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Limited Phase Two Environmental Site Assessment Proposed Commercial Building 1243 Teron Road Kanata, Ontario

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Submitted to:

Megha Holdings Inc.
1558 Blohm Drive
Ottawa, Ontario
K1G 4R7

Limited Phase Two Environmental Site Assessment Proposed Commercial Building 1243 Teron Road Kanata, Ontario

December 7, 2020
Project: 64742.02 - V02

experience • knowledge • integrity

GEMTEC Consulting Engineers and Scientists Limited
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Ottawa, ON, Canada
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December 7, 2020 File: 64742.02 - V02

Megha Holdings Inc.
1558 Blohm Drive
Ottawa, Ontario
K1G 4R7

Attention: Ramesh Sarna, Director

Re: Limited Phase Two Environmental Site Assessment
Proposed Commercial Building
1243 Teron Road
Ottawa, (Kanata), Ontario

Enclosed is our Limited Phase Two ESA report for the e-mail proposal dated December 6, 2019. The Limited Phase Two ESA was completed in general accordance with Ontario Regulation 153/04 and describes the interpreted environmental conditions at the property.

We trust this information is sufficient for your current needs. If you have any questions or require further information, please contact the undersigned.

Nicole Soucy, M.A.Sc., P.Eng
Environmental Engineer

Drew Paulusse, B.Sc.
Senior Environmental Scientist

NS/DP

Enclosures
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EXECUTIVE SUMMARY

GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) was retained by Megha Holdings Inc., to complete a Limited Phase Two Environmental Site Assessment (ESA) for the property located at 1243 Teron Road in Kanata, Ontario.

The Limited Phase Two ESA was completed following completion of a Phase One ESA completed and submitted to Megha Holdings Inc., under separate cover. This Limited Phase Two ESA has been completed in general accordance with the requirements for Phase Two ESAs as defined in Part VII and Schedule E of Ontario Regulation 153/04, as amended. The purpose of this Limited Phase Two ESA is to support a site plan application for development of the subject site.

The site is municipally addressed as 1243 Teron Road located in Kanata, Ontario. Proposed site development includes construction of a commercial building in the northern section of the property parcel. The proposed building is to be approximately 213 metres by 46 metres and consist of slab on grade construction, three loading bays are to be constructed within the building. It should be noted that since the completion of this Phase Two ESA, the property at 1243 Teron Road has undergone a successful severance resulting in two property parcels where 1243 Teron Road previously existed: 1243 and 1265 Teron Road.

Through completion of a Phase One ESA, fill material was identified as an Area of Potential Environmental Concern (APEC) on the subject site. The objective of this Limited Phase Two ESA was to determine the quality of the fill material of unknown origins with respect to Ministry of Environment, Conservation and Parks, generic site condition standards.

The surficial geology of the subject site can be generally described as fill material consisting brown silty sand, trace to some clay and gravel. Debris material including cinder blocks, red brick, and wood was identified at three test pit locations.

A total of 13 soil samples, including one duplicate were selected for analytical analysis based visual, olfactory and tactile evidence of impacts and submitted to ALS Laboratory Group for analysis of metals, and PAHs. Analytical results indicated that all soil samples met the MECP Table 2 SCS for all parameters analyzed.

Based on observations of deleterious material identified within the fill at TP19-3, TP19-4, and TP19-5, If deleterious material is identified during construction, it should not be re-used on the property, and should be disposed of at a MECP approved landfill.

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1.0 INTRODUCTION

GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) was retained by Megha Holdings Inc., to complete a Limited Phase Two Environmental Site Assessment (ESA) for the property located at 1243 Teron Road (the 'subject property'). The site location is provided on the Key Plan, Figure A.1, Appendix A.

The Limited Phase Two ESA was completed following a Phase One ESA (GEMTEC, 2019) completed and submitted to Megha Holdings Inc., under separate cover. One Area of Potential Environmental Concern (APEC) was identified in the Phase One ESA.

This Limited Phase Two ESA has been completed in general accordance with the requirements for Phase Two ESAs as defined in Part VII and Schedule E of Ontario Regulation 153/04, as amended by O. Reg. 511/09 in support of Site Plan Approval.

Note: Since the completion of this Phase Two ESA, the property at 1243 Teron Road has undergone a successful severance resulting in two property parcels where 1243 Teron Road previously existed: 1243 and 1265 Teron Road. This report includes information obtained for both property parcels prior to the severance, however, the information provided herein can be applied to the currently applicable municipal address based on the borehole locations are shown on Figure A.2, Appendix A.

1.1 Site Description

The subject property is currently comprised of vegetated vacant land and is owned by Astenjohnson Inc. The subject property boundary is shown on Figure A.1, Appendix A. According to a review of historical aerial photographs, the subject property has never been developed and was used for agricultural purposes from prior to 1934 to sometime between 1946 and 1985.

1.2 Property Ownership

The site is currently owned by owned by Astenjohnson Inc. The site representative is Mr. Ramesh L. Sarna of Megha Holdings Inc., 613-299-9366.

1.3 Current and Proposed Future Uses

Based on a preliminary drawing prepared by KWC Architects and provided to GEMTEC, it is understood that a commercial structure is to be constructed on the subject property at 1243 Teron Road. The subject site is currently undeveloped and vegetated with small to large trees. In addition, there is an existing stormwater management ditch located on the subject property.

The proposed building is to be approximately 213 metres by 46 metres and consist of slab on grade construction. Three loading bays are to be constructed within the building. It is understood that the current proposed finished floor elevation is 85.7 metres, geodetic datum.

1.4 Applicable Site Condition Standards

The Ministry of Environment, Conservation and Parks (MECP) Site Condition Standards (SCS) were selected based on site conditions and were selected for the site in accordance with the requirements of Ontario Regulation 153/04, Record of Site Condition – Part XV.1 of the Environmental Protection Act (O. Reg. 153/04, Ministry of the Environment, Conservation and Parks, October 31, 2011).

The following information was considered in selecting the site condition standards:

- The most sensitive use of the property will be commercial;
- The site is not located within 30 m of a water body;
- Four domestic water wells were identified within 250 metres of the subject site; and,
- Subsurface investigation completed on the subject site identified bedrock at depths greater than 2.0 m below ground surface.

Based on the above information the MECP Table 2 Full Depth Generic Site Condition Standards in a Potable Groundwater Condition, Commercial Property Use, Coarse Soils (MOE, April 15, 2011) was selected for the subject property.

2.0 BACKGROUND

2.1 Physical Setting

Topographic mapping available through the Ontario Basic Mapping (OBM, 2012) and the Ministry of Natural Resources and Forestry (MNR, 2014), were reviewed to determine topographic features in the vicinity of the subject property and study area. The elevation of the subject property is approximately 86 metres above sea level and topography at the subject site and surrounding area is generally flat sloping downward slightly to the northeast.

Surficial and bedrock geology maps of the Ottawa area were reviewed. Based on the review, overburden in the vicinity of the subject property generally consists of clay and silt with a thickness of between 10 and 16 metres (ESRI, 2016). Bedrock is mapped as undifferentiated metamorphic and igneous rocks of the Precambrian Formation (ESRI, 2016).

The Ottawa River is situated approximately 3.4 kilometers north of the subject property. No water features, wetlands, or areas of natural significance were identified on the subject property, or within the study area (MNR, 2014). Groundwater flow often reflects topographic features and typically flows toward nearby lakes, rivers and wetland areas. Based on the topography and hydrogeological features, it is anticipated that local shallow groundwater would flow towards the north.

2.2 Past Investigations

Two historical assessment reports were available for review as part of this Limited Phase Two ESA.

2.2.1 Geotechnical Investigation, GEMTEC 2019

A Geotechnical Investigation was completed for the subject property in 2019 by GEMTEC. The report was entitled “Geotechnical Investigation, Proposed Commercial Building, 1243 Teron Road, Ottawa, Ontario”.

The geotechnical investigation involved the advancement of twelve boreholes across the subject property. Two of the boreholes were advanced as monitoring wells. Based on the geotechnical investigation borehole logs, fill material was identified at all borehole locations. The purpose of this Limited Phase Two ESA was to investigate the quality of fill material observed at the subject property.

