157780

QC Summary

Analyte	Blank	QC % Rec	QC Limits
m/p-xylene	<0.05 ug/g	97	80-120
o-xylene	<0.05 ug/g	97	80-120
Toluene	<0.20 ug/g	99	80-120
Toluene-d8	92 %	101	
Run No 253832 Analysis Date 2013-07-05 Method CCME			
Petroleum Hydrocarbons F1	<10 ug/g		80-120
Run No 253841 Analysis Date 2013-07-05 Method CCME			
Petroleum Hydrocarbons F1	<10 ug/g	95	80-120
Run No 253842 Analysis Date 2013-07-05 Method CCME			
Petroleum Hydrocarbons F1-BTEX			
Run No 253843 Analysis Date 2013-07-05 Method CCME			
Petroleum Hydrocarbons F1	<10 ug/g	95	80-120
Run No 253857 Analysis Date 2013-07-08 Method M SM3120B-3050B			
Boron (total)	<10 ug/g	83	
Run No 254009 Analysis Date 2013-07-10 Method P 8270			
Methlynaphthalene, 1-	<0.05 ug/g	62	20-150
Methlynaphthalene, 2-	<0.05 ug/g	61	20-150

Guideline = O.Reg 153-T7-Res/Park-Coarse

* = Guideline Exceedence

** - Analysis completed in Mississauga

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313177
Date Submitted: 2013-06-28
Date Reported: 2013-07-10
Project: 131-13558-00-700
COC #: 157780

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Acenaphthene	<0.05 µg/g	63	20-150
Acenaphthylene	<0.05 µg/g	62	20-150
Anthracene	<0.05 µg/g	70	20-150
Benz[a]anthracene	<0.05 µg/g	77	20-150
Benzo[a]pyrene	<0.05 µg/g	76	20-150
Benzo[b]fluoranthene	<0.05 µg/g	77	20-150
Benzo[ghi]perylene	<0.05 µg/g	85	20-150
Benzo[k]fluoranthene	<0.05 µg/g	75	20-150
Chrysene	<0.05 µg/g	72	20-150
Dibenz[a h]anthracene	<0.05 µg/g	86	20-150
Fluoranthene	<0.05 µg/g	73	20-150
Fluorene	<0.05 µg/g	64	20-150
Indeno[1 2 3-cd]pyrene	<0.05 µg/g	86	20-150
Naphthalene	<0.05 µg/g	59	20-150
Phenanthrene	<0.05 µg/g	68	20-150
Pyrene	<0.05 µg/g	73	20-150

Guideline = O.Reg 153-T7-Res/Park-Coarse

*** = Guideline Exceedence**

** - Analysis completed in Mississauga

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313177
Date Submitted: 2013-06-28
Date Reported: 2013-07-10
Project: 131-13558-00-700
COC #: 157780

Guideline = O.Reg 153-T7-Res/Park-Coarse

*** = Guideline Exceedence**

** - Analysis completed in Mississauga

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313177
Date Submitted: 2013-06-28
Date Reported: 2013-07-10
Project: 131-13558-00-700
COC #: 157780

Sample Comment Summary

Sample ID: 1037904 DUP-7 The result for F4 (C34-C50) gravimetric must be substituted if it is greater than the result for F4 (C34-C50).

Guideline = O.Reg 153-T7-Res/Park-Coarse

*** = Guideline Exceedence**

******-Analysis completed in Mississauga

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1314739
Date Submitted: 2013-06-28
Date Reported: 2013-07-15
Project: 131-13558-00-700
COC #: 157780

Page 1 of 7

Dear David Feghali:

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

Report Comments:

APPROVAL: _____

Lorna Wilson
Laboratory Supervisor, Inorganics

APPROVAL: _____

Charlie (Long) Qu
Laboratory Supervisor, Organics

Exova (Ottawa) is certified and accredited for specific parameters by:
CALA, Canadian Association for Laboratory Accreditation (to ISO 17025), OMAFRA, Ontario Ministry of Agriculture, Food and Rural Affairs (for farm soils), Licensed by Ontario MOE for specific tests in drinking water.

Exova (Mississauga) is accredited for specific parameters by:
SCC, Standards Council of Canada (to ISO 17025)

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only.

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1314739
Date Submitted: 2013-06-28
Date Reported: 2013-07-15
Project: 131-13558-00-700
COC #: 157780

					1037930 Soil 2013-06-27 F-03 (1.01-1.11)	1037935 Soil 2013-06-27 F-05 (1.32-1.83)
Group	Analyte	MRL	Units	Guideline		
General Chemistry	Moisture	0.1	%		12.2	30.0
Hydrocarbons	F1 (C6-C10)	10	ug/g		<10	<10
	F1-BTEX (C6-C10)	10	ug/g		<10	<10
	F2 (C10-C16)	10	ug/g		<10	<10
	F3 (C16-C34)	20	ug/g		<20	<20
	F4 (C34-C50)	20	ug/g		<20	<20
Metals	Ag	0.2	ug/g		<0.2	<0.2
	As	1	ug/g		2	1
	B	10	ug/g		20	40
	Ba	1	ug/g		61	421
	Be	1	ug/g		<1	<1
	Cd	0.5	ug/g		<0.5	<0.5
	Co	1	ug/g		7	27
	Cr	1	ug/g		18	112
	Cu	1	ug/g		15	61
	Mo	1	ug/g		<1	<1
	Ni	1	ug/g		16	70
	Pb	1	ug/g		6	8
	Sb	1	ug/g		<1	<1
	Se	1	ug/g		<1	<1
	Tl	1	ug/g		<1	<1
	U	0.5	ug/g		<0.5	0.6
	V	2	ug/g		27	105
	Zn	2	ug/g		24	140
Semi-Volatiles	1-methylnaphthalene	0.05	ug/g		<0.05	<0.05
	2-methylnaphthalene	0.05	ug/g		<0.05	<0.05

Guideline = * = **Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1314739
Date Submitted: 2013-06-28
Date Reported: 2013-07-15
Project: 131-13558-00-700
COC #: 157780

					1037930 Soil 2013-06-27 F-03 (1.01-1.11)	1037935 Soil 2013-06-27 F-05 (1.32-1.83)
Group	Analyte	MRL	Units	Guideline		
Semi-Volatiles	Acenaphthene	0.05	ug/g		<0.05	<0.05
	Acenaphthylene	0.05	ug/g		<0.05	<0.05
	Anthracene	0.05	ug/g		<0.05	<0.05
	Benzo(a)anthracene	0.05	ug/g		<0.05	<0.05
	Benzo(a)pyrene	0.05	ug/g		<0.05	<0.05
	Benzo(b)fluoranthene	0.05	ug/g		<0.05	<0.05
	Benzo(g,h,i)perylene	0.05	ug/g		<0.05	<0.05
	Benzo(k)fluoranthene	0.05	ug/g		<0.05	<0.05
	Chrysene	0.05	ug/g		<0.05	<0.05
	Dibenzo(a,h)anthracene	0.05	ug/g		<0.05	<0.05
	Fluoranthene	0.05	ug/g		<0.05	<0.05
	Fluorene	0.05	ug/g		<0.05	<0.05
	Indeno(1,2,3-c,d)pyrene	0.05	ug/g		<0.05	<0.05
	Naphthalene	0.05	ug/g		<0.05	<0.05
	Phenanthrene	0.05	ug/g		<0.05	<0.05
	Pyrene	0.05	ug/g		<0.05	<0.05
VOCs	Benzene	0.02	ug/g		<0.02	<0.02
	Ethylbenzene	0.05	ug/g		<0.05	<0.05
	m/p-xylene	0.05	ug/g		<0.05	<0.05
	o-xylene	0.05	ug/g		<0.05	<0.05
	Toluene	0.20	ug/g		<0.20	<0.20
	Toluene-d8	0	%		101	104
	Xylene; total	0.05	ug/g		<0.05	<0.05

Guideline = * = **Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1314739
Date Submitted: 2013-06-28
Date Reported: 2013-07-15
Project: 131-13558-00-700
COC #: 157780

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 0 Analysis Date 2013-07-15 Method V 8260B			
Xylene; total			
Run No 254258 Analysis Date 2013-07-12 Method V 8260B			
Benzene	<0.02 ug/g	83	80-120
Ethylbenzene	<0.05 ug/g	100	80-120
m/p-xylene	<0.05 ug/g	106	80-120
o-xylene	<0.05 ug/g	110	80-120
Toluene	<0.20 ug/g	107	80-120
Toluene-d8	100 %	107	
Run No 254259 Analysis Date 2013-07-15 Method CCME			
F1 (C6-C10)	<10 ug/g	80	80-120
F1-BTEX (C6-C10)			
Run No 254297 Analysis Date 2013-07-12 Method P 8270			
1-methylnaphthalene	<0.05 ug/g	52	20-150
2-methylnaphthalene	<0.05 ug/g	51	20-150

Guideline = *** = Guideline Exceedence**
 ** = Analysis completed at Mississauga, Ontario.
 Results relate only to the parameters tested on the samples submitted.
 Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1314739
Date Submitted: 2013-06-28
Date Reported: 2013-07-15
Project: 131-13558-00-700
COC #: 157780

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Acenaphthene	<0.05 ug/g	58	20-150
Acenaphthylene	<0.05 ug/g	54	20-150
Anthracene	<0.05 ug/g	72	20-150
Benzo(a)anthracene	<0.05 ug/g	84	20-150
Benzo(a)pyrene	<0.05 ug/g	81	20-150
Benzo(b)fluoranthene	<0.05 ug/g	81	20-150
Benzo(g,h,i)perylene	<0.05 ug/g	92	20-150
Benzo(k)fluoranthene	<0.05 ug/g	83	20-150
Chrysene	<0.05 ug/g	81	20-150
Dibenzo(a,h)anthracene	<0.05 ug/g	90	20-150
Fluoranthene	<0.05 ug/g	83	20-150
Fluorene	<0.05 ug/g	63	20-150
Indeno(1,2,3-c,d)pyrene	<0.05 ug/g	96	20-150
Naphthalene	<0.05 ug/g	47	20-150
Phenanthrene	<0.05 ug/g	73	20-150
Pyrene	<0.05 ug/g	84	20-150
Run No 254314 Analysis Date 2013-07-15 Method C SM2540B			

Guideline = *** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1314739
Date Submitted: 2013-06-28
Date Reported: 2013-07-15
Project: 131-13558-00-700
COC #: 157780

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Moisture	<0.1 %	102	80-120
Run No 254316 Analysis Date 2013-07-15 Method CCME			
F2 (C10-C16)	<10 ug/g	81	50-120
F3 (C16-C34)	<20 ug/g	81	50-120
F4 (C34-C50)	<20 ug/g	81	50-120
Run No 254336 Analysis Date 2013-07-15 Method EPA 200.8			
Ag	<0.2 ug/g	95	70-130
As	<1 ug/g	103	70-130
Ba	<1 ug/g	97	70-130
Be	<1 ug/g	102	70-130
Cd	<0.5 ug/g	101	70-130
Co	<1 ug/g	116	70-130
Cr	<1 ug/g	111	70-130
Cu	<1 ug/g	108	70-130
Mo	<1 ug/g	113	70-130
Ni	<1 ug/g	109	70-130
Pb	<1 ug/g	99	70-130

Guideline = *** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1314739
Date Submitted: 2013-06-28
Date Reported: 2013-07-15
Project: 131-13558-00-700
COC #: 157780

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Sb	<1 ug/g	99	70-130
Se	<1 ug/g	106	70-130
Tl	<1 ug/g	101	70-130
U	<0.5 ug/g	97	70-130
V	<2 ug/g	111	70-130
Zn	<2 ug/g	108	70-130
Run No 254339 Analysis Date 2013-07-15 Method M SM3120B-3050B			
B	<10 ug/g	83	

Guideline = *** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313315
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 144561

Page 1 of 9

Dear David Feghali:

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

Report Comments:

APPROVAL: _____

Lorna Wilson
Laboratory Supervisor, Inorganics

APPROVAL: _____

Charlie (Long) Qu
Laboratory Supervisor, Organics

Exova (Ottawa) is certified and accredited for specific parameters by:

CALA, Canadian Association for Laboratory Accreditation (to ISO 17025), OMAFRA, Ontario Ministry of Agriculture, Food and Rural Affairs (for farm soils), Licensed by Ontario MOE for specific tests in drinking water.

Exova (Mississauga) is accredited for specific parameters by:

SCC, Standards Council of Canada (to ISO 17025)

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only.

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313315
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 144561

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D. Guideline	1038273	1038274	1038275	1038276
					Soil 2013-07-02 TE-01 (0.30-0.60)	Soil 2013-07-02 TE-02 (0 - 0.35)	Soil 2013-07-02 TE-02 (0.35 - 1.00)	Soil 2013-07-02 TE-02 (1.00-1.45)
General Chemistry	Moisture	0.1	%		23.2	11.7	15.3	26.1
Hydrocarbons	F1 (C6-C10)	10	ug/g		<10	<10	<10	<10
	F1-BTEX (C6-C10)	10	ug/g		<10	<10	<10	<10
	F2 (C10-C16)	10	ug/g		<10	20	<10	<10
	F3 (C16-C34)	20	ug/g		<20	31100	100	110
	F4 (C34-C50)	20	ug/g		70	10400	160	60
	F4 (C34-C50) gravimetric	500	ug/g			40400		
Metals	Ag	0.2	ug/g		<0.2	<0.2	<0.2	<0.2
	As	1	ug/g		3	5	6	2
	B	10	ug/g		10	20	30	40
	Ba	1	ug/g		153	98	150	347
	Be	1	ug/g		<1	<1	<1	<1
	Cd	0.5	ug/g		<0.5	<0.5	<0.5	<0.5
	Co	1	ug/g		10	7	10	18
	Cr	1	ug/g		59	41	62	111
	Cu	1	ug/g		21	19	24	50
	Mo	1	ug/g		<1	1	<1	<1
	Ni	1	ug/g		33	25	31	60
	Pb	1	ug/g		8	11	10	7
	Sb	1	ug/g		<1	<1	<1	<1
	Se	1	ug/g		<1	<1	<1	<1
	Tl	1	ug/g		<1	<1	<1	<1
	U	0.5	ug/g		<0.5	<0.5	0.6	0.9
	V	2	ug/g		45	38	52	98
	Zn	2	ug/g		58	138	80	113
Semi-Volatiles	1-methylnaphthalene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05

Guideline = * = Guideline Exceedence

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313315
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 144561

				Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1038273 Soil 2013-07-02 TE-01 (0.30-0.60)	1038274 Soil 2013-07-02 TE-02 (0 - 0.35)	1038275 Soil 2013-07-02 TE-02 (0.35 - 1.00)	1038276 Soil 2013-07-02 TE-02 (1.00-1.45)
Group	Analyte	MRL	Units	Guideline				
Semi-Volatiles	2-methylnaphthalene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Acenaphthene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Acenaphthylene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Anthracene	0.05	ug/g		<0.05	0.15	<0.05	<0.05
	Benzo(a)anthracene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Benzo(a)pyrene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Benzo(b)fluoranthene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Benzo(g,h,i)perylene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Benzo(k)fluoranthene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Chrysene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Dibenzo(a,h)anthracene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Fluoranthene	0.05	ug/g		<0.05	0.17	<0.05	<0.05
	Fluorene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Indeno(1,2,3-c,d)pyrene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Naphthalene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Phenanthrene	0.05	ug/g		<0.05	0.07	<0.05	<0.05
	Pyrene	0.05	ug/g		<0.05	0.17	<0.05	<0.05
VOCs	Benzene	0.02	ug/g		<0.02	<0.02	<0.02	<0.02
	Ethylbenzene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	m/p-xylene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	o-xylene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Toluene	0.20	ug/g		<0.20	<0.20	<0.20	<0.20
	Toluene-d8	0	%		96	95	96	94
	Xylene; total	1.0	ug/L		<1.0	<1.0	<1.0	<1.0

Guideline = * = **Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313315
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 144561

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 253766 Analysis Date 2013-07-08 Method C SM2540B			
Moisture	<0.1 %	102	80-120
Run No 253770 Analysis Date 2013-07-08 Method CCME			
F2 (C10-C16)	<10 ug/g	83	50-120
F3 (C16-C34)	<20 ug/g	83	50-120
F4 (C34-C50)	<20 ug/g	83	50-120
Run No 253806 Analysis Date 2013-07-08 Method CCME			
F4 (C34-C50) gravimetric	<500 ug/g		
Run No 253828 Analysis Date 2013-07-08 Method EPA 200.8			
Ag	<0.2 ug/g	87	70-130
As	<1 ug/g	103	70-130
Ba	<1 ug/g	103	70-130
Be	<1 ug/g	102	70-130
Cd	<0.5 ug/g	101	70-130
Co	<1 ug/g	105	70-130

Guideline = *** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313315
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 144561

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Cr	<1 ug/g	103	70-130
Cu	<1 ug/g	108	70-130
Mo	<1 ug/g	106	70-130
Ni	<1 ug/g	106	70-130
Pb	<1 ug/g	92	70-130
Sb	<1 ug/g	90	70-130
Se	<1 ug/g	103	70-130
Tl	<1 ug/g	92	70-130
U	<0.5 ug/g	87	70-130
V	<2 ug/g	114	70-130
Zn	<2 ug/g	109	70-130
Run No 253852 Analysis Date 2013-07-06 Method V 8260B			
Benzene	<0.02 ug/g	96	80-120
Ethylbenzene	<0.05 ug/g	94	80-120
m/p-xylene	<0.05 ug/g	97	80-120
o-xylene	<0.05 ug/g	97	80-120
Toluene	<0.20 ug/g	99	80-120

Guideline =
*** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313315
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 144561

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Toluene-d8	92 %	101	
Xylene; total			
Run No 253856 Analysis Date 2013-07-05 Method CCME			
F1 (C6-C10)	<10 ug/g	104	80-120
Run No 253857 Analysis Date 2013-07-08 Method M SM3120B-3050B			
B	<10 ug/g	83	
Run No 253859 Analysis Date 2013-07-05 Method CCME			
F1-BTEX (C6-C10)			
Run No 254078 Analysis Date 2013-07-11 Method P 8270			
1-methylnaphthalene	<0.05 ug/g	62	20-150
2-methylnaphthalene	<0.05 ug/g	61	20-150
Acenaphthene	<0.05 ug/g	63	20-150
Acenaphthylene	<0.05 ug/g	62	20-150
Anthracene	<0.05 ug/g	70	20-150
Benzo(a)anthracene	<0.05 ug/g	77	20-150
Benzo(a)pyrene	<0.05 ug/g	76	20-150
Benzo(b)fluoranthene	<0.05 ug/g	77	20-150

Guideline =
*** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313315
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 144561

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Benzo(g,h,i)perylene	<0.05 ug/g	85	20-150
Benzo(k)fluoranthene	<0.05 ug/g	75	20-150
Chrysene	<0.05 ug/g	72	20-150
Dibenzo(a,h)anthracene	<0.05 ug/g	86	20-150
Fluoranthene	<0.05 ug/g	73	20-150
Fluorene	<0.05 ug/g	64	20-150
Indeno(1,2,3-c,d)pyrene	<0.05 ug/g	86	20-150
Naphthalene	<0.05 ug/g	59	20-150
Phenanthrene	<0.05 ug/g	68	20-150
Pyrene	<0.05 ug/g	73	20-150
Run No 254082 Analysis Date 2013-07-11 Method P 8270			
1-methylnaphthalene	<0.05 ug/g	62	20-150
2-methylnaphthalene	<0.05 ug/g	61	20-150
Acenaphthene	<0.05 ug/g	63	20-150
Acenaphthylene	<0.05 ug/g	62	20-150
Anthracene	<0.05 ug/g	70	20-150
Benzo(a)anthracene	<0.05 ug/g	77	20-150

Guideline = *** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313315
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 144561

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Benzo(a)pyrene	<0.05 µg/g	76	20-150
Benzo(b)fluoranthene	<0.05 µg/g	77	20-150
Benzo(g,h,i)perylene	<0.05 µg/g	85	20-150
Benzo(k)fluoranthene	<0.05 µg/g	75	20-150
Chrysene	<0.05 µg/g	72	20-150
Dibenzo(a,h)anthracene	<0.05 µg/g	86	20-150
Fluoranthene	<0.05 µg/g	73	20-150
Fluorene	<0.05 µg/g	64	20-150
Indeno(1,2,3-c,d)pyrene	<0.05 µg/g	86	20-150
Naphthalene	<0.05 µg/g	59	20-150
Phenanthrene	<0.05 µg/g	68	20-150
Pyrene	<0.05 µg/g	73	20-150

Guideline = *** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313315
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 144561

Sample Comment Summary

Sample ID: 1038274 TE-02 (0 - 0.35) The result for F4 (C34-C50) gravimetric must be substituted if it is greater than the result for F4 (C34-C50).
--

Guideline = *** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. Catherine Tardy Laporte
PO#:
Invoice to: Genivar INC.

Report Number: 1314497
Date Submitted: 2013-07-11
Date Reported: 2013-07-15
Project: 131-13558-00
COC #: 144561

Page 1 of 4

Dear Catherine Tardy Laporte:

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

Report Comments:

APPROVAL: _____

Lorna Wilson
Laboratory Supervisor, Inorganics

Exova (Ottawa) is certified and accredited for specific parameters by:

CALA, Canadian Association for Laboratory Accreditation (to ISO 17025), OMAFRA, Ontario Ministry of Agriculture, Food and Rural Affairs (for farm soils), Licensed by Ontario MOE for specific tests in drinking water.

Exova (Mississauga) is accredited for specific parameters by:

SCC, Standards Council of Canada (to ISO 17025)

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only.

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. Catherine Tardy Laporte
PO#:
Invoice to: Genivar INC.

Report Number: 1314497
Date Submitted: 2013-07-11
Date Reported: 2013-07-15
Project: 131-13558-00
COC #: 144561

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1041600 Soil 2013-07-02 TE-02 (1.00-1.45)
Group	Analyte	MRL	Units	Guideline	
Metals	Ag	0.2	ug/g		<0.2
	As	1	ug/g		2
	B	10	ug/g		40
	Ba	1	ug/g		383
	Be	1	ug/g		<1
	Cd	0.5	ug/g		<0.5
	Co	1	ug/g		20
	Cr	1	ug/g		122
	Cu	1	ug/g		65
	Mo	1	ug/g		<1
	Ni	1	ug/g		65
	Pb	1	ug/g		19
	Sb	1	ug/g		<1
	Se	1	ug/g		<1
	Tl	1	ug/g		<1
	U	0.5	ug/g		0.9
	V	2	ug/g		109
	Zn	2	ug/g		135

Guideline = *** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
 500 Boul. Greber, 3rd Floor
 Gatineau, QC
 J8T 7W3
 Attention: Ms. Catherine Tardy Laporte
 PO#:
 Invoice to: Genivar INC.

Report Number: 1314497
 Date Submitted: 2013-07-11
 Date Reported: 2013-07-15
 Project: 131-13558-00
 COC #: 144561

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 254229 Analysis Date 2013-07-12 Method EPA 200.8			
Ag	<0.2 ug/g	90	70-130
As	<1 ug/g	96	70-130
Ba	<1 ug/g	101	70-130
Be	<1 ug/g	98	70-130
Cd	<0.5 ug/g	102	70-130
Co	<1 ug/g	97	70-130
Cr	<1 ug/g	98	70-130
Cu	<1 ug/g	102	70-130
Mo	<1 ug/g	100	70-130
Ni	<1 ug/g	99	70-130
Pb	<1 ug/g	90	70-130
Sb	<1 ug/g	87	70-130
Se	<1 ug/g	95	70-130
Tl	<1 ug/g	86	70-130

Guideline = *** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. Catherine Tardy Laporte
PO#:
Invoice to: Genivar INC.

Report Number: 1314497
Date Submitted: 2013-07-11
Date Reported: 2013-07-15
Project: 131-13558-00
COC #: 144561

QC Summary

Analyte	Blank	QC % Rec	QC Limits
U	<0.5 ug/g	86	70-130
V	<2 ug/g	104	70-130
Zn	<2 ug/g	101	70-130
Run No 254302 Analysis Date 2013-07-15 Method M SM3120B-3050B			
B	<10 ug/g	93	

Guideline = *** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313316
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 157046

Page 1 of 7

Dear David Feghali:

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

Report Comments:

APPROVAL: _____

Lorna Wilson
Laboratory Supervisor, Inorganics

APPROVAL: _____

Charlie (Long) Qu
Laboratory Supervisor, Organics

Exova (Ottawa) is certified and accredited for specific parameters by:

CALA, Canadian Association for Laboratory Accreditation (to ISO 17025), OMAFRA, Ontario Ministry of Agriculture, Food and Rural Affairs (for farm soils), Licensed by Ontario MOE for specific tests in drinking water.

Exova (Mississauga) is accredited for specific parameters by:

SCC, Standards Council of Canada (to ISO 17025)

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only.

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313316
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 157046

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D. Guideline	1038279	1038280	1038281	1038282
					Soil 2013-07-02 TE-03 (0.30 - 1.00)	Soil 2013-07-02 TE-04 (1.00 - 2.30)	Soil 2013-07-02 TE-05 (0.15 - 2.30)	Soil 2013-07-02 DUP - 8
General Chemistry	Moisture	0.1	%		30.2	21.4	21.3	29.4
Hydrocarbons	F1 (C6-C10)	10	ug/g		<10	<10	<10	<10
	F2 (C10-C16)	10	ug/g		<10	<10	<10	<10
	F3 (C16-C34)	20	ug/g		<20	30	<20	<20
	F4 (C34-C50)	20	ug/g		<20	40	<20	<20
Metals	Ag	0.2	ug/g			<0.2		
	As	1	ug/g			3		
	B	10	ug/g			30		
	Ba	1	ug/g			175		
	Be	1	ug/g			<1		
	Cd	0.5	ug/g			<0.5		
	Co	1	ug/g			14		
	Cr	1	ug/g			82		
	Cu	1	ug/g			28		
	Mo	1	ug/g			<1		
	Ni	1	ug/g			39		
	Pb	1	ug/g			9		
	Sb	1	ug/g			<1		
	Se	1	ug/g			<1		
	Tl	1	ug/g			<1		
	U	0.5	ug/g			1.0		
	V	2	ug/g			72		
	Zn	2	ug/g			110		
Semi-Volatiles	1-methylnaphthalene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	2-methylnaphthalene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Acenaphthene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05

Guideline = * = Guideline Exceedence

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313316
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 157046

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D. Guideline	1038279	1038280	1038281	1038282
					Soil 2013-07-02 TE-03 (0.30 - 1.00)	Soil 2013-07-02 TE-04 (1.00 - 2.30)	Soil 2013-07-02 TE-05 (0.15 - 2.30)	Soil 2013-07-02 DUP - 8
Semi-Volatiles	Acenaphthylene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Anthracene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Benzo(a)anthracene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Benzo(a)pyrene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Benzo(b)fluoranthene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Benzo(g,h,i)perylene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Benzo(k)fluoranthene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Chrysene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Dibenzo(a,h)anthracene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Fluoranthene	0.05	ug/g		<0.05	<0.05	0.05	<0.05
	Fluorene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Indeno(1,2,3-c,d)pyrene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Naphthalene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Phenanthrene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
	Pyrene	0.05	ug/g		<0.05	<0.05	<0.05	<0.05

Guideline = * = Guideline Exceedence

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313316
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 157046

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 253766 Analysis Date 2013-07-08 Method C SM2540B			
Moisture	<0.1 %	102	80-120
Run No 253770 Analysis Date 2013-07-08 Method CCME			
F2 (C10-C16)	<10 ug/g	83	50-120
F3 (C16-C34)	<20 ug/g	83	50-120
F4 (C34-C50)	<20 ug/g	83	50-120
Run No 253828 Analysis Date 2013-07-08 Method EPA 200.8			
Ag	<0.2 ug/g	87	70-130
As	<1 ug/g	103	70-130
Ba	<1 ug/g	103	70-130
Be	<1 ug/g	102	70-130
Cd	<0.5 ug/g	101	70-130
Co	<1 ug/g	105	70-130
Cr	<1 ug/g	103	70-130
Cu	<1 ug/g	108	70-130

Guideline = *** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313316
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 157046

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Mo	<1 ug/g	106	70-130
Ni	<1 ug/g	106	70-130
Pb	<1 ug/g	92	70-130
Sb	<1 ug/g	90	70-130
Se	<1 ug/g	103	70-130
Tl	<1 ug/g	92	70-130
U	<0.5 ug/g	87	70-130
V	<2 ug/g	114	70-130
Zn	<2 ug/g	109	70-130
Run No 253856 Analysis Date 2013-07-05 Method CCME			
F1 (C6-C10)	<10 ug/g	104	80-120
Run No 253857 Analysis Date 2013-07-08 Method M SM3120B-3050B			
B	<10 ug/g	83	
Run No 253864 Analysis Date 2013-07-05 Method CCME			
F1 (C6-C10)	<10 ug/g	104	80-120
Run No 253953 Analysis Date 2013-07-09 Method CCME			
F1 (C6-C10)	<10 ug/g	90	80-120

Guideline =
*** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313316
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 157046

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 254078 Analysis Date 2013-07-11 Method P 8270			
1-methylnaphthalene	<0.05 µg/g	62	20-150
2-methylnaphthalene	<0.05 µg/g	61	20-150
Acenaphthene	<0.05 µg/g	63	20-150
Acenaphthylene	<0.05 µg/g	62	20-150
Anthracene	<0.05 µg/g	70	20-150
Benzo(a)anthracene	<0.05 µg/g	77	20-150
Benzo(a)pyrene	<0.05 µg/g	76	20-150
Benzo(b)fluoranthene	<0.05 µg/g	77	20-150
Benzo(g,h,i)perylene	<0.05 µg/g	85	20-150
Benzo(k)fluoranthene	<0.05 µg/g	75	20-150
Chrysene	<0.05 µg/g	72	20-150
Dibenzo(a,h)anthracene	<0.05 µg/g	86	20-150
Fluoranthene	<0.05 µg/g	73	20-150
Fluorene	<0.05 µg/g	64	20-150
Indeno(1,2,3-c,d)pyrene	<0.05 µg/g	86	20-150
Naphthalene	<0.05 µg/g	59	20-150

Guideline = *** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. David Feghali
PO#:
Invoice to: Genivar Inc.