2.2.2 Phase One Environmental Site Assessment, GEMTEC 2019

An ESA was completed for the subject property in 2019 by GEMTEC. The report was entitled “Phase One Environmental Site Assessment, Proposed Commercial Building, 1243 Teron Road, Kanata, Ontario”.

A review of historical information pertaining to the subject site and adjacent properties identified, numerous potentially contaminating activities (PCAs) including but not limited to fill material of unknown quality, spills, waste disposal, and manufacturing.

Fill material of unknown quality located on the subject property has been identified as a PCA, resulting in the identification of an APEC on the subject property, the APEC identified at the subject property is summarized below:

APEC 1: Importation of Fill Material of Unknown Quality on the subject property

Through a review of aerial photographs, site interview and the geotechnical report (GEMTEC, 2019b), fill material of unknown origin appears to be present on the subject property. The associated potential contaminants of concern are metals and polycyclic aromatic hydrocarbons (PAHs). This APEC is present across the entire subject site.

Based on the APEC identified on the site, a Limited Phase Two Environmental Site Assessment was recommended to investigate potential soil impacts on the subject property.

3.0 METHODOLOGY

3.1 Test Pits

Test pits were advanced in the fill material on the subject property on December 20, 2019, to assess if the quality of fill material at selected test locations satisfy the applicable MECP SCS for the site. The test pits were advanced across the subject property, locations of test pits can be found on the Test Pit Location Plan, Figure A.1, Appendix A. Potential contaminants of concern (COCs) identified in the Phase One ESA (GEMTEC, 2019) for soil at the site include metals, and PAHs.

Test pits were advanced to between 0.40 and 2.35 metres below ground surface using a JD85 excavator provided and operated by Thunderbolt Contracting Ltd. The approximate locations of the test pits are shown on the Test Pit Location Plan, Figure A.1, Appendix A. The test pit locations were selected by GEMTEC personnel and positioned at the site to investigate quality of fill material identified in the geotechnical report. The locations of the test pits were determined using a Trimble R10 GPS survey instrument. The coordinates of the test pits are referenced to NAD83 (CSRS) Epoch 2010, vertical network CGVD28 and are considered to be accurate within the tolerance of the instrument.

3.2 Soil Sampling

Soil samples were recovered from 12 test pits on the subject property following the Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario (MOE, 1996). Clean gloves were worn and changed between each sample to prevent cross contamination. Soil samples were collected directly into laboratory-supplied sampling containers. All samples were stored and shipped in laboratory supplied coolers. Samples were submitted to ALS Laboratory Group, of Nepean, Ontario, a CALA-certified analytical laboratory, under standard chain-of-custody procedures and in accordance with GEMTEC QA/QC procedures.

A total of 12 samples were inspected in the field for visual, tactile and olfactory evidence of impact. The soil sampling program included the submission of soil samples for laboratory analysis of metals, and PAHs. Soil samples were selected based visual, olfactory and tactile evidence of impact. A total of 13 soil samples, including one duplicate sample, were submitted to ALS Laboratory Group, a CALA certified laboratory, for analysis of selected parameters. A summary of the soil samples screened and submitted for analyses of selected parameters are summarized in Table 3.1.

Table 3.1: Summary of Soil Analyses

Test Pit	Sample Depth (mbgs)	Sample Description	Analytical Analyses
TP19-1	1.90	Fill material – no debris	Metals, PAHs
TP19-2	1.55	Fill material – no debris	Metals, PAHs
TP19-3	2.35	Fill material – cinder block debris	Metals, PAHs
TP19-4	2.20	Fill material – red brick and wood debris	Metals, PAHs
TP19-5	1.90	Fill material – red brick debris	Metals, PAHs
TP19-13	1.90	Fill material – red brick debris	Metals, PAHs
TP19-6	1.20	Fill material – no debris	Metals, PAHs
TP19-7	1.70	Fill material – no debris	Metals, PAHs
TP19-8	0.70	Fill material – no debris	Metals, PAHs
TP19-9	1.05	Fill material – no debris	Metals, PAHs
TP19-10	0.40	Fill material – no debris	Metals, PAHs
TP19-11	0.65	Fill material – no debris	Metals, PAHs
TP19-12	0.90	Fill material – no debris	Metals, PAHs

1. bgs – Below ground surface.
2. TP – Test pit
3. PAHs – Polycyclic Aromatic Hydrocarbons
4. TP19-13 is a duplicate of TP19-5

4.0 RESULTS

4.1 General

Soil conditions identified in the test pits advanced as part of this investigation were generally identified as fill material. Subsurface conditions at locations other than the test locations may vary from the conditions encountered in the testpits. The following presents an overview of the subsurface conditions encountered in the testpits advanced as part of this investigation.

4.1.1 Site Geology

The surficial geology of the subject site can be described as fill material consisting brown silty sand, trace to some clay and gravel. Some of the sample locations also identified debris material including cinder blocks, red brick, and wood. A summary of the soil description from each sample collected can be found in Table 3.1 above.

4.2 Soil Sample Results

Laboratory analytical results for the soil samples submitted for analyses, including the selected MECP SCS, are presented in Table B1, Appendix B. Laboratory certificates of analysis for soil samples are provided in Appendix C. A summary of the soil samples submitted and exceedances compared to the applicable MECP SCS is provided in Table 4.1.

Table 4.1: Summary of Soil Sample Results

Test Pit/ Sample ID	Depth Interval (m bgs)	Exceedances of MECP T2 SCS[1]
TP19-1	1.90	None
TP19-2	1.55	None
TP19-3	2.35	None
TP19-4	2.20	None
TP19-5	1.90	None
TP19-13	1.90	None
TP19-6	1.20	None
TP19-7	1.70	None
TP19-8	0.70	None
TP19-9	1.05	None
TP19-10	0.40	None
TP19-11	0.65	None
TP19-12	0.90	None

1. MECP Table 2 SCS: Full Depth Generic Site Condition Standards in a Potable Groundwater Condition, Commercial Property Use, Coarse Soils (MOE, April 15, 2011)

4.3 Quality Assurance and Quality Control Results

A quality assurance/quality control (QA/QC) program was implemented during the environmental sampling. The QA/QC program consisted of the use of standard field protocols. The QA/QC program also included internal laboratory QC performed by ALS Laboratory Group of Nepean, Ontario.

One duplicate soil sample was submitted to ALS Laboratory Group for analysis of selected parameters. The soil sample TP19-13 is a duplicate of sample TP19-5. Relative Standards Deviations (RPDs) were calculated for all parameters where the original and duplicate sample concentrations exceeded five times the reportable detection limits (RDL). The average RPD values for duplicate set was 16.9 %. All of the QA/QC RPDs (with sample values greater than 5 times the RDL) for the duplicate samples were within the acceptable limit for soils (MOE, 2011), with the exception of lead.

Additionally, GEMTECs review of ALSs QA/QC indicates that analytical results fell within acceptable QA/QC limits for constituent recovery as defined by the protocols for the analytical methods for all parameters analyzed.

Based on the measures discussed above, sample collection and handling protocols are considered acceptable and associated analytical results reproducible. The quality of the data from the investigation was sufficient in that decision making was not affected, and the overall objectives of the investigation and assessment were met.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on a review of historical information and completion of the Limited Phase Two ESA to investigate the single APEC (fill of unknown quality) identified in the Phase One ESA, GEMTEC offers the following conclusions.

- Surficial geology of the subject site generally consists of fill material consisting brown silty sand, trace to some clay and gravel. Debris material including cinder blocks, red brick, and wood was occasionally encountered within the fill.
- A total of 13 soil samples, including one duplicate sample, were selected for analytical analysis based visual, olfactory and tactile evidence of impacts and submitted for analysis of metals, and PAHs.
- Analytical results indicated that soil samples met the MECP Table 2 SCS for all parameters analyzed.

Based on observations of deleterious material identified within the fill at TP19-3, TP19-4, and TP19-5, If deleterious material is identified during construction, it should not be re-used on the property, and should be disposed of at a MECP approved landfill.

We trust this report provides sufficient information for your present purposes. If you have any questions concerning this report, please do not hesitate to contact our office.

Nicole Soucy, M.A.Sc., P.Eng
Environmental Engineer

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Senior Environmental Scientist

6.0 REFERENCES

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7.0 LIMITATION OF LIABILITY

This report was prepared for and the work referred to within it has been undertaken by GEMTEC Consulting Engineers and Scientists Ltd for Megha Holdings Inc. It is intended for the exclusive use of Megha Holdings Inc. This report may not be relied upon by any other person or entity without the express written consent of GEMTEC, and Megha Holdings Inc. Nothing in this report is intended to provide a legal opinion.

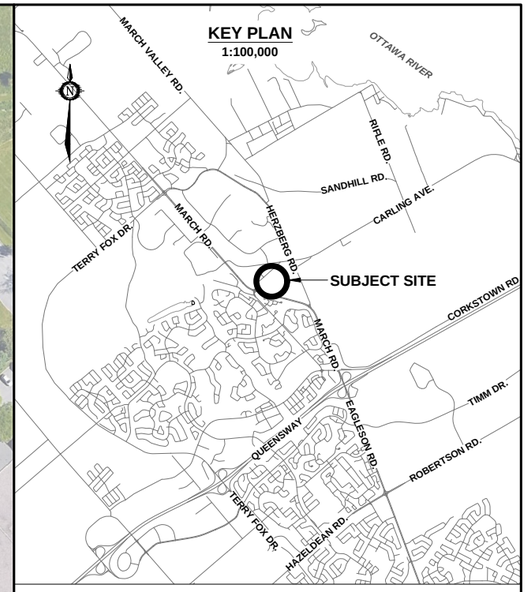
The investigation undertaken by GEMTEC with respect to this report and any conclusions or recommendations made in this report reflect the best judgements of GEMTEC based on the site conditions observed during the investigations undertaken at the date(s) identified in the report and on the information available at the time the report was prepared. This report has been prepared for the application noted and it is based, in part, on visual observations made at the site, subsurface investigations at discrete locations and depths and laboratory analyses of specific chemical parameters and material during a specific time interval, all as described in the report. Unless otherwise stated, the findings contained in this report cannot be extrapolated or extended to previous or future site conditions, portions of the site that were unavailable for direct investigation, subsurface locations on the site that were not investigated directly, or chemical parameters, materials or analysis which were not addressed. Chemical parameters other than those addressed by the investigation described in this report may exist in soil and groundwater elsewhere on the site, the chemical parameters addressed in the report may exist in soil and groundwater at other locations at the site that were not investigated and concentrations of the chemical parameters addressed which are different than those reported may exist at other locations on the site than those from where the samples were taken.

Should new information become available during future work, including excavations, borings or other studies, GEMTEC should be requested to review the information and, if necessary, re-assess the conclusions presented herein.

APPENDIX A

Figures

KEY PLAN
1:100,000



LEGEND

- SUBJECT PROPERTY
- TEST PIT LOCATION IN PLAN (current investigation by GEMTEC)
- TP # — TEST PIT ID
- XX.XX — GROUND SURFACE ELEVATION, IN METRES GEODETIC DATUM

Scale 1:2000

0 40 80 120m

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Drawing: TEST PIT LOCATION PLAN

Client: MEGA HOLDINGS INC.

Project: 64742.02

LIMITED PHASE TWO ESA
1243 TERON RD.
OTTAWA, ONTARIO

Drwn by: P.C.

Chkd by: N.S.

Date: JANUARY 2020

Rev.: 0

FIGURE A.1

APPENDIX B

Summary of Soil Results

TABLE B1
SOIL ANALYTICAL RESULTS

Parameter	Units	RDL	MECP Table 2*	Sample Location:	1243 Teron Road											
				Sample ID:	TP19-1	TP19-2	TP19-3	TP19-4	TP19-5	TP19-13	TP19-6	TP19-7	TP19-8	TP19-9	TP19-10	TP19-11	TP19-12
				Date Sampled:	20-Dec-19	20-Dec-19	20-Dec-19	20-Dec-19	20-Dec-19	20-Dec-19	20-Dec-19	20-Dec-19	20-Dec-19	20-Dec-19	20-Dec-19	20-Dec-19	20-Dec-19
				Sample Depth (mbgs):	1.90	1.55	2.35	2.20	1.90	1.90	1.20	1.70	0.70	1.05	0.40	0.65	0.90
Physical Tests																	
% Moisture	%	0.25	NS		16.9	18.5	16.7	16.9	13.4	12.6	15.1	11.8	17.6	15.2	17	24.5	18.2
Metals																	
Antimony (Sb)	ug/g	1	40		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic (As)	ug/g	1	18		2.9	2.9	2.5	2.5	2	2	2	<1.0	2.4	1.9	2.7	1.6	1.3
Barium (Ba)	ug/g	1	670		167	201	307	219	122	151	101	45.3	212	66.8	157	120	82.5
Beryllium (Be)	ug/g	0.5	8		0.69	0.6	0.7	0.57	<0.50	<0.50	<0.50	<0.50	0.57	<0.50	0.55	<0.50	<0.50
Boron (B)	ug/g	5	120		<5.0	6	6.6	6.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Cadmium (Cd)	ug/g	0.5	1.9		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chromium (Cr)	ug/g	1	160		87.2	50.7	59.8	46.4	28	32.4	31.5	14.1	42.5	23.4	35.4	35.2	25
Cobalt (Co)	ug/g	1	80		18	12.8	16.5	13.4	8.5	9.9	8.1	4.5	10.7	6.8	8.8	7.3	6.8
Copper (Cu)	ug/g	1	230		29.9	24.1	29.8	23.8	17	20	8.9	9.3	16	7.1	11.5	12.5	8.2
Lead (Pb)	ug/g	1	120		12.7	9.8	9.2	12.3	19.6	12.9	5.9	3.8	5.2	4.3	6.2	5.1	3.6
Molybdenum (Mo)	ug/g	1	40		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Nickel (Ni)	ug/g	1	270		36	26.8	32.4	24.4	15.9	17.8	16	8.4	23.4	16.2	18.3	18.1	13.1
Selenium (Se)	ug/g	1	5.5		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver (Ag)	ug/g	0.2	40		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.22	<0.20	<0.20
Thallium (Tl)	ug/g	0.5	3.3		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Uranium (U)	ug/g	1	33		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vanadium (V)	ug/g	1	86		71.3	64.1	77.2	64.2	41.1	48.2	56.5	25	60.8	41.4	63.8	51.9	38.5
Zinc (Zn)	ug/g	5	340		65.2	73.1	81	77.4	44.9	49.6	38.2	23	57.4	36.3	68.6	51.6	28.3
Polycyclic Aromatic Hydrocarbons																	
Acenaphthene	ug/g	0.05	21		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	ug/g	0.05	0.15		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	ug/g	0.05	0.67		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)anthracene	ug/g	0.05	0.96		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	ug/g	0.05	0.3		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(b)fluoranthene	ug/g	0.05	0.96		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	ug/g	0.05	9.6		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	ug/g	0.05	0.96		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chrysene	ug/g	0.05	9.6		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenzo(ah)anthracene	ug/g	0.05	0.1		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluoranthene	ug/g	0.05	9.6		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	ug/g	0.05	62		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	ug/g	0.05	0.76		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1+2-Methylnaphthalenes	ug/g	0.0424	30		<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
1-Methylnaphthalene	ug/g	0.03	30		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
2-Methylnaphthalene	ug/g	0.03	30		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Naphthalene	ug/g	0.013	9.6		<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
Phenanthrene	ug/g	0.046	12		<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046
Pyrene	ug/g	0.05	96		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
2-Fluorobiphenyl	%	-	NS		92	89.7	88.5	90.7	88.8	87.5	87.8	91.2	88.3	85.1	88.2	87.2	88.2
p-Terphenyl d14	%	-	NS		84.1	83	80.6	84	82.5	78.5	79.2	82.1	78	74.9	76.2	77.6	88.9

Notes:

1 RDL - Reported Detection Limit
2 NS - No Standard
3 mbgs - metres below ground surface
4 * - Table 2: Full Depth Generic Site Condition Standards in a Potable Groundwater Condition, Commercial Property Use, Coarse Soils (MOE, April 15, 2011)
5 **Bolded** - Exceeds MECP Table 2 SCS

APPENDIX C

Laboratory Analytical Reports

GEMTEC Consulting Engineers & Scientists Limited
ATTN: Nicole Soucy
32 Steacie Drive
Ottawa ON K2K 2A9