Report Number: 1313316
Date Submitted: 2013-07-02
Date Reported: 2013-07-11
Project: 131-13558-00
COC #: 157046

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Phenanthrene	<0.05 µg/g	68	20-150
Pyrene	<0.05 µg/g	73	20-150

Guideline = *** = Guideline Exceedence**

** = Analysis completed at Mississauga, Ontario.

Results relate only to the parameters tested on the samples submitted.

Methods references and/or additional QA/QC information available on request.

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

Client: Genivar INC.
500 Boul. Greber, 3rd Floor
Gatineau, QC
J8T 7W3
Attention: Ms. Catherine Tardy Laporte
PO#:
Invoice to: Genivar INC.

Report Number: 1314097
Date Submitted: 2013-07-08
Date Reported: 2013-07-11
Project: 131-13558-00-700-001
COC #: 500429

Page 1 of 8

Dear Catherine Tardy Laporte:

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

Report Comments:

APPROVAL: _____

Lorna Wilson
Laboratory Supervisor, Inorganics

APPROVAL: _____

Charlie (Long) Qu
Laboratory Supervisor, Organics

Exova (Ottawa) is certified and accredited for specific parameters by:

CALA, Canadian Association for Laboratory Accreditation (to ISO 17025), OMAFRA, Ontario Ministry of Agriculture, Food and Rural Affairs (for farm soils), Licensed by Ontario MOE for specific tests in drinking water.

Exova (Mississauga) is certified and accredited for specific parameters by:

SCC, Standards Council of Canada (to ISO 17025)

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only.

CLIENT NAME: WSP CANADA INC.
500, BOUL GREBER 3E ETAGE
GATINEAU, QC J8T7W3
(819) 243-2827

ATTENTION TO: Matthieu Rochon

PROJECT: 161-06382-00-101-980

AGAT WORK ORDER: 16Z101291

SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Coordinator

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Jun 15, 2016

PAGES (INCLUDING COVER): 21

VERSION*: 2

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

***NOTES**

VERSION 2: Revised report sent on June 15, 2016. Data for Inorganics has been added this report.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 16Z101291

PROJECT: 161-06382-00-101-980

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Matthieu Rochon

SAMPLING SITE: Phase Two ESA. Orleans GW Monitoring.

SAMPLED BY: Kathryn Maton

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

DATE RECEIVED: 2016-06-03

DATE REPORTED: 2016-06-15

		SAMPLE DESCRIPTION:		BH16-1-1B	BH16-2-1B	BH16-3-1B	BH16-4-1B	BH16-5-1B	BH16-6-1B	BH16-7-1	BH16-8-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		6/1/2016	6/1/2016	6/1/2016	6/1/2016	6/1/2016	6/1/2016	6/1/2016	6/1/2016
Parameter	Unit	G / S	RDL	7608015	7608030	7608034	7608053	7608075	7608096	7608105	7608133
Antimony	µg/g	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	1	1	1	1	2	1	1	3	2	2
Barium	µg/g	2	325	345	286	254	129	180	302	296	
Beryllium	µg/g	0.5	0.9	1.0	0.9	0.8	0.6	0.6	1.0	0.9	
Boron	µg/g	5	<5	<5	6	<5	<5	5	<5	<5	
Boron (Hot Water Soluble)	µg/g	0.10	0.13	0.15	0.24	0.12	0.29	0.55	0.11	<0.10	
Cadmium	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	µg/g	2	101	116	113	87	59	63	118	121	
Cobalt	µg/g	0.5	19.7	22.0	21.6	16.3	11.2	12.4	22.4	25.9	
Copper	µg/g	1	43	47	46	35	16	27	50	44	
Lead	µg/g	1	7	8	7	6	8	9	8	9	
Molybdenum	µg/g	0.5	<0.5	<0.5	<0.5	0.5	0.5	0.6	<0.5	0.5	
Nickel	µg/g	1	58	64	65	47	27	34	67	67	
Selenium	µg/g	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	
Silver	µg/g	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
Thallium	µg/g	0.4	0.4	0.5	<0.4	<0.4	<0.4	<0.4	0.5	0.4	
Uranium	µg/g	0.5	0.6	0.7	0.6	1.0	0.9	0.6	0.8	0.9	
Vanadium	µg/g	1	91	99	88	89	53	60	103	98	
Zinc	µg/g	5	123	132	120	96	80	85	128	126	
Chromium VI	µg/g	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
Cyanide	µg/g	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	
Mercury	µg/g	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Electrical Conductivity	mS/cm	0.005	0.458	0.419	0.465	0.363	0.325	0.569	0.579	1.86	
Sodium Adsorption Ratio	NA	NA	0.486	0.855	1.11	0.565	0.657	5.41	1.02	4.79	
pH, 2:1 CaCl2 Extraction	pH Units	NA	7.23	7.05	7.15	7.07	7.24	7.42	7.13	7.25	

Certified By:

Amanjot Bhela



Certificate of Analysis

AGAT WORK ORDER: 16Z101291

PROJECT: 161-06382-00-101-980

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: Phase Two ESA. Orleans GW Monitoring.

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

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

DATE RECEIVED: 2016-06-03

DATE REPORTED: 2016-06-15

		SAMPLE DESCRIPTION:		BH16-9-1	BH16-10-1	BH16-11-2A	BH16-12-2A	BH16-13-2A
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		6/2/2016	6/2/2016	6/2/2016	6/2/2016	6/2/2016
Parameter	Unit	G / S	RDL	7608148	7608156	7608164	7608171	7608178
Antimony	µg/g	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	1	2	2	2	2	2	2
Barium	µg/g	2	263	268	290	288	273	
Beryllium	µg/g	0.5	0.9	0.8	0.8	0.7	0.8	
Boron	µg/g	5	<5	<5	<5	<5	5	
Boron (Hot Water Soluble)	µg/g	0.10	0.22	<0.10	0.25	0.37	0.34	
Cadmium	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	µg/g	2	112	103	107	116	112	
Cobalt	µg/g	0.5	19.3	18.7	23.7	24.2	22.2	
Copper	µg/g	1	47	44	48	51	47	
Lead	µg/g	1	8	7	7	8	7	
Molybdenum	µg/g	0.5	0.6	<0.5	<0.5	<0.5	<0.5	
Nickel	µg/g	1	60	58	62	66	64	
Selenium	µg/g	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	
Silver	µg/g	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
Thallium	µg/g	0.4	<0.4	<0.4	0.4	0.4	<0.4	
Uranium	µg/g	0.5	1.0	0.8	1.0	1.2	0.9	
Vanadium	µg/g	1	99	89	100	105	94	
Zinc	µg/g	5	114	106	124	129	123	
Chromium VI	µg/g	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
Cyanide	µg/g	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	
Mercury	µg/g	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Electrical Conductivity	mS/cm	0.005	0.394	0.215	0.176	0.091	0.075	
Sodium Adsorption Ratio	NA	NA	1.10	1.04	0.622	0.436	0.416	
pH, 2:1 CaCl2 Extraction	pH Units	NA	7.15	6.77	7.05	7.13	7.13	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to T1(All)

7608015-7608178 EC & SAR were determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio.

Certified By:

Amanjot Bhela



Certificate of Analysis

AGAT WORK ORDER: 16Z101291

PROJECT: 161-06382-00-101-980

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Matthieu Rochon

SAMPLING SITE: Phase Two ESA. Orleans GW Monitoring.

SAMPLED BY: Kathryn Maton

O. Reg. 153(511) - Metals (Comprehensive) (Soil)

DATE RECEIVED: 2016-06-03

DATE REPORTED: 2016-06-15

		SAMPLE DESCRIPTION:		BH16-1-2A	BH16-1-2B	BH16-2-2A	BH16-2-2B	BH16-3-2A	BH16-3-3	BH16-4-2B	BH16-4-102B
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		6/1/2016	6/1/2016	6/1/2016	6/1/2016	6/1/2016	6/1/2016	6/1/2016	6/1/2016
Parameter	Unit	G / S	RDL	7608016	7608020	7608023	7608027	7608038	7608050	7608062	7608065
Antimony	µg/g	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	1	1	1	1	1	2	1	5	2	4
Boron	µg/g	5	<5	6	<5	8	5	9	8	9	
Barium	µg/g	2	347	198	355	271	398	346	347	250	
Beryllium	µg/g	0.5	1.0	0.7	0.9	0.8	0.9	<0.5	1.0	0.8	
Cadmium	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	2	108	45	99	65	111	26	70	57	
Cobalt	µg/g	0.5	23.0	10.7	20.4	16.7	22.6	6.8	20.2	18.2	
Copper	µg/g	1	48	28	47	33	48	15	35	35	
Lead	µg/g	1	7	6	7	6	7	8	7	8	
Molybdenum	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.0	<0.5	<0.5	<0.5
Nickel	µg/g	1	60	25	55	40	62	11	43	37	
Selenium	µg/g	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Silver	µg/g	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	µg/g	0.4	0.5	<0.4	0.4	<0.4	0.5	<0.4	0.4	<0.4	<0.4
Uranium	µg/g	0.5	0.6	<0.5	0.6	0.6	0.7	0.6	0.6	0.6	0.6
Vanadium	µg/g	1	101	57	98	76	102	25	88	80	
Zinc	µg/g	5	137	71	129	101	146	56	127	112	

Certified By:

Amanjot Bhela



Certificate of Analysis

AGAT WORK ORDER: 16Z101291

PROJECT: 161-06382-00-101-980

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Matthieu Rochon

SAMPLING SITE: Phase Two ESA. Orleans GW Monitoring.

SAMPLED BY: Kathryn Maton

O. Reg. 153(511) - Metals (Comprehensive) (Soil)

DATE RECEIVED: 2016-06-03

DATE REPORTED: 2016-06-15

		SAMPLE DESCRIPTION:		BH16-5-101B	BH16-5-2B	BH16-6-2B	BH16-7-2B	BH16-8-2B	BH16-9-2B	BH16-9-4	BH16-10-2B
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		6/1/2016	6/1/2016	6/1/2016	6/1/2016	6/1/2016	6/2/2016	6/2/2016	6/2/2016
Parameter	Unit	G / S	RDL	7608077	7608081	7608100	7608122	7608139	7608151	7608154	7608158
Antimony	µg/g		0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g		1	2	2	3	1	2	1	1	1
Boron	µg/g		5	6	8	9	6	8	<5	<5	<5
Barium	µg/g		2	266	412	285	338	524	304	84	303
Beryllium	µg/g		0.5	0.9	1.0	0.9	0.7	1.0	0.7	<0.5	0.8
Cadmium	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g		2	125	72	61	50	77	99	14	102
Cobalt	µg/g		0.5	22.2	19.1	18.4	15.1	22.7	20.0	5.4	22.6
Copper	µg/g		1	44	39	35	30	47	46	11	45
Lead	µg/g		1	8	8	8	6	9	6	4	6
Molybdenum	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.6	<0.5
Nickel	µg/g		1	66	43	37	32	49	56	10	59
Selenium	µg/g		0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Silver	µg/g		0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	µg/g		0.4	<0.4	0.5	<0.4	<0.4	0.6	0.4	<0.4	0.4
Uranium	µg/g		0.5	1.0	0.6	0.6	0.6	0.7	0.9	<0.5	0.8
Vanadium	µg/g		1	94	93	83	68	101	102	21	96
Zinc	µg/g		5	109	134	118	94	149	126	21	123

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 16Z101291

PROJECT: 161-06382-00-101-980

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Matthieu Rochon

SAMPLING SITE: Phase Two ESA. Orleans GW Monitoring.

SAMPLED BY: Kathryn Maton

O. Reg. 153(511) - Metals (Comprehensive) (Soil)

DATE RECEIVED: 2016-06-03

DATE REPORTED: 2016-06-15

		SAMPLE DESCRIPTION:		BH16-10-4A	BH16-11-3B	BH16-12-3B	BH16-13-3B	BH16-13-102A
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		6/2/2016	6/2/2016	6/2/2016	6/2/2016	6/2/2016
Parameter	Unit	G / S	RDL	7608161	7608167	7608174	7608185	7608670
Antimony	µg/g		0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g		1	2	1	1	2	2
Boron	µg/g		5	8	5	5	7	<5
Barium	µg/g		2	294	297	369	246	272
Beryllium	µg/g		0.5	0.7	0.7	0.7	0.7	0.7
Cadmium	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g		2	80	99	99	84	109
Cobalt	µg/g		0.5	19.6	21.1	23.2	18.2	22.4
Copper	µg/g		1	40	47	50	38	46
Lead	µg/g		1	7	6	7	6	7
Molybdenum	µg/g		0.5	1.0	0.7	1.0	0.9	<0.5
Nickel	µg/g		1	47	56	58	48	63
Selenium	µg/g		0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Silver	µg/g		0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	µg/g		0.4	<0.4	<0.4	0.5	<0.4	<0.4
Uranium	µg/g		0.5	1.8	1.0	0.9	1.9	0.9
Vanadium	µg/g		1	87	94	114	82	93
Zinc	µg/g		5	117	123	141	108	120

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

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 16Z101291

PROJECT: 161-06382-00-101-980

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: Phase Two ESA. Orleans GW Monitoring.