Date Received: 20-DEC-19
Report Date: 03-JAN-20 12:52 (MT)
Version: FINAL REV. 2

Client Phone: 613-836-1422

Certificate of Analysis

Lab Work Order #: L2399551

Project P.O. #: 64742.02
Job Reference: 64742.02
C of C Numbers:
Legal Site Desc:

Comments: ADDITIONAL 02-JAN-20 06:35 - PAH analysis added

Emily Smith
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-1 TP19-1 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	16.9		0.25	%	23-DEC-19	23-DEC-19	R4952039
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Arsenic (As)	2.9		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Barium (Ba)	167		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Beryllium (Be)	0.69		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Boron (B)	<5.0		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cadmium (Cd)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Chromium (Cr)	87.2		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cobalt (Co)	18.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Copper (Cu)	29.9		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Lead (Pb)	12.7		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Molybdenum (Mo)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Nickel (Ni)	36.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Selenium (Se)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Silver (Ag)	<0.20		0.20	ug/g	24-DEC-19	24-DEC-19	R4954646
Thallium (Tl)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Uranium (U)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Vanadium (V)	71.3		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Zinc (Zn)	65.2		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Acenaphthylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(b)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(k)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Chrysene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluorene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		27-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
2-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
Naphthalene	<0.013		0.013	ug/g	23-DEC-19	27-DEC-19	R4955138
Phenanthrene	<0.046		0.046	ug/g	23-DEC-19	27-DEC-19	R4955138
Pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Surrogate: 2-Fluorobiphenyl	92.0		50-140	%	23-DEC-19	27-DEC-19	R4955138

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-1 TP19-1 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Surrogate: p-Terphenyl d14	84.1		50-140	%	23-DEC-19	27-DEC-19	R4955138
L2399551-2 TP19-2 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	18.5		0.25	%	23-DEC-19	23-DEC-19	R4952039
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Arsenic (As)	2.9		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Barium (Ba)	201		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Beryllium (Be)	0.60		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Boron (B)	6.0		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cadmium (Cd)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Chromium (Cr)	50.7		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cobalt (Co)	12.8		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Copper (Cu)	24.1		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Lead (Pb)	9.8		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Molybdenum (Mo)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Nickel (Ni)	26.8		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Selenium (Se)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Silver (Ag)	<0.20		0.20	ug/g	24-DEC-19	24-DEC-19	R4954646
Thallium (Tl)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Uranium (U)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Vanadium (V)	64.1		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Zinc (Zn)	73.1		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Acenaphthylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(b)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(k)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Chrysene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluorene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		27-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
2-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-2 TP19-2 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Naphthalene	<0.013		0.013	ug/g	23-DEC-19	27-DEC-19	R4955138
Phenanthrene	<0.046		0.046	ug/g	23-DEC-19	27-DEC-19	R4955138
Pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Surrogate: 2-Fluorobiphenyl	89.7		50-140	%	23-DEC-19	27-DEC-19	R4955138
Surrogate: p-Terphenyl d14	83.0		50-140	%	23-DEC-19	27-DEC-19	R4955138
L2399551-3 TP19-3 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	16.7		0.25	%	23-DEC-19	23-DEC-19	R4952039
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Arsenic (As)	2.5		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Barium (Ba)	307		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Beryllium (Be)	0.70		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Boron (B)	6.6		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cadmium (Cd)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Chromium (Cr)	59.8		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cobalt (Co)	16.5		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Copper (Cu)	29.8		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Lead (Pb)	9.2		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Molybdenum (Mo)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Nickel (Ni)	32.4		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Selenium (Se)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Silver (Ag)	<0.20		0.20	ug/g	24-DEC-19	24-DEC-19	R4954646
Thallium (Tl)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Uranium (U)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Vanadium (V)	77.2		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Zinc (Zn)	81.0		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Acenaphthylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(b)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(k)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Chrysene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluorene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-3 TP19-3 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		27-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
2-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
Naphthalene	<0.013		0.013	ug/g	23-DEC-19	27-DEC-19	R4955138
Phenanthrene	<0.046		0.046	ug/g	23-DEC-19	27-DEC-19	R4955138
Pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Surrogate: 2-Fluorobiphenyl	88.5		50-140	%	23-DEC-19	27-DEC-19	R4955138
Surrogate: p-Terphenyl d14	80.6		50-140	%	23-DEC-19	27-DEC-19	R4955138
L2399551-4 TP19-4 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	16.9		0.25	%	23-DEC-19	23-DEC-19	R4952039
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Arsenic (As)	2.5		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Barium (Ba)	219		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Beryllium (Be)	0.57		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Boron (B)	6.5		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cadmium (Cd)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Chromium (Cr)	46.4		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cobalt (Co)	13.4		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Copper (Cu)	23.8		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Lead (Pb)	12.3		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Molybdenum (Mo)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Nickel (Ni)	24.4		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Selenium (Se)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Silver (Ag)	<0.20		0.20	ug/g	24-DEC-19	24-DEC-19	R4954646
Thallium (Tl)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Uranium (U)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Vanadium (V)	64.2		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Zinc (Zn)	77.4		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Acenaphthylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(b)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(k)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-4 TP19-4 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Chrysene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluorene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		27-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
2-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
Naphthalene	<0.013		0.013	ug/g	23-DEC-19	27-DEC-19	R4955138
Phenanthrene	<0.046		0.046	ug/g	23-DEC-19	27-DEC-19	R4955138
Pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Surrogate: 2-Fluorobiphenyl	90.7		50-140	%	23-DEC-19	27-DEC-19	R4955138
Surrogate: p-Terphenyl d14	84.0		50-140	%	23-DEC-19	27-DEC-19	R4955138
L2399551-5 TP19-5 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	13.4		0.25	%	23-DEC-19	23-DEC-19	R4952039
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Arsenic (As)	2.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Barium (Ba)	122		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Beryllium (Be)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Boron (B)	<5.0		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cadmium (Cd)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Chromium (Cr)	28.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cobalt (Co)	8.5		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Copper (Cu)	17.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Lead (Pb)	19.6		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Molybdenum (Mo)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Nickel (Ni)	15.9		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Selenium (Se)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Silver (Ag)	<0.20		0.20	ug/g	24-DEC-19	24-DEC-19	R4954646
Thallium (Tl)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Uranium (U)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Vanadium (V)	41.1		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Zinc (Zn)	44.9		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Acenaphthylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-5 TP19-5 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(b)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(k)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Chrysene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluorene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		27-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
2-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
Naphthalene	<0.013		0.013	ug/g	23-DEC-19	27-DEC-19	R4955138
Phenanthrene	<0.046		0.046	ug/g	23-DEC-19	27-DEC-19	R4955138
Pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Surrogate: 2-Fluorobiphenyl	88.8		50-140	%	23-DEC-19	27-DEC-19	R4955138
Surrogate: p-Terphenyl d14	82.5		50-140	%	23-DEC-19	27-DEC-19	R4955138
L2399551-6 TP19-13 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	12.6		0.25	%	23-DEC-19	23-DEC-19	R4952039
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Arsenic (As)	2.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Barium (Ba)	151		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Beryllium (Be)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Boron (B)	<5.0		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cadmium (Cd)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Chromium (Cr)	32.4		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cobalt (Co)	9.9		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Copper (Cu)	20.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Lead (Pb)	12.9		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Molybdenum (Mo)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Nickel (Ni)	17.8		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Selenium (Se)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Silver (Ag)	<0.20		0.20	ug/g	24-DEC-19	24-DEC-19	R4954646
Thallium (Tl)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Uranium (U)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Vanadium (V)	48.2		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Zinc (Zn)	49.6		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Polycyclic Aromatic Hydrocarbons							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-6 TP19-13 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Acenaphthylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(b)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(k)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Chrysene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluorene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		27-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
2-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
Naphthalene	<0.013		0.013	ug/g	23-DEC-19	27-DEC-19	R4955138
Phenanthrene	<0.046		0.046	ug/g	23-DEC-19	27-DEC-19	R4955138
Pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Surrogate: 2-Fluorobiphenyl	87.5		50-140	%	23-DEC-19	27-DEC-19	R4955138
Surrogate: p-Terphenyl d14	78.5		50-140	%	23-DEC-19	27-DEC-19	R4955138
L2399551-7 TP19-6 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	15.1		0.25	%	23-DEC-19	23-DEC-19	R4952039
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Arsenic (As)	2.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Barium (Ba)	101		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Beryllium (Be)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Boron (B)	<5.0		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cadmium (Cd)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Chromium (Cr)	31.5		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cobalt (Co)	8.1		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Copper (Cu)	8.9		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Lead (Pb)	5.9		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Molybdenum (Mo)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Nickel (Ni)	16.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Selenium (Se)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Silver (Ag)	<0.20		0.20	ug/g	24-DEC-19	24-DEC-19	R4954646
Thallium (Tl)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-7 TP19-6 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Metals							
Uranium (U)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Vanadium (V)	56.5		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Zinc (Zn)	38.2		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Acenaphthylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(b)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(k)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Chrysene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluorene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		27-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
2-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
Naphthalene	<0.013		0.013	ug/g	23-DEC-19	27-DEC-19	R4955138
Phenanthrene	<0.046		0.046	ug/g	23-DEC-19	27-DEC-19	R4955138
Pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Surrogate: 2-Fluorobiphenyl	87.8		50-140	%	23-DEC-19	27-DEC-19	R4955138
Surrogate: p-Terphenyl d14	79.2		50-140	%	23-DEC-19	27-DEC-19	R4955138
L2399551-8 TP19-7 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	11.8		0.25	%	23-DEC-19	23-DEC-19	R4952039
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Arsenic (As)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Barium (Ba)	45.3		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Beryllium (Be)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Boron (B)	<5.0		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cadmium (Cd)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Chromium (Cr)	14.1		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cobalt (Co)	4.5		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Copper (Cu)	9.3		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Lead (Pb)	3.8		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Molybdenum (Mo)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-8 TP19-7 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Metals							
Nickel (Ni)	8.4		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Selenium (Se)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Silver (Ag)	<0.20		0.20	ug/g	24-DEC-19	24-DEC-19	R4954646
Thallium (Tl)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Uranium (U)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Vanadium (V)	25.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Zinc (Zn)	23.0		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Acenaphthylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(b)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(k)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Chrysene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluorene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		27-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
2-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
Naphthalene	<0.013		0.013	ug/g	23-DEC-19	27-DEC-19	R4955138
Phenanthrene	<0.046		0.046	ug/g	23-DEC-19	27-DEC-19	R4955138
Pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Surrogate: 2-Fluorobiphenyl	91.2		50-140	%	23-DEC-19	27-DEC-19	R4955138
Surrogate: p-Terphenyl d14	82.1		50-140	%	23-DEC-19	27-DEC-19	R4955138
L2399551-9 TP19-8 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	17.6		0.25	%	23-DEC-19	23-DEC-19	R4952039
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Arsenic (As)	2.4		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Barium (Ba)	212		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Beryllium (Be)	0.57		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Boron (B)	<5.0		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cadmium (Cd)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Chromium (Cr)	42.5		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-9 TP19-8 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Metals							
Cobalt (Co)	10.7		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Copper (Cu)	16.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Lead (Pb)	5.2		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Molybdenum (Mo)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Nickel (Ni)	23.4		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Selenium (Se)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Silver (Ag)	<0.20		0.20	ug/g	24-DEC-19	24-DEC-19	R4954646
Thallium (Tl)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Uranium (U)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Vanadium (V)	60.8		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Zinc (Zn)	57.4		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Acenaphthylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(b)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(k)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Chrysene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluorene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		27-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
2-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
Naphthalene	<0.013		0.013	ug/g	23-DEC-19	27-DEC-19	R4955138
Phenanthrene	<0.046		0.046	ug/g	23-DEC-19	27-DEC-19	R4955138
Pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Surrogate: 2-Fluorobiphenyl	88.3		50-140	%	23-DEC-19	27-DEC-19	R4955138
Surrogate: p-Terphenyl d14	78.0		50-140	%	23-DEC-19	27-DEC-19	R4955138
L2399551-10 TP19-9 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	15.2		0.25	%	23-DEC-19	23-DEC-19	R4952039
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Arsenic (As)	1.9		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Barium (Ba)	66.8		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-10 TP19-9 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Metals							
Beryllium (Be)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Boron (B)	<5.0		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cadmium (Cd)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Chromium (Cr)	23.4		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cobalt (Co)	6.8		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Copper (Cu)	7.1		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Lead (Pb)	4.3		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Molybdenum (Mo)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Nickel (Ni)	16.2		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Selenium (Se)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Silver (Ag)	<0.20		0.20	ug/g	24-DEC-19	24-DEC-19	R4954646
Thallium (Tl)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Uranium (U)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Vanadium (V)	41.4		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Zinc (Zn)	36.3		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Acenaphthylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(b)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(k)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Chrysene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluorene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		27-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
2-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
Naphthalene	<0.013		0.013	ug/g	23-DEC-19	27-DEC-19	R4955138
Phenanthrene	<0.046		0.046	ug/g	23-DEC-19	27-DEC-19	R4955138
Pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Surrogate: 2-Fluorobiphenyl	85.1		50-140	%	23-DEC-19	27-DEC-19	R4955138
Surrogate: p-Terphenyl d14	74.9		50-140	%	23-DEC-19	27-DEC-19	R4955138
L2399551-11 TP19-10 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	17.0		0.25	%	23-DEC-19	23-DEC-19	R4952039