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

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

DATE RECEIVED: 2016-06-03

DATE REPORTED: 2016-06-15

		SAMPLE DESCRIPTION:		BH16-5-2B	BH16-7-1	BH16-8-1
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		6/1/2016	6/1/2016	6/1/2016
Parameter	Unit	G / S	RDL	7608081	7608105	7608133
Naphthalene	µg/g		0.05	0.06	<0.05	<0.05
Acenaphthylene	µg/g		0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g		0.05	<0.05	<0.05	<0.05
Fluorene	µg/g		0.05	0.11	<0.05	<0.05
Phenanthrene	µg/g		0.05	0.17	<0.05	<0.05
Anthracene	µg/g		0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05
Pyrene	µg/g		0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g		0.05	<0.05	<0.05	<0.05
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g		0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g		0.05	0.50	<0.05	<0.05
Moisture Content	%		0.1	17.1	26.3	27.7
Surrogate	Unit	Acceptable Limits				
Chrysene-d12	%	50-140	96	119	104	

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

7608081-7608133 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 16Z101291

PROJECT: 161-06382-00-101-980

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: Phase Two ESA. Orleans GW Monitoring.

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

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

DATE RECEIVED: 2016-06-03

DATE REPORTED: 2016-06-15

		SAMPLE DESCRIPTION:		BH16-6-1B
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		6/1/2016
Parameter	Unit	G / S	RDL	7608096
Benzene	µg/g		0.02	<0.02
Toluene	µg/g		0.08	<0.08
Ethylbenzene	µg/g		0.05	<0.05
Xylene Mixture	µg/g		0.05	<0.05
F1 (C6 to C10)	µg/g		5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5
F2 (C10 to C16)	µg/g		10	<10
F3 (C16 to C34)	µg/g		50	<50
F4 (C34 to C50)	µg/g		50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA
Moisture Content	%		0.1	29.7
Surrogate	Unit	Acceptable Limits		
Terphenyl	%	60-140		103

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

7608096

Results are based on sample dry weight.

The C6-C10 fraction is calculated using Toluene response factor.

The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

The chromatogram has returned to baseline by the retention time of nC50.

Total C6 - C50 results are corrected for BTEX contributions.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

Extraction and holding times were met for this sample.

Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Quality Control Data is available upon request.

Certified By:

**AGAT** Laboratories

Certificate of Analysis

AGAT WORK ORDER: 16Z101291

PROJECT: 161-06382-00-101-980

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Matthieu Rochon

SAMPLING SITE: Phase Two ESA. Orleans GW Monitoring.

SAMPLED BY: Kathryn Maton

O. Reg. 153(511) - PHCs F1 - F4 (Soil) - F2-F4

DATE RECEIVED: 2016-06-03

DATE REPORTED: 2016-06-15

		SAMPLE DESCRIPTION:		BH16-4-1B	BH16-5-1B	BH16-5-101B
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		6/1/2016	6/1/2016	6/1/2016
Parameter	Unit	G / S	RDL	7608053	7608075	7608077
F2 (C10 to C16)	µg/g		10	<10	<10	<10
F3 (C16 to C34)	µg/g		50	<50	<50	<50
F4 (C34 to C50)	µg/g		50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA	NA
Moisture Content	%		0.1	19.0	19.8	21.8
Surrogate	Unit	Acceptable Limits				
Terphenyl	%	60-140	92	116	99	

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

7608053-7608077 Results are based on sample dry weight.

The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

The chromatogram has returned to baseline by the retention time of nC50.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

Extraction and holding times were met for this sample.

Fractions 2-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Quality Control Data is available upon request.

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 16Z101291

PROJECT: 161-06382-00-101-980

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Matthieu Rochon

SAMPLING SITE: Phase Two ESA. Orleans GW Monitoring.

SAMPLED BY: Kathryn Maton

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

DATE RECEIVED: 2016-06-03

DATE REPORTED: 2016-06-15

		SAMPLE DESCRIPTION:		BH16-5-2B	BH16-7-1	BH16-8-1
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		6/1/2016	6/1/2016	6/1/2016
Parameter	Unit	G / S	RDL	7608081	7608105	7608133
Benzene	µg/g	0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	0.08	<0.08	<0.08	<0.08	<0.08
Ethylbenzene	µg/g	0.05	0.16	<0.05	<0.05	<0.05
Xylene Mixture	µg/g	0.05	0.06	<0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g	5	11	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	5	11	<5	<5	<5
F2 (C10 to C16)	µg/g	10	34	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g	10	34	<10	<10	<10
F3 (C16 to C34)	µg/g	50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g	50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	50	NA	NA	NA	NA
Moisture Content	%	0.1	17.1	26.3	27.7	
Surrogate	Unit	Acceptable Limits				
Terphenyl	%	60-140	100	85	136	

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

7608081-7608133 Results are based on sample dry weight.

The C6-C10 fraction is calculated using toluene response factor.

The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

The chromatogram has returned to baseline by the retention time of nC50.

Total C6 - C50 results are corrected for BTEX and PAH contributions.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

Extraction and holding times were met for this sample.

Certified By:



Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 161-06382-00-101-980

SAMPLING SITE: Phase Two ESA, Orleans GW Monitoring.

AGAT WORK ORDER: 16Z101291

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

Soil Analysis															
RPT Date: Jun 15, 2016			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Comprehensive) (Soil)															
Antimony	7608105	7608105	<0.8	<0.8	NA	< 0.8	108%	70%	130%	100%	80%	120%	102%	70%	130%
Arsenic	7608105	7608105	2	2	NA	< 1	105%	70%	130%	93%	80%	120%	95%	70%	130%
Boron	7608105	7608105	<5	5	NA	< 5	76%	70%	130%	91%	80%	120%	79%	70%	130%
Barium	7608105	7608105	302	309	2.3%	< 2	92%	70%	130%	85%	80%	120%	93%	70%	130%
Beryllium	7608105	7608105	1.0	0.9	NA	< 0.5	91%	70%	130%	97%	80%	120%	91%	70%	130%
Cadmium	7608105	7608105	<0.5	<0.5	NA	< 0.5	95%	70%	130%	105%	80%	120%	102%	70%	130%
Chromium	7608105	7608105	118	120	1.7%	< 2	80%	70%	130%	100%	80%	120%	108%	70%	130%
Cobalt	7608105	7608105	22.4	21.7	3.2%	< 0.5	91%	70%	130%	92%	80%	120%	90%	70%	130%
Copper	7608105	7608105	50	51	2.0%	< 1	87%	70%	130%	92%	80%	120%	90%	70%	130%
Lead	7608105	7608105	8	8	0.0%	< 1	101%	70%	130%	87%	80%	120%	85%	70%	130%
Molybdenum	7608105	7608105	<0.5	<0.5	NA	< 0.5	103%	70%	130%	100%	80%	120%	100%	70%	130%
Nickel	7608105	7608105	67	67	0.0%	< 1	90%	70%	130%	91%	80%	120%	92%	70%	130%
Selenium	7608105	7608105	<0.4	<0.4	NA	< 0.4	117%	70%	130%	95%	80%	120%	98%	70%	130%
Silver	7608105	7608105	<0.2	<0.2	NA	< 0.2	100%	70%	130%	102%	80%	120%	99%	70%	130%
Thallium	7608105	7608105	0.5	0.5	NA	< 0.4	93%	70%	130%	101%	80%	120%	99%	70%	130%
Uranium	7608105	7608105	0.8	0.8	NA	< 0.5	91%	70%	130%	84%	80%	120%	84%	70%	130%
Vanadium	7608105	7608105	103	106	2.9%	< 1	85%	70%	130%	89%	80%	120%	99%	70%	130%
Zinc	7608105	7608105	128	130	1.6%	< 5	99%	70%	130%	100%	80%	120%	103%	70%	130%

Comments: NA signifies Not Applicable.

Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

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

Antimony	7608015	7608015	<0.8	<0.8	NA	< 0.8	109%	70%	130%	104%	80%	120%	105%	70%	130%
Arsenic	7608015	7608015	1	1	NA	< 1	104%	70%	130%	94%	80%	120%	97%	70%	130%
Barium	7608015	7608015	325	342	5.1%	< 2	87%	70%	130%	86%	80%	120%	97%	70%	130%
Beryllium	7608015	7608015	0.9	1.0	NA	< 0.5	99%	70%	130%	108%	80%	120%	103%	70%	130%
Boron	7608015	7608015	<5	<5	NA	< 5	71%	70%	130%	99%	80%	120%	92%	70%	130%
Boron (Hot Water Soluble)	7617440		<0.10	<0.10	NA	< 0.10	85%	60%	140%	101%	70%	130%	104%	60%	140%
Cadmium	7608015	7608015	<0.5	<0.5	NA	< 0.5	91%	70%	130%	110%	80%	120%	103%	70%	130%
Chromium	7608015	7608015	101	105	3.9%	< 2	86%	70%	130%	95%	80%	120%	109%	70%	130%
Cobalt	7608015	7608015	19.7	20.1	2.0%	< 0.5	91%	70%	130%	94%	80%	120%	93%	70%	130%
Copper	7608015	7608015	43	45	4.5%	< 1	84%	70%	130%	93%	80%	120%	90%	70%	130%
Lead	7608015	7608015	7	7	0.0%	< 1	100%	70%	130%	90%	80%	120%	88%	70%	130%
Molybdenum	7608015	7608015	<0.5	<0.5	NA	< 0.5	101%	70%	130%	100%	80%	120%	102%	70%	130%
Nickel	7608015	7608015	58	60	3.4%	< 1	86%	70%	130%	92%	80%	120%	94%	70%	130%
Selenium	7608015	7608015	<0.4	<0.4	NA	< 0.4	91%	70%	130%	99%	80%	120%	101%	70%	130%
Silver	7608015	7608015	<0.2	<0.2	NA	< 0.2	99%	70%	130%	103%	80%	120%	99%	70%	130%
Thallium	7608015	7608015	0.4	0.4	NA	< 0.4	97%	70%	130%	103%	80%	120%	102%	70%	130%

Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 16Z101291

PROJECT: 161-06382-00-101-980

ATTENTION TO: Matthieu Rochon

SAMPLING SITE: Phase Two ESA. Orleans GW Monitoring.

SAMPLED BY: Kathryn Maton

Soil Analysis (Continued)

RPT Date: Jun 15, 2016			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Uranium	7608015	7608015	0.6	0.6	NA	< 0.5	92%	70%	130%	86%	80%	120%	87%	70%	130%
Vanadium	7608015	7608015	91	93	2.2%	< 1	88%	70%	130%	90%	80%	120%	99%	70%	130%
Zinc	7608015	7608015	123	126	2.4%	< 5	100%	70%	130%	104%	80%	120%	103%	70%	130%
Chromium VI	7614373		<0.2	<0.2	NA	< 0.2	97%	70%	130%	92%	80%	120%	93%	70%	130%
Cyanide	7608015	7608015	<0.040	<0.040	NA	< 0.040	91%	70%	130%	103%	80%	120%	104%	70%	130%
Mercury	7608015	7608015	<0.10	<0.10	NA	< 0.10	97%	70%	130%	96%	80%	120%	89%	70%	130%
Electrical Conductivity	7608015	7608015	0.458	0.458	0.0%	< 0.005	99%	90%	110%	NA			NA		
Sodium Adsorption Ratio	7608015	7608015	0.486	0.470	3.3%	NA	NA			NA			NA		
pH, 2:1 CaCl ₂ Extraction	7608156	7608156	6.77	6.86	1.3%	NA	101%	80%	120%	NA			NA		

Comments: NA signifies Not Applicable.

Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Certified By:



Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 161-06382-00-101-980

SAMPLING SITE: Phase Two ESA, Orleans GW Monitoring.

AGAT WORK ORDER: 16Z101291

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

Trace Organics Analysis

RPT Date: Jun 15, 2016			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE				
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - PHCs F1 - F4 (Soil) - F2-F4

F2 (C10 to C16)	7608075	7608075	< 10	< 10	NA	< 10	102%	60%	130%	101%	80%	120%	70%	70%	130%
F3 (C16 to C34)	7608075	7608075	< 50	< 50	NA	< 50	105%	60%	130%	84%	80%	120%	100%	70%	130%
F4 (C34 to C50)	7608075	7608075	< 50	< 50	NA	< 50	100%	60%	130%	96%	80%	120%	100%	70%	130%

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

Benzene	7607223		< 0.02	< 0.02	NA	< 0.02	105%	60%	130%	109%	60%	130%	115%	60%	130%
Toluene	7607223		< 0.08	< 0.08	NA	< 0.08	110%	60%	130%	106%	60%	130%	112%	60%	130%
Ethylbenzene	7607223		< 0.05	< 0.05	NA	< 0.05	119%	60%	130%	106%	60%	130%	112%	60%	130%
Xylene Mixture	7607223		< 0.05	< 0.05	NA	< 0.05	117%	60%	130%	108%	60%	130%	112%	60%	130%
F1 (C6 to C10)	7607223		< 5	< 5	NA	< 5	81%	60%	130%	95%	85%	115%	97%	70%	130%

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

Naphthalene	7599332		< 0.05	< 0.05	NA	< 0.05	103%	50%	140%	112%	50%	140%	94%	50%	140%
Acenaphthylene	7599332		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	114%	50%	140%	94%	50%	140%
Acenaphthene	7599332		< 0.05	< 0.05	NA	< 0.05	103%	50%	140%	111%	50%	140%	96%	50%	140%
Fluorene	7599332		< 0.05	< 0.05	NA	< 0.05	106%	50%	140%	113%	50%	140%	98%	50%	140%
Phenanthrene	7599332		< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	107%	50%	140%	92%	50%	140%
Anthracene	7599332		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	112%	50%	140%	96%	50%	140%
Fluoranthene	7599332		< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	110%	50%	140%	104%	50%	140%
Pyrene	7599332		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	110%	50%	140%	104%	50%	140%
Benz(a)anthracene	7599332		< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	98%	50%	140%	93%	50%	140%
Chrysene	7599332		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	104%	50%	140%	95%	50%	140%
Benzo(b)fluoranthene	7599332		< 0.05	< 0.05	NA	< 0.05	100%	50%	140%	125%	50%	140%	108%	50%	140%
Benzo(k)fluoranthene	7599332		< 0.05	< 0.05	NA	< 0.05	122%	50%	140%	140%	50%	140%	125%	50%	140%
Benzo(a)pyrene	7599332		< 0.05	< 0.05	NA	< 0.05	119%	50%	140%	129%	50%	140%	105%	50%	140%
Indeno(1,2,3-cd)pyrene	7599332		< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	89%	50%	140%	83%	50%	140%
Dibenz(a,h)anthracene	7599332		< 0.05	< 0.05	NA	< 0.05	106%	50%	140%	91%	50%	140%	86%	50%	140%
Benzo(g,h,i)perylene	7599332		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	84%	50%	140%	81%	50%	140%
2-and 1-methyl Naphthalene	7599332		< 0.05	< 0.05	NA	< 0.05	119%	50%	140%	100%	50%	140%	88%	50%	140%

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

Certified By:



Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 16Z101291

PROJECT: 161-06382-00-101-980

ATTENTION TO: Matthieu Rochon

SAMPLING SITE: Phase Two ESA. Orleans GW Monitoring.