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-11 TP19-10 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Physical Tests							
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Arsenic (As)	2.7		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Barium (Ba)	157		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Beryllium (Be)	0.55		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Boron (B)	<5.0		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cadmium (Cd)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Chromium (Cr)	35.4		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Cobalt (Co)	8.8		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Copper (Cu)	11.5		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Lead (Pb)	6.2		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Molybdenum (Mo)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Nickel (Ni)	18.3		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Selenium (Se)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Silver (Ag)	0.22		0.20	ug/g	24-DEC-19	24-DEC-19	R4954646
Thallium (Tl)	<0.50		0.50	ug/g	24-DEC-19	24-DEC-19	R4954646
Uranium (U)	<1.0		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Vanadium (V)	63.8		1.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Zinc (Zn)	68.6		5.0	ug/g	24-DEC-19	24-DEC-19	R4954646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Acenaphthylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(b)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(k)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Chrysene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluorene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		27-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
2-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
Naphthalene	<0.013		0.013	ug/g	23-DEC-19	27-DEC-19	R4955138
Phenanthrene	<0.046		0.046	ug/g	23-DEC-19	27-DEC-19	R4955138
Pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Surrogate: 2-Fluorobiphenyl	88.2		50-140	%	23-DEC-19	27-DEC-19	R4955138
Surrogate: p-Terphenyl d14	76.2		50-140	%	23-DEC-19	27-DEC-19	R4955138

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-12 TP19-11 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	24.5		0.25	%	23-DEC-19	23-DEC-19	R4952039
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Arsenic (As)	1.6		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Barium (Ba)	120		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Beryllium (Be)	<0.50		0.50	ug/g	27-DEC-19	27-DEC-19	R4956967
Boron (B)	<5.0		5.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Cadmium (Cd)	<0.50		0.50	ug/g	27-DEC-19	27-DEC-19	R4956967
Chromium (Cr)	35.2		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Cobalt (Co)	7.3		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Copper (Cu)	12.5		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Lead (Pb)	5.1		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Molybdenum (Mo)	<1.0		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Nickel (Ni)	18.1		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Selenium (Se)	<1.0		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Silver (Ag)	<0.20		0.20	ug/g	27-DEC-19	27-DEC-19	R4956967
Thallium (Tl)	<0.50		0.50	ug/g	27-DEC-19	27-DEC-19	R4956967
Uranium (U)	<1.0		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Vanadium (V)	51.9		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Zinc (Zn)	51.6		5.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Acenaphthylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(a)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(b)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Benzo(k)fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Chrysene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluoranthene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Fluorene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		27-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
2-Methylnaphthalene	<0.030		0.030	ug/g	23-DEC-19	27-DEC-19	R4955138
Naphthalene	<0.013		0.013	ug/g	23-DEC-19	27-DEC-19	R4955138
Phenanthrene	<0.046		0.046	ug/g	23-DEC-19	27-DEC-19	R4955138
Pyrene	<0.050		0.050	ug/g	23-DEC-19	27-DEC-19	R4955138
Surrogate: 2-Fluorobiphenyl	87.2		50-140	%	23-DEC-19	27-DEC-19	R4955138

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-12 TP19-11 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Surrogate: p-Terphenyl d14	77.6		50-140	%	23-DEC-19	27-DEC-19	R4955138
L2399551-13 TP19-12 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	18.2		0.25	%	23-DEC-19	23-DEC-19	R4952040
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Arsenic (As)	1.3		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Barium (Ba)	82.5		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Beryllium (Be)	<0.50		0.50	ug/g	27-DEC-19	27-DEC-19	R4956967
Boron (B)	<5.0		5.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Cadmium (Cd)	<0.50		0.50	ug/g	27-DEC-19	27-DEC-19	R4956967
Chromium (Cr)	25.0		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Cobalt (Co)	6.8		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Copper (Cu)	8.2		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Lead (Pb)	3.6		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Molybdenum (Mo)	<1.0		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Nickel (Ni)	13.1		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Selenium (Se)	<1.0		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Silver (Ag)	<0.20		0.20	ug/g	27-DEC-19	27-DEC-19	R4956967
Thallium (Tl)	<0.50		0.50	ug/g	27-DEC-19	27-DEC-19	R4956967
Uranium (U)	<1.0		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Vanadium (V)	38.5		1.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Zinc (Zn)	28.3		5.0	ug/g	27-DEC-19	27-DEC-19	R4956967
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	02-JAN-20	03-JAN-20	R4958834
Acenaphthylene	<0.050		0.050	ug/g	02-JAN-20	03-JAN-20	R4958834
Anthracene	<0.050		0.050	ug/g	02-JAN-20	03-JAN-20	R4958834
Benzo(a)anthracene	<0.050		0.050	ug/g	02-JAN-20	03-JAN-20	R4958834
Benzo(a)pyrene	<0.050		0.050	ug/g	02-JAN-20	03-JAN-20	R4958834
Benzo(b)fluoranthene	<0.050		0.050	ug/g	02-JAN-20	03-JAN-20	R4958834
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	02-JAN-20	03-JAN-20	R4958834
Benzo(k)fluoranthene	<0.050		0.050	ug/g	02-JAN-20	03-JAN-20	R4958834
Chrysene	<0.050		0.050	ug/g	02-JAN-20	03-JAN-20	R4958834
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	02-JAN-20	03-JAN-20	R4958834
Fluoranthene	<0.050		0.050	ug/g	02-JAN-20	03-JAN-20	R4958834
Fluorene	<0.050		0.050	ug/g	02-JAN-20	03-JAN-20	R4958834
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	02-JAN-20	03-JAN-20	R4958834
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		03-JAN-20	
1-Methylnaphthalene	<0.030		0.030	ug/g	02-JAN-20	03-JAN-20	R4958834
2-Methylnaphthalene	<0.030		0.030	ug/g	02-JAN-20	03-JAN-20	R4958834

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2399551-13 TP19-12 Sampled By: CLIENT on 20-DEC-19 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Naphthalene	<0.013		0.013	ug/g	02-JAN-20	03-JAN-20	R4958834
Phenanthrene	<0.046		0.046	ug/g	02-JAN-20	03-JAN-20	R4958834
Pyrene	<0.050		0.050	ug/g	02-JAN-20	03-JAN-20	R4958834
Surrogate: 2-Fluorobiphenyl	88.2		50-140	%	02-JAN-20	03-JAN-20	R4958834
Surrogate: p-Terphenyl d14	88.9		50-140	%	02-JAN-20	03-JAN-20	R4958834

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
MET-200.2-CCMS-WT	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020A (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H2S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

METHYLNAPS-CALC-WT	Soil	ABN-Calculated Parameters	SW846 8270
MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)
PAH-511-WT	Soil	PAH-O.Reg 153/04 (July 2011)	SW846 3510/8270

A representative sub-sample of soil is fortified with deuterium-labelled surrogates and a mechanical shaking techniqueis used to extract the sample with a mixture of methanol and toluene. The extracts are concentrated and analyzed by GC/MS. Results for benzo(b) fluoranthene may include contributions from benzo(j)fluoranthene, if also present in the sample.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

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

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Drive
Ottawa ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R4954646								
WG3248963-2 CRM		**WT-CANMET-TILL2**						
Antimony (Sb)			110.0		%		70-130	24-DEC-19
Arsenic (As)			113.0		%		70-130	24-DEC-19
Barium (Ba)			118.9		%		70-130	24-DEC-19
Beryllium (Be)			96.5		%		70-130	24-DEC-19
Boron (B)			2.7		mg/kg		0-8.6	24-DEC-19
Cadmium (Cd)			104.5		%		70-130	24-DEC-19
Chromium (Cr)			110.3		%		70-130	24-DEC-19
Cobalt (Co)			111.6		%		70-130	24-DEC-19
Copper (Cu)			112.9		%		70-130	24-DEC-19
Lead (Pb)			105.9		%		70-130	24-DEC-19
Molybdenum (Mo)			114.9		%		70-130	24-DEC-19
Nickel (Ni)			111.5		%		70-130	24-DEC-19
Selenium (Se)			0.41		mg/kg		0.15-0.55	24-DEC-19
Silver (Ag)			0.29		mg/kg		0.16-0.36	24-DEC-19
Thallium (Tl)			102.7		%		70-130	24-DEC-19
Uranium (U)			85.6		%		70-130	24-DEC-19
Vanadium (V)			110.7		%		70-130	24-DEC-19
Zinc (Zn)			106.3		%		70-130	24-DEC-19
WG3248963-4 DUP		**L2399404-11**						
Antimony (Sb)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	24-DEC-19
Arsenic (As)		1.6	1.7		ug/g	5.3	30	24-DEC-19
Barium (Ba)		17.5	18.5		ug/g	5.1	40	24-DEC-19
Beryllium (Be)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	24-DEC-19
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	24-DEC-19
Cadmium (Cd)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	24-DEC-19
Chromium (Cr)		8.9	9.4		ug/g	5.5	30	24-DEC-19
Cobalt (Co)		3.4	3.6		ug/g	6.1	30	24-DEC-19
Copper (Cu)		7.8	8.3		ug/g	6.3	30	24-DEC-19
Lead (Pb)		4.7	5.1		ug/g	7.2	40	24-DEC-19
Molybdenum (Mo)		<1.0	<1.0	RPD-NA	ug/g	N/A	40	24-DEC-19
Nickel (Ni)		6.4	6.8		ug/g	6.1	30	24-DEC-19
Selenium (Se)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	24-DEC-19
Silver (Ag)		<0.20	<0.20	RPD-NA	ug/g	N/A	40	24-DEC-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R4954646								
WG3248963-4 DUP		**L2399404-11**						
Thallium (Tl)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	24-DEC-19
Uranium (U)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	24-DEC-19
Vanadium (V)		21.4	23.0		ug/g	7.0	30	24-DEC-19
Zinc (Zn)		27.0	28.9		ug/g	6.8	30	24-DEC-19
WG3248963-3 LCS								
Antimony (Sb)			114.2		%		80-120	24-DEC-19
Arsenic (As)			107.7		%		80-120	24-DEC-19
Barium (Ba)			114.8		%		80-120	24-DEC-19
Beryllium (Be)			100.3		%		80-120	24-DEC-19
Boron (B)			99.0		%		80-120	24-DEC-19
Cadmium (Cd)			103.8		%		80-120	24-DEC-19
Chromium (Cr)			108.7		%		80-120	24-DEC-19
Cobalt (Co)			104.5		%		80-120	24-DEC-19
Copper (Cu)			103.0		%		80-120	24-DEC-19
Lead (Pb)			101.1		%		80-120	24-DEC-19
Molybdenum (Mo)			108.2		%		80-120	24-DEC-19
Nickel (Ni)			104.3		%		80-120	24-DEC-19
Selenium (Se)			109.3		%		80-120	24-DEC-19
Silver (Ag)			104.3		%		80-120	24-DEC-19
Thallium (Tl)			102.2		%		80-120	24-DEC-19
Uranium (U)			83.7		%		80-120	24-DEC-19
Vanadium (V)			112.0		%		80-120	24-DEC-19
Zinc (Zn)			100.9		%		80-120	24-DEC-19
WG3248963-1 MB								
Antimony (Sb)			<0.10		mg/kg		0.1	24-DEC-19
Arsenic (As)			<0.10		mg/kg		0.1	24-DEC-19
Barium (Ba)			<0.50		mg/kg		0.5	24-DEC-19
Beryllium (Be)			<0.10		mg/kg		0.1	24-DEC-19
Boron (B)			<5.0		mg/kg		5	24-DEC-19
Cadmium (Cd)			<0.020		mg/kg		0.02	24-DEC-19
Chromium (Cr)			<0.50		mg/kg		0.5	24-DEC-19
Cobalt (Co)			<0.10		mg/kg		0.1	24-DEC-19
Copper (Cu)			<0.50		mg/kg		0.5	24-DEC-19
Lead (Pb)			<0.50		mg/kg		0.5	24-DEC-19