SAMPLED BY: Kathryn Maton

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Barium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Boron	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	EPA SW 846 6010C; MSA, Part 3, Ch.21	ICP/OES
Cadmium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Chromium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Cobalt	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Copper	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Lead	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Molybdenum	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Nickel	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Selenium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Silver	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Thallium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Uranium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Zinc	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Chromium VI	INOR-93-6029	SM 3500 B; MSA Part 3, Ch. 25	SPECTROPHOTOMETER
Cyanide	INOR-93-6052	MOE CN-3015 & E 3009 A; SM 4500 CN	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Electrical Conductivity	INOR-93-6036	McKeague 4.12, SM 2510 B	EC METER
Sodium Adsorption Ratio	INOR-93-6007	McKeague 4.12 & 3.26 & EPA SW-846 6010B	ICP/OES
pH, 2:1 CaCl ₂ Extraction	INOR-93-6031	MSA part 3 & SM 4500-H+ B	PH METER

Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 16Z101291

PROJECT: 161-06382-00-101-980

ATTENTION TO: Matthieu Rochon

SAMPLING SITE: Phase Two ESA. Orleans GW Monitoring.

SAMPLED BY: Kathryn Maton

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Acenaphthylene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Acenaphthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Fluorene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Phenanthrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Anthracene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Fluoranthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Pyrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benz(a)anthracene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Chrysene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(a)pyrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Moisture Content	ORG-91-5106	EPA SW-846 3541 & 8270	BALANCE
Chrysene-d12	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Toluene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Ethylbenzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Xylene Mixture	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
F1 (C6 to C10)	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
F2 (C10 to C16)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
F3 (C16 to C34)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
F4 (C34 to C50)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009		GC/FID
F1 (C6 to C10)	VOL-91-5009	CCME Tier 1 Method	GC / FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	CCME Tier 1 Method	GC / FID
F2 (C10 to C16)	VOL-91-5009	CCME Tier 1 Method	GC / FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	CCME Tier 1 Method	GC / FID
F3 (C16 to C34)	VOL-91-5009	CCME Tier 1 Method	GC / FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	CCME Tier 1 Method	GC / FID
F4 (C34 to C50)	VOL-91-5009	CCME Tier 1 Method	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	CCME Tier 1 Method	GRAVIMETRIC ANALYSIS



AGAT

Laboratories

464442/464947
434952
307

5635 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
web@at.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (portable water intended for human consumption)

Report Information:

Company: WSP Canada Inc.
Contact: Kathryn Walker / Matthew Rakon
Address: 500 Guelber & Stage
Chateau de
613-613-9237 Fax: 613-243-2019
Reports to be sent to: Kathryn.malone@wspgroup.com
1. Email: Matthew.Rakon@wspgroup.com
2. Email:

Regulatory Requirements:

(Please check all appropriate boxes)
☒ Regulation 153/04
☐ Regulation 558
☐ Sewer Use
☐ Sanitary
☐ Storm
☐ CCME
☐ Prov. Water Quality Objectives (PMOQ)
☐ Other
☐ Fine
☒ Coarse
☐ Region
☐ Indicate One

Is this submission for a Record of Site Condition?

☒ Yes ☐ No

Report Guideline on Certificate of Analysis

☒ Yes ☐ No

Invoice Information:

Company: AGAT
Contact: AGAT
Address: AGAT
Email: AGAT
AGAT Quote #: PO
Please note: a sample number is not provided, client will be called for price for analysis.
Bill To Same: Yes ☒ No ☐

Sample Matrix Legend

B Biota
GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water

(Check Applicable)

Metals and Inorganics
Metal Scan
Hydride Forming Metals
Client Custom Metals
ORPs: ☐ B-HWS ☐ Cl ☐ CN
☐ Cr⁶⁺ ☐ EC ☐ FOC ☐ NO₂/NO₃
☐ Total N ☐ Hg ☐ pH ☐ SAR
Nutrients: ☐ TP ☐ NH₃ ☐ TKN
☐ NO₂ ☐ NO₃ ☐ NO₂/NO₃
Volatiles: ☐ VOC ☐ BTEX ☐ THM
CCME Fractions 1 to 4
ABNs
PAHs
Chlorophenols
PCBs
Organochlorine Pesticides
TCPL Metals/Inorganics
Sewer Use

153 METALS 93-101
F2-F4 91-107

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/Special Instructions
BH16-1-1B	3/6/16	9:00am	4	Soil	1x 150, 1x 150, 1x 150, 1x 150.
BH16-1-2A			4		
BH16-1-2B			4		
BH16-2-2A			4		2x 150, 1x 250.
BH16-2-2B			4		2x 150, 1x 250, 1x 120.
BH16-2-2C			3		1x 150, 2x 150.
BH16-3-1B			4		1x 250, 2x 150, 1x 120.
BH16-3-1C			4		1x 250, 2x 150, 1x 120.
BH16-3-2A			4		
BH16-3-2B			4		
BH16-3-3			4		
BH16-4-1B			4		

Sample Description	Sample Location	Date	Time	Signature	Signature	Date	Time	Signature	Signature	Date	Time	Page	of
Kathryn Walker	Matthew Rakon	6/6/16	7:30pm	7:30pm	7:30pm	7:30pm	7:30pm	7:30pm	7:30pm	7:30pm	7:30pm	1	6



AGAT

Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax 905.712.5122
web@atn.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (posable water intended for human consumption)

Report Information:

Company: WSP
Contact: Kathryn Mahon / Matthew Rochon
Address: 500 Gower Ave
613-617-9237 Fax: 613-617-9237
Phone: Kathryn.Mahon@wspgroup.com
Reports to be sent to: Matthew.Rochon@wspgroup.com
1. Email: Matthew.Rochon@wspgroup.com
2. Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
☐ Sewer Use
☐ Sanitary
☐ Storm
☐ Other

☒ Ind./Com
☒ Ag./Park
☐ Agriculture
☐ Prov. Water Quality Objectives (PM10)
☐ Other

Project Information:

Project: Phase Two CSA
Site Location: 3636 Innes Rd, Ottawa
Sampled By: K.M.
AGAT Quote #:

Invoice Information:

Company: AGAT
Contact: AGAT
Address: AGAT
Email: AGAT

Sample Matrix

☒ B
☒ Biota
☒ GW
☒ Ground Water
☒ Oil
☒ Paint
☒ S
☒ Soil
☒ Sediment
☒ SW
☒ Surface Water

Is this submission for a Record of Site Condition?

☒ Yes ☐ No

Report Guidelines on Certificate of Analysis

☒ Yes ☐ No

Laboratory Use Only

Work Order #: 102101291

Cooler Quantity: 1

Arrival Temperatures: 10°C

Custody Seal Intact: ☒ Yes ☐ No ☐ N/A

Notes:

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply) ☐ 1 Business Day

☐ 3 Business Days ☐ 2 Business Days ☐ 1 Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Metals	Metal Scan	Hydride Forming	Client Custom	ORPs: ☐ Cr ⁶⁺ ☐ Total	Nutrient ☐ NO ₃	Volatiles	CCME Fractions	ABNs	PAHs	Chlorophenols	PCBs	Organochlorine	TCLP Metals	Sewer Use
BH16-4-2A	31/05/16	10am	4	Soil	Initials, 1x250, 1x120.															
BH16-4-2B			2		Initial, 1x20															
BH16-4-102K			2		Initial, 1x20															
BH16-4-2A			4		Initials, 1x250, 1x120															
BH16-5-1B			2		Initial, 1x250															
BH16-5-101B			2		Initial, 1x120.															
BH16-5-2B			4		Initials, 1x120, 1x250															
BH16-5-2A			4		Initial, 1x250															
BH16-6-2A																				
BH16-6-1B																				
BH16-6-2B																				

Signature: Kathryn Mahon Date: 31/05/16 Time: 7:30pm
Signature: Matthew Rochon Date: 31/05/16 Time: 8:00
Signature: Simon Date: 14/6/14 Time: 11:05
Page: 2 of 6
Nº: T 018590



AGAT

Laboratories

5835 Couper Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
web@agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water intended for human consumption)

Report Information:

Company: WSP Canada Inc.
Contact: Kathryn Nelson / Matthew Kelton
Address: 500 Greber
Geahyway, Q.V.
63-613-9237 Fax: _____

Phone: _____
Reports to be sent to:
1. Email: Kathryn.Nelson@wsp.ca
Matthew.Kelton@wsp.ca
2. Email: _____

Project Information:

Project: Please See TAT 154
Site Location: 3636 Innes Road, Ottawa
Sampled By: K.M.
AGAT Quote #: _____ PO: _____

Invoice Information:

Company: _____ Bill To Same: ☒ Yes ☐ No
Contact: _____
Address: _____
Email: _____

Regulatory Requirements:

(Please check all appropriate boxes)
☒ Regulation 153/04
☐ Sewer Use ☐ Regulation 558
☐ Inc./Dom ☐ Sanitary
☐ Parks/Park ☐ Storm
☐ Agriculture ☐ CCME
☐ Prox. Water Quality
Soil Texture (check one) ☒ Coarse ☐ Other
☐ Fine ☐ Other
Region: _____ Indicate One

Is this submission for a Record of Site Condition?

☒ Yes ☐ No

Report Guideline on Certificate of Analysis

☒ Yes ☐ No

Sample Matrix Legend

B Biota
GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water

(Check Applicable)
Metals and Inorganics
Metal Scan
Hydride Forming Metals
Client Custom Metals
ORPs: ☐ B-HWS ☐ Cl ☐ CN
☐ Cr ☐ EC ☐ FOC ☐ NO₃/NO₂
☐ Total N ☐ Hg ☐ pH ☐ SAR
Nutrients: ☐ TP ☐ NH₃ ☐ TKN
☐ NO₃ ☐ NO₂ ☐ NO₃/NO₂
Volatiles: ☐ VOC ☐ BTEX ☐ THM
CCME Fractions 1 to 4
ABNs
PAHs
Chlorophenols
PCBs
Organochlorine Pesticides
TCPL Metals/Inorganics
Sewer Use

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Metals	Metal	Hydride	Client	ORP:	Volatiles	CCME	ABNs	PAHs	Chloro	PCBs	Organ	TCLP	Sewer
										☐ Cr ⁶⁺									
										☐ Total									
										Nutrient									
										☐ NO ₃									
BH16-7-1	3/16/16	1pm	3	Soil	2x0.5, 1x120, 1x250.														
BH16-7-101			1		1x250.														
BH16-7-2A			4		2x0.5, 1x120, 1x250.														
BH16-7-2B			4		2x0.5, 1x120, 1x250														
BH16-7-3			3		1x0.5, 1x120, 1x250														
BH16-8-1			3		1x0.5, 1x120, 1x250														
BH16-8-2A			3																
BH16-8-2B			3																
BH16-8-3A			3																
BH16-8-3B			3																
BH16-9-1	01/06/16	5am	1		250.														

Laboratory Use Only
Work Order #: 162101291
Cooler Quantity: _____
Arrival Temperature: _____
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: _____

Turnaround Time (TAT) Required:
Regular TAT: ☒ 5 to 7 Business Days
Rush TAT (Rush Sample Applies): ☐ 3 Business Days ☐ 2 Business Days ☐ 1 Business Day
OR Date Required (Rush Surcharges May Apply): _____

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

Sampled/Retained by (Print Name and Sign): Kathryn Nelson Date: 01/06/16 Time: 7:30
Sampled/Retained by (Print Name and Sign): Kathryn Nelson Date: 01/06/16 Time: 7:30
Page 3 of 3
Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT
Document ID: FWS-1531-016

AGAT Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
web@agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (public water intended for human consumption)

Report Information:

Company: USP
Contact: Kathryn Weber / Natalia Kachon
Address: 5800 Brimley Ave.
613-613-9237 Fax: 613-613-9237

Phone: Kathryn Weber @ usgagap.com
Reports to be sent to: Natalia Kachon @ usgagap.com
1. Email: Natalia.Kachon@usgagap.com
2. Email:

Project Information:

Project: Phase Two ESH
Site Location: 3636 lanes R Ottawa
Sampled By: AK. Kachon
AGAT Quote #: PO:

Invoice Information:

Company: Billie
Contact: Billie
Address: Billie
Email: Billie

Regulatory Requirements:

☒ Regulation 153/04
☐ Sewer Use
☐ Regulation 558
☐ Sanitary
☐ Storm
☐ CCME
☐ PWS Water Quality Objectives (PWSO)
☐ Other

Is this submission for a Record of Site Condition?
☒ Yes ☐ No

Sample Matrix

Legend
B Biota
GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water

Metals and Inorganics
Metal Scan
Hydride Forming Metals
Client Custom Metals
ORPs: ☐ B-HWS ☐ Cl ☐ CN
☐ C²⁺ ☐ EC ☐ FOC ☐ NO₃/NO₂
☐ Total N ☐ Hg ☐ pH ☐ SAR
Nutrients: ☐ TP ☐ NH₃ ☐ TKN
☐ NO₃ ☐ NO₂ ☐ NO₃/NO₂
Volatiles: ☐ VOC ☐ BTEX ☐ THM
CCME Fractions 1 to 4
ABNs
PAHs
Chlorophenols
PCBs
Organochlorine Pesticides
TCLP Metals/Inorganics
Sewer Use

(Check Applicable)

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/Special Instructions
BH16-9-2A	Billie	Sam.	1		250.
BH16-9-2B					
BH16-9-3A					
BH16-9-3B					
BH16-9-4					
BH16-9-5					
BH16-10-1					
BH16-10-2A					
BH16-10-2B					
BH16-10-3A					
BH16-10-3B					

Laboratory Use Only

Work Order #: 162101291

Cooler Quantity: 1

Arrival Temperature: 11°C

Custody Seal Intact: ☒ Yes ☐ No ☐ N/A
Notes:

Turnaround Time (TAT) Required:

Regular TAT ☒ 3 to 7 Business Days
Rush TAT (rush surcharges apply)
☐ 3 Business Days ☐ 2 Business Days ☐ 1 Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

Signature: Kathryn Weber Date: 01/06/16 Time: 3:30pm
Signature: Billie Date: 01/06/16 Time: 11:05
Page 4 of 6
018532



GGAT Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
web@agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water intended for human consumption)

Report Information:

Company: WSP
Contact: Kathryn Watson/Matthew Robson
Address: 3636 Jones Rd. #101
500 Guelph, ON G1G 4W2
613-613-9233 Fax: 613-613-9233

Phone: 613-613-9233
Report to be sent to:
1. Email: Kathryn.Watson@wspgroup.com
2. Email: matthew.robson@wspgroup.com

Project Information:

Project: Phase Two ESR
Site Location: 3636 Jones Rd. #101
Sampled By: Ent
AGAT Quote #: PO

Invoice Information:

Company: WSP
Contact: Kathryn Watson
Address: 3636 Jones Rd. #101
Email: matthew.robson@wspgroup.com

Regulatory Requirements:

(Please check all applicable boxes)
☒ Regulation 153/04
☐ Sewer Use
☐ Sanitary
☐ Storm
☐ CCME
☐ Prou. Water Quality Objectives (PWQO)
☐ Other
☐ Fine
☐ Coarse
☐ Region
☐ Indicate One

Is this submission for a Record of Site Condition?

☒ Yes ☐ No

Report Guideline on Certificate of Analysis

☒ Yes ☐ No

Sample Matrix Legend

B Biota
GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water

Comments/Special Instructions

Metals and Inorganics
Metal Scan
Hydride Forming Metals
Client Custom Metals
ORPs: ☐ B-HWS ☐ Cl ☐ CN
☐ Cr⁶⁺ ☐ EC ☐ FOC ☐ NO₃/NO₂
☐ Total N ☐ Hg ☐ pH ☐ SAR
Nutrients: ☐ TP ☐ NH₃ ☐ TKN
☐ NO₃ ☐ NO₂ ☐ NO₃/NO₂
Volatiles: ☐ VOC ☐ BTEX ☐ THM
CCME Fractions 1 to 4
ABNs
PAHs
Chlorophenols
PCBs
Organochlorine Pesticides
TCLP Metals/Inorganics
Sewer Use

(Check Applicable)

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/Special Instructions
BH16-10-41A	01/06/16	1 PM	1	Soil	
BH16-10-41B					
BH16-11-1					
BH16-11-2A					
BH16-11-21B					
BH16-11-3A					
BH16-11-3B					
BH16-11-41A					
BH16-11-41B					
BH16-12-1					
BH16-12-2A					

Laboratory Use Only

Work Order #: 162101291
Order Quantity: 1
Arrival temperatures: 1
Custody Seal intact: ☐ Yes ☐ No ☐ N/A
Notes: 3 June-16 8:00

Turnaround Time (TAT) Required:

Regular TAT: 5 to 7 Business Days
Rush TAT: 1 Business Day
☐ 3 Business Days ☐ 2 Business Days ☐ 1 Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

Signature: Kathryn Watson Date: 01/06/16 Time: 7:30 PM Sampled by (Print Name and Sign): Ent
Signature: Mat Date: 01/06/16 Time: 7:30 PM Sampled by (Print Name and Sign): Ent
Print Copy - Client | Yellow Copy - AGAT | White Copy - AGAT
Page 5 of 6
018578



AGAT

Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
web@atn.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (drinking water intended for human consumption)

Report Information:

Company: WSO
Contact: Kathryn Nelson/Matthew Palmer
Address: 500 Grosvenor
Grahamville, QC
613-617-9237 Fax: _____

Phone: _____

Reports to be sent to:

1. Email: _____

2. Email: _____

Project Information:

Project: Phase 11
Site Location: 3636 Upper Rd, Ottawa
Sampled By: KH
ACQU Quote #: _____ PO: _____

Invoice Information:

Company: _____ Bill To Same: Yes ☒ No ☐
Contact: _____
Address: _____
Email: _____

Regulatory Requirements:

Regulation 153/04 ☐ Indicate One
Table: ☐ Sewer Use ☐ Regulation 558
☐ Land/Can ☐ Sanitary
☐ Other/Perk ☐ Storm
☐ Agriculture ☐ Prov. Water Quality Objectives (PWQO)
Soil Texture (check one) ☐ Region: _____
☐ Fine ☐ Other ☐ Indicate One

Is this submission for a Record of Site Condition?

Yes ☒ No ☐

Report Guideline on Certificate of Analysis

Yes ☒ No ☐

Sample Matrix Legend

B Bids
GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water

Metals and Inorganics
Metal Scan
Hydride Forming Metals
Client Custom Metals
ORPs: ☐ B-HWS ☐ Cl ☐ CN
☐ Cr⁶⁺ ☐ EC ☐ FOC ☐ NO₂/NO₃
☐ Total N ☐ Hg ☐ pH ☐ SAR
Nutrients: ☐ TP ☐ NH₃ ☐ TKN
☐ NO₂ ☐ NO₃ ☐ NO₂/NO₃
Volatiles: ☐ VOC ☐ BTEX ☐ THM
CCME Fractions 1 to 4
ABNs
PAHs
Chlorophenols
PCBs
Organochlorine Pesticides
TCPL Metals/Inorganics
Sewer Use

(Check Applicable)

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/Special Instructions
BH16-12-28	01/06/16	11PM	1	Soil	
BH16-12-3A					
BH16-12-3B					
BH16-12-4A					
BH16-13-1					
BH16-13-2A					
BH16-13-2B					
BH16-13-3A					
BH16-13-3B					
BH16-13-4					

Laboratory Use Only

Work Order #: 162101291

Cooler Quantity: _____

Arrival Temperature: _____

Custody Seal Intact: Yes ☐ No ☐ N/A ☐

Notes: _____

Turnaround Time (TAT) Required:

Regular TAT

Rush TAT (rush Surcharge Applies)

3 Business Days ☐ 2 Business Days ☐ 1 Business Day ☐

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

Document 374 - 3/2015

Printed by: Kathryn Nelson Date: 01/06/16 Time: 7:30pm Samples Received By: WSO

Page 6 of 6

Page Number: T018573

Print Copy: Client | Yellow Copy: AGAT | White Copy: AGAT

Date Recd: November 2, 2015

CLIENT NAME: WSP CANADA INC.
500, BOUL GREBER 3E ETAGE
GATINEAU, QC J8T7W3
(819) 243-2827

ATTENTION TO: Matthieu Rochon

PROJECT: 161-06382-00 Phase Two ESA

AGAT WORK ORDER: 16Z102773

TRACE ORGANICS REVIEWED BY: Gulhan Yalamova, Report Reviewer

WATER ANALYSIS REVIEWED BY: Mike Muneswar, BSc (Chem), Senior Inorganic Analyst

DATE REPORTED: Jun 13, 2016

PAGES (INCLUDING COVER): 10

VERSION*: 1

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

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 16Z102773

PROJECT: 161-06382-00 Phase Two ESA

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: 3636 Innes Road, Ottawa

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2016-06-07

DATE REPORTED: 2016-06-13

		SAMPLE DESCRIPTION:		MW16-3	MW16-5	MW16-8	MW16-108
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		6/7/2016	6/7/2016	6/7/2016	6/7/2016
Parameter	Unit	G / S	RDL	7615636	7615659	7615681	7615693
Naphthalene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benz(a)anthracene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits					
Chrysene-d12	%	50-140		118	92	103	116

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

7615636-7615693 Note: The result for Benzo(b)Flouranthene is the total of the Benzo(b)&(j)Flouranthene isomers because the isomers co-elute on the GC column.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 16Z102773

PROJECT: 161-06382-00 Phase Two ESA

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: 3636 Innes Road, Ottawa

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

O. Reg. 153(511) - PHCs F1 - F4 (Water) - BTEX/F1

DATE RECEIVED: 2016-06-07

DATE REPORTED: 2016-06-13

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		5/25/2016
Parameter	Unit	G / S	RDL	7615703
Benzene	µg/L		0.20	<0.20
Toluene	µg/L		0.20	<0.20
Ethylbenzene	µg/L		0.10	<0.10
Xylene Mixture	µg/L		0.20	<0.20
F1 (C6 to C10)	µg/L		25	<25
F1 (C6 to C10) minus BTEX	µg/L		25	<25

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
7615703 The C6-C10 fraction is calculated using Toluene response factor.
Total C6-C10 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 16Z102773

PROJECT: 161-06382-00 Phase Two ESA

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: 3636 Innes Road, Ottawa

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

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

DATE RECEIVED: 2016-06-07

DATE REPORTED: 2016-06-13

		SAMPLE DESCRIPTION:		MW16-3	MW16-5	MW16-8	MW16-108
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		6/7/2016	6/7/2016	6/7/2016	6/7/2016
Parameter	Unit	G / S	RDL	7615636	7615659	7615681	7615693
Benzene	µg/L	0.20	<0.20	1.1	<0.20	<0.20	<0.20
Toluene	µg/L	0.20	<0.20	0.39	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	0.10	<0.10	15	<0.10	<0.10	<0.10
Xylene Mixture	µg/L	0.20	<0.20	4.2	<0.20	<0.20	<0.20
F1 (C6 to C10)	µg/L	25	<25	380	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	25	<25	360	<25	<25	<25
F2 (C10 to C16)	µg/L	100	<100	530	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L	100	<100	530	<100	<100	<100
F3 (C16 to C34)	µg/L	100	<100	390	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L	100	<100	390	<100	<100	<100
F4 (C34 to C50)	µg/L	100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	NA	NA	NA	NA	NA
Surrogate	Unit	Acceptable Limits					
Terphenyl	%	60-140	80	89	89	89	68

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

7615636-7615693 The C6-C10 fraction is calculated using Toluene response factor.

The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.

The chromatogram has returned to baseline by the retention time of n-C50.

Total C6-C50 results are corrected for BTEX and PAH contributions.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 nC34 average.

Linearity is within 15%.

Extraction and holding times were met for this sample.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 16Z102773

PROJECT: 161-06382-00 Phase Two ESA

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: 3636 Innes Road, Ottawa

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

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

DATE RECEIVED: 2016-06-07

DATE REPORTED: 2016-06-13

		SAMPLE DESCRIPTION:		MW16-3	MW16-5	MW16-8	MW16-108
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		6/7/2016	6/7/2016	6/7/2016	6/7/2016
Parameter	Unit	G / S	RDL	7615636	7615659	7615681	7615693
Antimony	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	µg/L	1.0	<1.0	1.9	<1.0	<1.0	<1.0
Barium	µg/L	2.0	89.7	166	224	187	
Beryllium	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	µg/L	10.0	48.5	41.9	21.5	16.3	
Cadmium	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	2.0	2.4	4.9	2.6	5.0	
Cobalt	µg/L	0.5	<0.5	3.3	0.9	0.8	
Copper	µg/L	1.0	2.0	<1.0	1.1	<1.0	
Lead	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Molybdenum	µg/L	0.5	0.6	1.2	<0.5	<0.5	
Nickel	µg/L	1.0	1.3	<1.0	1.4	<1.0	<1.0
Selenium	µg/L	1.0	1.6	<1.0	<1.0	<1.0	<1.0
Silver	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	µg/L	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Uranium	µg/L	0.5	1.3	5.0	4.4	3.7	
Vanadium	µg/L	0.4	2.4	1.5	4.8	4.8	
Zinc	µg/L	5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	5	<5	<5	<5	<5	<5
Cyanide	µg/L	2	<2	<2	<2	<2	<2
Sodium	µg/L	2500	63200	65600	66900	65200	
Chloride	µg/L	1000	133000	286000	341000	358000	
Electrical Conductivity	µS/cm	2	1340	1940	1900	1970	
pH	pH Units	NA	7.96	7.89	8.04	8.05	

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

7615636-7615693 Elevated RDLs for Anions & Cations indicate the degree of dilution prior to analysis in order to keep analytes within the calibration range of the instruments and to reduce matrix interferences.

Certified By:

Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 161-06382-00 Phase Two ESA

SAMPLING SITE: 3636 Innes Road, Ottawa

AGAT WORK ORDER: 16Z102773

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

Trace Organics Analysis

RPT Date: Jun 13, 2016			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Benzene	7615636	7515636	< 0.20	< 0.20	NA	< 0.20	109%	50%	140%	111%	60%	130%	113%	50%	140%
Toluene	7615636	7515636	< 0.20	< 0.20	NA	< 0.20	110%	50%	140%	104%	60%	130%	115%	50%	140%
Ethylbenzene	7615636	7515636	< 0.10	< 0.10	NA	< 0.10	116%	50%	140%	113%	60%	130%	115%	50%	140%
Xylene Mixture	7615636	7515636	< 0.20	< 0.20	NA	< 0.20	108%	50%	140%	109%	60%	130%	99%	50%	140%
F1 (C6 to C10)	7615636	7515636	< 25	< 25	NA	< 25	104%	60%	140%	118%	60%	140%	94%	60%	140%

F2 (C10 to C16)		TW	< 100	< 100	NA	< 100	98%	60%	140%	65%	60%	140%	72%	60%	140%
F3 (C16 to C34)		TW	< 100	< 100	NA	< 100	102%	60%	140%	92%	60%	140%	93%	60%	140%
F4 (C34 to C50)		TW	< 100	< 100	NA	< 100	86%	60%	140%	71%	60%	140%	101%	60%	140%

O. Reg. 153(511) - PAHs (Water)

Naphthalene		TW	< 0.20	< 0.20	NA	< 0.20	88%	50%	140%	115%	50%	140%	109%	50%	140%
Acenaphthylene		TW	< 0.20	< 0.20	NA	< 0.20	96%	50%	140%	115%	50%	140%	112%	50%	140%
Acenaphthene		TW	< 0.20	< 0.20	NA	< 0.20	100%	50%	140%	118%	50%	140%	113%	50%	140%
Fluorene		TW	< 0.20	< 0.20	NA	< 0.20	96%	50%	140%	114%	50%	140%	111%	50%	140%
Phenanthrene		TW	< 0.10	< 0.10	NA	< 0.10	95%	50%	140%	111%	50%	140%	106%	50%	140%
Anthracene		TW	< 0.10	< 0.10	NA	< 0.10	96%	50%	140%	114%	50%	140%	111%	50%	140%
Fluoranthene		TW	< 0.20	< 0.20	NA	< 0.20	100%	50%	140%	122%	50%	140%	116%	50%	140%
Pyrene		TW	< 0.20	< 0.20	NA	< 0.20	102%	50%	140%	125%	50%	140%	117%	50%	140%
Benz(a)anthracene		TW	< 0.20	< 0.20	NA	< 0.20	111%	50%	140%	121%	50%	140%	125%	50%	140%
Chrysene		TW	< 0.10	< 0.10	NA	< 0.10	124%	50%	140%	130%	50%	140%	127%	50%	140%
Benzo(b)fluoranthene		TW	< 0.10	< 0.10	NA	< 0.10	105%	50%	140%	113%	50%	140%	110%	50%	140%
Benzo(k)fluoranthene		TW	< 0.10	< 0.10	NA	< 0.10	123%	50%	140%	136%	50%	140%	129%	50%	140%
Benzo(a)pyrene		TW	< 0.01	< 0.01	NA	< 0.01	113%	50%	140%	129%	50%	140%	129%	50%	140%
Indeno(1,2,3-cd)pyrene		TW	< 0.20	< 0.20	NA	< 0.20	103%	50%	140%	105%	50%	140%	111%	50%	140%
Dibenz(a,h)anthracene		TW	< 0.20	< 0.20	NA	< 0.20	104%	50%	140%	109%	50%	140%	118%	50%	140%
Benzo(g,h,i)perylene		TW	< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	110%	50%	140%	119%	50%	140%
2-and 1-methyl Naphthalene		TW	< 0.20	< 0.20	NA	< 0.20	110%	50%	140%	57%	50%	140%	60%	50%	140%