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R4954646								
WG3248963-1 MB								
Molybdenum (Mo)			<0.10		mg/kg		0.1	24-DEC-19
Nickel (Ni)			<0.50		mg/kg		0.5	24-DEC-19
Selenium (Se)			<0.20		mg/kg		0.2	24-DEC-19
Silver (Ag)			<0.10		mg/kg		0.1	24-DEC-19
Thallium (Tl)			<0.050		mg/kg		0.05	24-DEC-19
Uranium (U)			<0.050		mg/kg		0.05	24-DEC-19
Vanadium (V)			<0.20		mg/kg		0.2	24-DEC-19
Zinc (Zn)			<2.0		mg/kg		2	24-DEC-19
Batch R4956967								
WG3249574-2 CRM		**WT-CANMET-TILL2**						
Antimony (Sb)			92.8		%		70-130	27-DEC-19
Arsenic (As)			93.0		%		70-130	27-DEC-19
Barium (Ba)			92.0		%		70-130	27-DEC-19
Beryllium (Be)			87.3		%		70-130	27-DEC-19
Boron (B)			3.0		mg/kg		0-8.6	27-DEC-19
Cadmium (Cd)			90.2		%		70-130	27-DEC-19
Chromium (Cr)			94.0		%		70-130	27-DEC-19
Cobalt (Co)			93.6		%		70-130	27-DEC-19
Copper (Cu)			95.0		%		70-130	27-DEC-19
Lead (Pb)			94.5		%		70-130	27-DEC-19
Molybdenum (Mo)			99.0		%		70-130	27-DEC-19
Nickel (Ni)			96.6		%		70-130	27-DEC-19
Selenium (Se)			0.37		mg/kg		0.15-0.55	27-DEC-19
Silver (Ag)			0.25		mg/kg		0.16-0.36	27-DEC-19
Thallium (Tl)			95.3		%		70-130	27-DEC-19
Uranium (U)			91.0		%		70-130	27-DEC-19
Vanadium (V)			93.4		%		70-130	27-DEC-19
Zinc (Zn)			87.1		%		70-130	27-DEC-19
WG3249574-6 DUP		**WG3249574-5**						
Antimony (Sb)		0.23	0.19		ug/g	19	30	27-DEC-19
Arsenic (As)		4.54	4.46		ug/g	1.7	30	27-DEC-19
Barium (Ba)		53.0	50.2		ug/g	5.4	40	27-DEC-19
Beryllium (Be)		0.39	0.38		ug/g	2.7	30	27-DEC-19
Boron (B)		6.5	6.9		ug/g	4.8	30	27-DEC-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R4956967								
WG3249574-6 DUP		**WG3249574-5**						
Cadmium (Cd)		0.080	0.077		ug/g	4.1	30	27-DEC-19
Chromium (Cr)		14.5	14.1		ug/g	3.0	30	27-DEC-19
Cobalt (Co)		7.79	7.60		ug/g	2.5	30	27-DEC-19
Copper (Cu)		24.1	23.5		ug/g	2.3	30	27-DEC-19
Lead (Pb)		4.60	4.61		ug/g	0.2	40	27-DEC-19
Molybdenum (Mo)		0.48	0.47		ug/g	2.5	40	27-DEC-19
Nickel (Ni)		16.4	16.1		ug/g	1.7	30	27-DEC-19
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	27-DEC-19
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	27-DEC-19
Thallium (Tl)		0.066	0.067		ug/g	1.7	30	27-DEC-19
Uranium (U)		0.475	0.475		ug/g	0.0	30	27-DEC-19
Vanadium (V)		21.9	21.6		ug/g	1.4	30	27-DEC-19
Zinc (Zn)		38.1	36.9		ug/g	3.4	30	27-DEC-19
WG3249574-4 LCS								
Antimony (Sb)			100.8		%		80-120	27-DEC-19
Arsenic (As)			95.3		%		80-120	27-DEC-19
Barium (Ba)			99.5		%		80-120	27-DEC-19
Beryllium (Be)			96.0		%		80-120	27-DEC-19
Boron (B)			91.5		%		80-120	27-DEC-19
Cadmium (Cd)			94.1		%		80-120	27-DEC-19
Chromium (Cr)			99.3		%		80-120	27-DEC-19
Cobalt (Co)			96.9		%		80-120	27-DEC-19
Copper (Cu)			95.9		%		80-120	27-DEC-19
Lead (Pb)			95.5		%		80-120	27-DEC-19
Molybdenum (Mo)			99.7		%		80-120	27-DEC-19
Nickel (Ni)			97.6		%		80-120	27-DEC-19
Selenium (Se)			92.4		%		80-120	27-DEC-19
Silver (Ag)			100.1		%		80-120	27-DEC-19
Thallium (Tl)			97.2		%		80-120	27-DEC-19
Uranium (U)			96.3		%		80-120	27-DEC-19
Vanadium (V)			99.8		%		80-120	27-DEC-19
Zinc (Zn)			88.8		%		80-120	27-DEC-19
WG3249574-1 MB								
							0.1	

Quality Control Report

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Ottawa ON K2K 2A9
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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R4956967								
WG3249574-1 MB								
Antimony (Sb)			<0.10		mg/kg		0.1	27-DEC-19
Arsenic (As)			<0.10		mg/kg		0.1	27-DEC-19
Barium (Ba)			<0.50		mg/kg		0.5	27-DEC-19
Beryllium (Be)			<0.10		mg/kg		0.1	27-DEC-19
Boron (B)			<5.0		mg/kg		5	27-DEC-19
Cadmium (Cd)			<0.020		mg/kg		0.02	27-DEC-19
Chromium (Cr)			<0.50		mg/kg		0.5	27-DEC-19
Cobalt (Co)			<0.10		mg/kg		0.1	27-DEC-19
Copper (Cu)			<0.50		mg/kg		0.5	27-DEC-19
Lead (Pb)			<0.50		mg/kg		0.5	27-DEC-19
Molybdenum (Mo)			<0.10		mg/kg		0.1	27-DEC-19
Nickel (Ni)			<0.50		mg/kg		0.5	27-DEC-19
Selenium (Se)			<0.20		mg/kg		0.2	27-DEC-19
Silver (Ag)			<0.10		mg/kg		0.1	27-DEC-19
Thallium (Tl)			<0.050		mg/kg		0.05	27-DEC-19
Uranium (U)			<0.050		mg/kg		0.05	27-DEC-19
Vanadium (V)			<0.20		mg/kg		0.2	27-DEC-19
Zinc (Zn)			<2.0		mg/kg		2	27-DEC-19
MOISTURE-WT	**Soil**							
Batch R4952039								
WG3248274-3 DUP		**L2399418-2**						
% Moisture		12.8	12.2		%	5.2	20	23-DEC-19
WG3248274-2 LCS								
% Moisture			99.8		%		90-110	23-DEC-19
WG3248274-1 MB								
% Moisture			<0.25		%		0.25	23-DEC-19
Batch R4952040								
WG3248276-3 DUP		**L2399480-2**						
% Moisture		5.61	5.25		%	6.5	20	23-DEC-19
WG3248276-2 LCS								
% Moisture			99.5		%		90-110	23-DEC-19
WG3248276-1 MB								
% Moisture			<0.25		%		0.25	23-DEC-19
PAH-511-WT	**Soil**							