Comments: Tap water analysis has been performed as QC sample testing for duplicate and matrix spike due to insufficient sample volume.
When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By:



Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 161-06382-00 Phase Two ESA

SAMPLING SITE: 3636 Innes Road, Ottawa

AGAT WORK ORDER: 16Z102773

ATTENTION TO: Matthieu Rochon

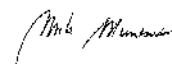
SAMPLED BY: Kathryn Maton

Water Analysis															
RPT Date: Jun 13, 2016			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Water)															
Antimony	7615636	7615636	< 1.0	<1.0	NA	< 1.0	102%	70%	130%	91%	80%	120%	93%	70%	130%
Arsenic	7615636	7615636	< 1.0	<1.0	NA	< 1.0	105%	70%	130%	98%	80%	120%	101%	70%	130%
Barium	7615636	7615636	89.7	92.3	2.9%	< 2.0	104%	70%	130%	96%	80%	120%	97%	70%	130%
Beryllium	7615636	7615636	< 0.5	<0.5	NA	< 0.5	96%	70%	130%	100%	80%	120%	92%	70%	130%
Boron	7615636	7615636	48.5	46.1	NA	< 10.0	101%	70%	130%	100%	80%	120%	93%	70%	130%
Cadmium	7615636	7615636	< 0.2	<0.2	NA	< 0.2	102%	70%	130%	98%	80%	120%	97%	70%	130%
Chromium	7615636	7615636	2.4	2.7	NA	< 2.0	109%	70%	130%	100%	80%	120%	99%	70%	130%
Cobalt	7615636	7615636	< 0.5	<0.5	NA	< 0.5	107%	70%	130%	98%	80%	120%	99%	70%	130%
Copper	7615636	7615636	2.0	2.1	NA	< 1.0	107%	70%	130%	99%	80%	120%	98%	70%	130%
Lead	7615636	7615636	< 0.5	<0.5	NA	< 0.5	101%	70%	130%	92%	80%	120%	92%	70%	130%
Molybdenum	7615636	7615636	0.6	0.7	NA	< 0.5	103%	70%	130%	95%	80%	120%	96%	70%	130%
Nickel	7615636	7615636	1.3	1.2	NA	< 1.0	109%	70%	130%	104%	80%	120%	98%	70%	130%
Selenium	7615636	7615636	1.6	<1.0	NA	< 1.0	108%	70%	130%	99%	80%	120%	102%	70%	130%
Silver	7615636	7615636	< 0.2	<0.2	NA	< 0.2	104%	70%	130%	107%	80%	120%	104%	70%	130%
Thallium	7615636	7615636	< 0.3	<0.3	NA	< 0.3	108%	70%	130%	103%	80%	120%	102%	70%	130%
Uranium	7615636	7615636	1.3	1.4	NA	< 0.5	104%	70%	130%	95%	80%	120%	92%	70%	130%
Vanadium	7615636	7615636	2.4	2.5	4.1%	< 0.4	105%	70%	130%	98%	80%	120%	98%	70%	130%
Zinc	7615636	7615636	< 5.0	<5.0	NA	< 5.0	105%	70%	130%	98%	80%	120%	99%	70%	130%
Mercury	7615636	7615636	< 0.02	<0.02	NA	< 0.02	101%	70%	130%	100%	80%	120%	102%	70%	130%
Chromium VI	7615173		<5	<5	NA	< 5	102%	70%	130%	107%	80%	120%	106%	70%	130%
Cyanide	7615636		< 2	< 2	NA	< 2	105%	70%	130%	102%	80%	120%	102%	70%	130%
Sodium	7600828		95400	93000	2.5%	< 500	91%	70%	130%	90%	80%	120%	103%	70%	130%
Chloride	7615565		447000	442000	1.1%	< 100	106%	70%	130%	107%	70%	130%	95%	70%	130%
Electrical Conductivity	7615636	7615636	1340	1350	0.7%	< 2	106%	90%	110%	NA			NA		
pH	7615636	7615636	7.96	8.01	0.6%	NA	101%	90%	110%	NA			NA		

Comments: NA signifies Not Applicable.

Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Certified By:



Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 16Z102773

PROJECT: 161-06382-00 Phase Two ESA

ATTENTION TO: Matthieu Rochon

SAMPLING SITE: 3636 Innes Road, Ottawa

SAMPLED BY: Kathryn Maton

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Acenaphthylene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Acenaphthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Fluorene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Phenanthrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Anthracene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Fluoranthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Pyrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benz(a)anthracene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Chrysene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(a)pyrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Chrysene-d12	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Toluene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Ethylbenzene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Xylene Mixture	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10)	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Benzene	VOL-91-5010	MOE PHC E3421	(P&T)GC/MS
Toluene	VOL-91-5010	MOE PHC E3421	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	MOE PHC E3421	(P&T)GC/MS
Xylene Mixture	VOL-91-5010	MOE PHC E3421	(P&T)GC/MS
F1 (C6 to C10)	VOL-91-5010	MOE PHC E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	MOE PHC E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	MOE PHC E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	MOE PHC E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	MOE PHC E3421	GC/FID
F4 (C34 to C50)	VOL -91- 5010	MOE PHC- E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	MOE PHC E3421	BALANCE
Terphenyl	VOL-91-5010		GC/FID

Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 16Z102773

PROJECT: 161-06382-00 Phase Two ESA

ATTENTION TO: Matthieu Rochon

SAMPLING SITE: 3636 Innes Road, Ottawa

SAMPLED BY: Kathryn Maton

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Antimony	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Barium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Boron	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Cadmium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Chromium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Cobalt	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Copper	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Lead	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Molybdenum	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Nickel	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Selenium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Silver	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Thallium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Uranium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Zinc	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Mercury	MET-93-6100	EPA SW-846 7470 & 245.1	CVAAS
Chromium VI	INOR-93-6034	SM 3500-Cr B	SPECTROPHOTOMETER
Cyanide	INOR-93-6052	MOE METHOD CN- 3015 & SM 4500 CN- I	TECHNICON AUTO ANALYZER
Sodium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Chloride	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
pH	INOR-93-6000	SM 4500-H+ B	PC TITRATE



Laboratories

1614
5635 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
web@earth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water intended for human consumption)

Report Information:

Company: WSP Canada Inc.
Contact: Wetter Rodon/Kathryn Makin
Address: 500 G. Gower Blvd. 3rd floor
Gahmerv. 2c, 181 4th fl
Phone: 603-617-9233 Fax: 819-243-2019
Reports to be sent to: 819-762-1466
1. Email: Wetter Rodon Clus@wsp.ca
2. Email: Kathryn.makin@wsp.ca

Project Information:

Project: Phase Two ESA
Site Location: 3636 Innes Rd, Ottawa
Sampled By: KLH
AGAT Quote #: PO: 161-06382-00

Please note, if quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Company: _____
Contact: _____
Address: _____
Email: _____
Bill To Same: Yes ☐ No ☒

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/C4
Table _____
☐ Sewer Use
☐ Sanitary
☐ Storm
☐ CCME
☐ Prov. Water Quality Objectives (PWQO)
☐ Agriculture
☐ Other
Soil Texture (check one)
☒ Coarse
☐ Fine
Region _____
Indicate one

Is this submission for a Record of Site Condition?
☒ Yes ☐ No

Report Guideline on Certificate of Analysis
☒ Yes ☐ No

Sample Matrix Legend

B Biota
GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water

Comments/Special Instructions

Metals and Inorganics

Metal Scan

Hydride Forming Metals

Client Custom Metals

ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ Cr⁶⁺ ☐ EC ☐ FOC ☐ NO₃/NO₂ ☐ Total N ☐ Hg ☐ pH ☐ SAR
Nutrients: ☐ TP ☐ NH₃ ☐ TKN ☐ NO₃ ☐ NO₂ ☐ NO₃/NO₂
Volatiles: ☐ VOC ☐ BTEX ☐ THM

CCME Fractions 1 to 4

ABNs

PAHs

Chlorophenols

PCBs

Organochlorine Pesticides

TCLP Metals/Inorganics

Sewer Use

CCME FI-F4+BTEX
Reg 153 PAHs
Reg 153 Metals
CCME FI+BTEX

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Metal	Metal	Hydric	Client	ORPs ☐ Cr ⁶⁺ ☐ Total	Nutrient ☐ NO ₃	Volatil	CCME	ABNs	PAHs	Chloro	PCBs	Organ	TCLP	Sewer
RAWA/BARBAR			40	GW																
MW16-3	02/06/16	13:31	10																	
MW16-5		13:50																		
MW16-8		13:24																		
MW16-108		13:24																		
Trip Blank	25/05/16		403																	

Laboratory Use Only

Work Order #: 162102373

Cooler Quantity: 8.3 64 69

Arrival Temperatures: 8.3 64 69

Custody Seal Intact: ☐ Yes ☐ No ☒ N/A

Notes: _____

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☒ 3 Business Days ☐ 2 Business Days ☐ 1 Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT

*TAT is exclusive of weekends and statutory holidays

Sample Requisitioned By (Print Name and Sign): Kathryn Makin Date: 02/06/16 Time: 4:30pm Samples Received By (Print Name and Sign): Shawn D Date: 9:00 Time: _____

Page 1 of 1

No. T 018580

Document ID: DW-76-13-1-010

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

Date Issued: November 2, 2015

CLIENT NAME: WSP CANADA INC.
500, BOUL GREBER 3E ETAGE
GATINEAU, QC J8T7W3
(819) 243-2827

ATTENTION TO: Matthieu Rochon

PROJECT: 161-06382-00

AGAT WORK ORDER: 16Z156073

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Nov 08, 2016

PAGES (INCLUDING COVER): 5

VERSION*: 1

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

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 16Z156073

PROJECT: 161-06382-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: 3636 Innes Road - Remediation

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

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

DATE RECEIVED: 2016-11-03

DATE REPORTED: 2016-11-08

		SAMPLE DESCRIPTION:		FL 01	FL 101	FL 04	WW 14	SW 11	EW 8
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2016-11-02	2016-11-02	2016-11-02	2016-11-02	2016-11-02	2016-11-02
Parameter	Unit	G / S	RDL	7980909	7980934	7980935	7980937	7980938	7980942
Benzene	µg/g	0.32	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	6.4	0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Ethylbenzene	µg/g	1.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene Mixture	µg/g	26	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g	55	5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	230	10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	1700	50	200	68	<50	160	380	400
F4 (C34 to C50)	µg/g	3300	50	<50	<50	<50	79	100	130
Gravimetric Heavy Hydrocarbons	µg/g	3300	50	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	18.3	16.2	28.0	13.7	10.9	9.3
Surrogate	Unit	Acceptable Limits							
Terphenyl	%	60-140		92	86	100	110	65	81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

7980909-7980942 Results are based on sample dry weight.

The C6-C10 fraction is calculated using Toluene response factor.

The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

The chromatogram has returned to baseline by the retention time of nC50.

Total C6 - C50 results are corrected for BTEX contributions.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

Extraction and holding times were met for this sample.

Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Quality Control Data is available upon request.

Certified By:

Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 161-06382-00

SAMPLING SITE: 3636 Innes Road - Remediation

AGAT WORK ORDER: 16Z156073

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

Trace Organics Analysis

RPT Date: Nov 08, 2016

RPT Date: Nov 08, 2016			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Benzene	7980755		< 0.02	< 0.02	NA	< 0.02	94%	60%	130%	95%	60%	130%	94%	60%	130%
Toluene	7980755		< 0.08	< 0.08	NA	< 0.08	99%	60%	130%	99%	60%	130%	99%	60%	130%
Ethylbenzene	7980755		< 0.05	< 0.05	NA	< 0.05	98%	60%	130%	98%	60%	130%	97%	60%	130%
Xylene Mixture	7980755		< 0.05	< 0.05	NA	< 0.05	93%	60%	130%	93%	60%	130%	92%	60%	130%
F1 (C6 to C10)	7980755		< 5	< 5	NA	< 5	81%	60%	130%	108%	85%	115%	105%	70%	130%
F2 (C10 to C16)	7961471		< 10	< 10	NA	< 10	100%	60%	130%	91%	80%	120%	86%	70%	130%
F3 (C16 to C34)	7961471		< 50	< 50	NA	< 50	103%	60%	130%	91%	80%	120%	88%	70%	130%
F4 (C34 to C50)	7961471		< 50	< 50	NA	< 50	99%	60%	130%	92%	80%	120%	86%	70%	130%

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

Certified By:



Method Summary

CLIENT NAME: WSP CANADA INC.

PROJECT: 161-06382-00

SAMPLING SITE: 3636 Innes Road - Remediation

AGAT WORK ORDER: 16Z156073

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Toluene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Ethylbenzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Xylene Mixture	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
F1 (C6 to C10)	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
F2 (C10 to C16)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
F3 (C16 to C34)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
F4 (C34 to C50)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009		GC/FID



If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water intended for human consumption)

Date Issued: Feb 18 2016

CLIENT NAME: WSP CANADA INC.
500, BOUL GREBER 3E ETAGE
GATINEAU, QC J8T7W3
(819) 243-2827

ATTENTION TO: Matthieu Rochon

PROJECT: 161-06382-00

AGAT WORK ORDER: 16Z156062

SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Coordinator

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Nov 08, 2016

PAGES (INCLUDING COVER): 7

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (403) 299-2000

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 16Z156062

PROJECT: 161-06382-00

2910 12TH STREET NE
CALGARY, ALBERTA
CANADA T2E 7P7
TEL (403)299-2000
FAX (403)299-2010
<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: 3636 Innes Road - Phase Two ESA

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

O. Reg. 153(511) - ORPs (Soil) - EC

DATE RECEIVED: 2016-11-03

DATE REPORTED: 2016-11-08

		SAMPLE DESCRIPTION:		TP 16-5 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2016-11-02
Parameter	Unit	G / S	RDL	7980762
Electrical Conductivity	mS/cm	1.4	0.005	0.906

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

7980762 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil).

Certified By:

Amanjot Bhela

Certificate of Analysis

AGAT WORK ORDER: 16Z156062

PROJECT: 161-06382-00

2910 12TH STREET NE
CALGARY, ALBERTA
CANADA T2E 7P7
TEL (403)299-2000
FAX (403)299-2010
<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: 3636 Innes Road - Phase Two ESA

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

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

DATE RECEIVED: 2016-11-03

DATE REPORTED: 2016-11-08

		SAMPLE DESCRIPTION:		TP 16-6 SA1	TP 16-6 SA101
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2016-11-02	2016-11-02
Parameter	Unit	G / S	RDL	7980748	7980755
Benzene	µg/g	0.32	0.02	<0.02	<0.02
Toluene	µg/g	6.4	0.08	<0.08	<0.08
Ethylbenzene	µg/g	1.1	0.05	<0.05	<0.05
Xylene Mixture	µg/g	26	0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g	55	5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5
F2 (C10 to C16)	µg/g	230	10	<10	<10
F3 (C16 to C34)	µg/g	1700	50	130	160
F4 (C34 to C50)	µg/g	3300	50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50	NA	NA
Moisture Content	%		0.1	23.3	20.4
Surrogate	Unit	Acceptable Limits			
Terphenyl	%	60-140		110	100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

7980748-7980755 Results are based on sample dry weight.

The C6-C10 fraction is calculated using Toluene response factor.

The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

The chromatogram has returned to baseline by the retention time of nC50.

Total C6 - C50 results are corrected for BTEX contributions.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

Extraction and holding times were met for this sample.

Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Quality Control Data is available upon request.

Certified By:



Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 161-06382-00

SAMPLING SITE: 3636 Innes Road - Phase Two ESA

AGAT WORK ORDER: 16Z156062

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

Soil Analysis

RPT Date: Nov 08, 2016

DUPLICATE

REFERENCE MATERIAL

METHOD BLANK SPIKE

MATRIX SPIKE

PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - ORPs (Soil) - EC

Electrical Conductivity 7980762 7980762 0.906 0.903 0.3% < 0.005 102% 90% 110% NA NA

Comments: NA signifies Not Applicable.

Certified By:



Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 161-06382-00

SAMPLING SITE: 3636 Innes Road - Phase Two ESA

AGAT WORK ORDER: 16Z156062

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

Trace Organics Analysis

RPT Date: Nov 08, 2016

			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Benzene	7980755	7980755	< 0.02	< 0.02	NA	< 0.02	94%	60%	130%	95%	60%	130%	94%	60%	130%
Toluene	7980755	7980755	< 0.08	< 0.08	NA	< 0.08	99%	60%	130%	99%	60%	130%	99%	60%	130%
Ethylbenzene	7980755	7980755	< 0.05	< 0.05	NA	< 0.05	98%	60%	130%	98%	60%	130%	97%	60%	130%
Xylene Mixture	7980755	7980755	< 0.05	< 0.05	NA	< 0.05	93%	60%	130%	93%	60%	130%	92%	60%	130%
F1 (C6 to C10)	7980755	7980755	< 5	< 5	NA	< 5	81%	60%	130%	108%	85%	115%	105%	70%	130%
F2 (C10 to C16)	7961471		< 10	< 10	NA	< 10	100%	60%	130%	91%	80%	120%	86%	70%	130%
F3 (C16 to C34)	7961471		< 50	< 50	NA	< 50	103%	60%	130%	91%	80%	120%	88%	70%	130%
F4 (C34 to C50)	7961471		< 50	< 50	NA	< 50	99%	60%	130%	92%	80%	120%	86%	70%	130%

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

Certified By:



Method Summary

CLIENT NAME: WSP CANADA INC.

PROJECT: 161-06382-00

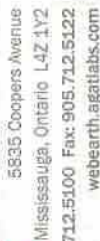
SAMPLING SITE: 3636 Innes Road - Phase Two ESA

AGAT WORK ORDER: 16Z156062

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Electrical Conductivity	INOR-93-6036	McKeague 4.12, SM 2510 B	EC METER
Trace Organics Analysis			
Benzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Toluene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Ethylbenzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Xylene Mixture	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
F1 (C6 to C10)	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
F2 (C10 to C16)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
F3 (C16 to C34)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
F4 (C34 to C50)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009		GC/FID



Work Order #:

Cooler Quantity:

Chain of Custody Record

Company: WSP Canada.
Contact: Kathryn Watson.
Address: 2611 Queensview Drive.
Ottawa, ON
613-617-9237
Phone: _____ Fax: _____
Reports to be sent to:
1. Email: Kathryn.Watson@wspgroup.com
2. Email: Matthew.Rochon@wspgroup.com

Project: _____
 Site Location: _____
 Sampled By: K. Mahan. 63.
 AGAT Quote #: 161-128-0082-00 PO: _____

Company: WSP
Contact: Matthew Rochon.
Address: 200-450 Boul. de la Cité, Granby, QC
Email: Matthew.Rochon@wspgroup.com

[illegible]

☒ Regulation 153/04
 (Please check all applicable boxes)

☐ Sewer Use ☐ Sanitary ☐ Storm	☐ Regulation 558 ☐ CCME ☐ Prov. Water Quality Objectives (PWQO) ☐ Other
---	--

Region _____ Indicate One

Table _____ Indicate One

☐ Ind/Com
☒ Res/Park
☐ Agriculture
☒ Soil Texture (check One)

☐ Coarse
☒ Medium
☐ Fine

Indicate One

Yes	No	Yes	No
☒	☐	☒	☐

☒ Yes ☐ No

Legend		Field Filtered - Metals, Hg, CrVI (Please Circle)		Forming Metals		Custom Metals	
B	Biota						
GW	Ground Water						
O	Oil						
P	Paint						
S	Soil						
SD	Sediment						
SW	Surface Water						

[illegible]

Samples Received By (Print Name and Sig):

Usernetix GmbH

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign)

Time: 1:00

Shy

Time

Time

Document ID: DIV-78-1511-011

CLIENT NAME: WSP CANADA INC.
500, BOUL GREBER 3E ETAGE
GATINEAU, QC J8T7W3
(819) 243-2827

ATTENTION TO: Matthieu Rochon

PROJECT: 161-06832-00

AGAT WORK ORDER: 16Z156093

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Nov 08, 2016

PAGES (INCLUDING COVER): 6

VERSION*: 1

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

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 16Z156093

PROJECT: 161-06832-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: 3636 Innes Road - Phase Two ESA

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2016-11-03

DATE REPORTED: 2016-11-08

		SAMPLE DESCRIPTION:		MW 16-5	
		SAMPLE TYPE:		Water	
		DATE SAMPLED:		2016-11-02	
Parameter	Unit	G / S	RDL	7981097	
Benzene	µg/L	5.0	0.20	1.9	
Toluene	µg/L	24	0.20	0.32	
Ethylbenzene	µg/L	2.4	0.10	31	
Xylene Mixture	µg/L	300	0.20	9.5	
F1 (C6 to C10)	µg/L	750	25	1000	
F1 (C6 to C10) minus BTEX	µg/L	750	25	960	
F2 (C10 to C16)	µg/L	150	100	4000	
F3 (C16 to C34)	µg/L	500	100	3300	
F4 (C34 to C50)	µg/L	500	100	<100	
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	
Surrogate	Unit	Acceptable Limits			
Terphenyl	%	60-140		93	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Coarse Textured Soils

7981097 The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Certified By:



Guideline Violation

AGAT WORK ORDER: 16Z156093

PROJECT: 161-06832-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Matthieu Rochon

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	GUIDEVALUE	RESULT
7981097	MW 16-5	ON T2 PGW CT	O. Reg. 153(511) - PHCs F1 - F4 (Water)	Ethylbenzene	2.4	31
7981097	MW 16-5	ON T2 PGW CT	O. Reg. 153(511) - PHCs F1 - F4 (Water)	F1 (C6 to C10)	750	1000
7981097	MW 16-5	ON T2 PGW CT	O. Reg. 153(511) - PHCs F1 - F4 (Water)	F1 (C6 to C10) minus BTEX	750	960
7981097	MW 16-5	ON T2 PGW CT	O. Reg. 153(511) - PHCs F1 - F4 (Water)	F2 (C10 to C16)	150	4000
7981097	MW 16-5	ON T2 PGW CT	O. Reg. 153(511) - PHCs F1 - F4 (Water)	F3 (C16 to C34)	500	3300

Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 161-06832-00

SAMPLING SITE: 3636 Innes Road - Phase Two ESA

AGAT WORK ORDER: 16Z156093

ATTENTION TO: Matthieu Rochon

SAMPLED BY: Kathryn Maton

Trace Organics Analysis

RPT Date: Nov 08, 2016

RPT Date: Nov 08, 2016			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - PHCs F1 - F4 (Water)

Benzene	7984789		< 0.20	< 0.20	NA	< 0.20	87%	50%	140%	82%	60%	130%	97%	50%	140%
Toluene	7984789		< 0.20	< 0.20	NA	< 0.20	78%	50%	140%	77%	60%	130%	94%	50%	140%
Ethylbenzene	7984789		< 0.10	< 0.10	NA	< 0.10	80%	50%	140%	79%	60%	130%	95%	50%	140%
Xylene Mixture	7984789		< 0.20	< 0.20	NA	< 0.20	74%	50%	140%	84%	60%	130%	97%	50%	140%
F1 (C6 to C10)	7984789		< 25	< 25	NA	< 25	89%	60%	140%	98%	60%	140%	90%	60%	140%
F2 (C10 to C16)		TW	< 100	< 100	NA	< 100	98%	60%	140%	67%	60%	140%	67%	60%	140%
F3 (C16 to C34)		TW	< 100	< 100	NA	< 100	103%	60%	140%	93%	60%	140%	67%	60%	140%
F4 (C34 to C50)		TW	< 100	< 100	NA	< 100	95%	60%	140%	91%	60%	140%	94%	60%	140%

Comments: Tap water analysis has been performed as QC sample testing for duplicate and matrix spike due to insufficient sample volume.

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

Certified By:



Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 16Z156093

PROJECT: 161-06832-00

ATTENTION TO: Matthieu Rochon

SAMPLING SITE: 3636 Innes Road - Phase Two ESA

SAMPLED BY: Kathryn Maton

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Toluene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Ethylbenzene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Xylene Mixture	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10)	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010		GC/FID



5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water intended for human consumption)

Regulatory Requirements: ☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04

☐ Sewer Use

☐ Regulation 558

☐ Sanitary

☐ CCME

☐ Storm

☐ Prov. Water Quality Objectives (PWQO)

☐ Other

Table _____ Indicate One

☐ Ind/Com

☒ X Lakes/Park

☐ Agriculture

Region _____ Indicate One

☒ X

Soil Texture (check one)

☒ X coarse

☐ Fine

Indicate One

Is this submission for a
Record of Site Condition?

☒ Yes ☐ No

**Report Guideline on
Certificate of Analysis**

☒ Yes ☐ No

Sample Matrix Legend

B	Biota
GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

(Please Circle) Hg, CrVI	
and Inorganics	
Forming Metals	
System Metals	
B-HWS ☐ Cl ☐ CN ☐ FOC ☐ NO ₂ /NO _x ☐ pH ☐ SAR ☐ TP ☐ NH ₃ ☐ TKN ☐ NO ₂ ☐ VOC ☒ BTEX ☐ THM	(Check Applicable)
Actions 1 to 4	
enols	
Chlorine Pesticides	
Metals/Inorganics	

Date and Sign:	Date	Time	Page <u>1</u> of <u>1</u>
<i>[Signature]</i>	3 Nov-16	9h 43	
Date and Sign:	Date	Time	No: T 028835
<i>[Signature]</i>	20/4/16	9:30	

STANDARD LIMITATIONS

PHASE II ENVIRONMENTAL SITE ASSESSMENT (PHASE II ESA)

These Standard Limitations form part of the Report to which they are appended and any use of the Report is subject to them.

1. EXCLUSIVE USE BY CLIENT

This Report was prepared for the exclusive use of the client identified as the intended recipient. Any use of the report by any other party without the written consent of MMM Group Limited is the sole responsibility of such party. MMM Group Limited accepts no responsibility for damages that may be suffered by any third party as a result of decisions made or actions taken based on this Report.

2. SCOPE, TERMS AND CONDITIONS OF CONTRACT

The observations and investigations (hereinafter referred to as the "Work") upon which this Report is based were carried out in accordance with the scope, terms and conditions of the contract or the proposal pursuant to which the Work was commissioned. The conclusions presented in the Report are based solely upon the scope of services described in the contract or the proposal and governed by the time and budgetary constraints imposed by them.

3. STANDARD OF CARE

The Phase II ESA was carried out in accordance with generally accepted environmental study and/or professional practices, industry standards and applicable environmental regulations. No other warranties are either expressed or implied with respect to the professional services provided under the terms of the contract or proposal and represented in this Report.

4. SCOPE OF THE PHASE II ESA

A Phase II ESA is conducted to obtain information about environmental conditions in the land or water on, in or under the subject property. This Report has been prepared based on information obtained at discrete borehole, test pit, monitoring well, or other (e.g., surface water) sampling locations. The conditions reported herein were those encountered at the subject property at the time the Work was performed and as present

at the discrete sampling locations. Conditions between sampling locations may be different than those encountered at the sampling locations and MMM Group Limited is not responsible for such differences.

5. REASONABLE CONCLUSIONS

The conclusions of the Phase II ESA regarding the environmental conditions at the subject property are based on the investigations conducted during the Work and information from other sources as may be indicated in the Report. The accuracy of information from other sources was not verified unless specifically noted in the Report, nor was it determined if the reviewed information constituted all information that exists and pertains to the subject property.

The conclusions made are based on reasonable and professional interpretation of the information considered. If additional information concerning environmental conditions of relevance to this Report is obtained during future work at the subject property, MMM Group Limited should be notified in order that we may determine if modifications to the conclusions presented in this Report are necessary.

6. REPORT AS A COMPLETE DOCUMENT

This Report must be read as a whole and sections taken out of context may be misleading. If discrepancies exist between the preliminary (draft) and final versions of the Report, the final version of the Report shall take precedence.

7. LIMITATION OF LIABILITY

MMM Group Limited's liability with respect to the Phase II ESA is limited to re-performing, without cost, any part of the Work that is unacceptable solely as a result of failure to comply with industry standards. MMM Group Limited's maximum liability is limited in accordance with terms in the original contract, provided that notice of claim is made within regulated timelines as of the date of delivery of the Report.