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R4955138								
WG3248284-3 DUP		**WG3248284-5**						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	27-DEC-19
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	27-DEC-19
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	27-DEC-19
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	27-DEC-19
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	27-DEC-19
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	27-DEC-19
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	27-DEC-19
Benzo(b)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	27-DEC-19
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	27-DEC-19
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	27-DEC-19
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	27-DEC-19
Dibenzo(ah)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	27-DEC-19
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	27-DEC-19
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	27-DEC-19
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	27-DEC-19
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	27-DEC-19
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	27-DEC-19
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	27-DEC-19
WG3248284-2 LCS								
1-Methylnaphthalene			90.3		%		50-140	27-DEC-19
2-Methylnaphthalene			86.0		%		50-140	27-DEC-19
Acenaphthene			90.7		%		50-140	27-DEC-19
Acenaphthylene			89.8		%		50-140	27-DEC-19
Anthracene			89.1		%		50-140	27-DEC-19
Benzo(a)anthracene			90.2		%		50-140	27-DEC-19
Benzo(a)pyrene			87.5		%		50-140	27-DEC-19
Benzo(b)fluoranthene			92.0		%		50-140	27-DEC-19
Benzo(g,h,i)perylene			89.2		%		50-140	27-DEC-19
Benzo(k)fluoranthene			87.3		%		50-140	27-DEC-19
Chrysene			100.2		%		50-140	27-DEC-19
Dibenzo(ah)anthracene			93.0		%		50-140	27-DEC-19
Fluoranthene			89.7		%		50-140	27-DEC-19
Fluorene			89.4		%		50-140	27-DEC-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R4955138								
WG3248284-2 LCS								
Indeno(1,2,3-cd)pyrene			94.3		%		50-140	27-DEC-19
Naphthalene			89.0		%		50-140	27-DEC-19
Phenanthrene			90.4		%		50-140	27-DEC-19
Pyrene			90.4		%		50-140	27-DEC-19
WG3248284-1 MB								
1-Methylnaphthalene			<0.030		ug/g		0.03	27-DEC-19
2-Methylnaphthalene			<0.030		ug/g		0.03	27-DEC-19
Acenaphthene			<0.050		ug/g		0.05	27-DEC-19
Acenaphthylene			<0.050		ug/g		0.05	27-DEC-19
Anthracene			<0.050		ug/g		0.05	27-DEC-19
Benzo(a)anthracene			<0.050		ug/g		0.05	27-DEC-19
Benzo(a)pyrene			<0.050		ug/g		0.05	27-DEC-19
Benzo(b)fluoranthene			<0.050		ug/g		0.05	27-DEC-19
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	27-DEC-19
Benzo(k)fluoranthene			<0.050		ug/g		0.05	27-DEC-19
Chrysene			<0.050		ug/g		0.05	27-DEC-19
Dibenzo(ah)anthracene			<0.050		ug/g		0.05	27-DEC-19
Fluoranthene			<0.050		ug/g		0.05	27-DEC-19
Fluorene			<0.050		ug/g		0.05	27-DEC-19
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	27-DEC-19
Naphthalene			<0.013		ug/g		0.013	27-DEC-19
Phenanthrene			<0.046		ug/g		0.046	27-DEC-19
Pyrene			<0.050		ug/g		0.05	27-DEC-19
Surrogate: 2-Fluorobiphenyl			95.6		%		50-140	27-DEC-19
Surrogate: p-Terphenyl d14			87.8		%		50-140	27-DEC-19
WG3248284-4 MS		**WG3248284-5**						
1-Methylnaphthalene			86.4		%		50-140	27-DEC-19
2-Methylnaphthalene			81.9		%		50-140	27-DEC-19
Acenaphthene			87.3		%		50-140	27-DEC-19
Acenaphthylene			85.9		%		50-140	27-DEC-19
Anthracene			83.0		%		50-140	27-DEC-19
Benzo(a)anthracene			85.2		%		50-140	27-DEC-19
Benzo(a)pyrene			85.3		%		50-140	27-DEC-19
Benzo(b)fluoranthene			83.0		%		50-140	27-DEC-19

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R4955138								
WG3248284-4 MS		**WG3248284-5**						
Benzo(g,h,i)perylene			87.5		%		50-140	27-DEC-19
Benzo(k)fluoranthene			92.1		%		50-140	27-DEC-19
Chrysene			97.3		%		50-140	27-DEC-19
Dibenzo(ah)anthracene			91.1		%		50-140	27-DEC-19
Fluoranthene			85.0		%		50-140	27-DEC-19
Fluorene			85.3		%		50-140	27-DEC-19
Indeno(1,2,3-cd)pyrene			88.3		%		50-140	27-DEC-19
Naphthalene			84.7		%		50-140	27-DEC-19
Phenanthrene			87.1		%		50-140	27-DEC-19
Pyrene			85.6		%		50-140	27-DEC-19
Batch R4958834								
WG3251665-3 DUP		**WG3251665-5**						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	03-JAN-20
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	03-JAN-20
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	03-JAN-20
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	03-JAN-20
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	03-JAN-20
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	03-JAN-20
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	03-JAN-20
Benzo(b)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	03-JAN-20
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	03-JAN-20
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	03-JAN-20
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	03-JAN-20
Dibenzo(ah)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	03-JAN-20
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	03-JAN-20
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	03-JAN-20
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	03-JAN-20
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	03-JAN-20
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	03-JAN-20
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	03-JAN-20
WG3251665-2 LCS								
1-Methylnaphthalene			88.5		%		50-140	03-JAN-20
2-Methylnaphthalene			86.6		%		50-140	03-JAN-20

Quality Control Report

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Drive
Ottawa ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R4958834								
WG3251665-2 LCS								
Acenaphthene			92.9		%		50-140	03-JAN-20
Acenaphthylene			95.9		%		50-140	03-JAN-20
Anthracene			91.2		%		50-140	03-JAN-20
Benzo(a)anthracene			96.2		%		50-140	03-JAN-20
Benzo(a)pyrene			94.7		%		50-140	03-JAN-20
Benzo(b)fluoranthene			96.3		%		50-140	03-JAN-20
Benzo(g,h,i)perylene			98.1		%		50-140	03-JAN-20
Benzo(k)fluoranthene			91.9		%		50-140	03-JAN-20
Chrysene			103.5		%		50-140	03-JAN-20
Dibenzo(ah)anthracene			99.7		%		50-140	03-JAN-20
Fluoranthene			93.4		%		50-140	03-JAN-20
Fluorene			91.7		%		50-140	03-JAN-20
Indeno(1,2,3-cd)pyrene			102.4		%		50-140	03-JAN-20
Naphthalene			89.9		%		50-140	03-JAN-20
Phenanthrene			93.4		%		50-140	03-JAN-20
Pyrene			93.4		%		50-140	03-JAN-20
WG3251665-1 MB								
1-Methylnaphthalene			<0.030		ug/g		0.03	03-JAN-20
2-Methylnaphthalene			<0.030		ug/g		0.03	03-JAN-20
Acenaphthene			<0.050		ug/g		0.05	03-JAN-20
Acenaphthylene			<0.050		ug/g		0.05	03-JAN-20
Anthracene			<0.050		ug/g		0.05	03-JAN-20
Benzo(a)anthracene			<0.050		ug/g		0.05	03-JAN-20
Benzo(a)pyrene			<0.050		ug/g		0.05	03-JAN-20
Benzo(b)fluoranthene			<0.050		ug/g		0.05	03-JAN-20
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	03-JAN-20
Benzo(k)fluoranthene			<0.050		ug/g		0.05	03-JAN-20
Chrysene			<0.050		ug/g		0.05	03-JAN-20
Dibenzo(ah)anthracene			<0.050		ug/g		0.05	03-JAN-20
Fluoranthene			<0.050		ug/g		0.05	03-JAN-20
Fluorene			<0.050		ug/g		0.05	03-JAN-20
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	03-JAN-20
Naphthalene			<0.013		ug/g		0.013	03-JAN-20
Phenanthrene			<0.046		ug/g		0.046	03-JAN-20

Quality Control Report

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Drive
Ottawa ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R4958834								
WG3251665-1 MB								
Pyrene			<0.050		ug/g		0.05	03-JAN-20
Surrogate: 2-Fluorobiphenyl			86.2		%		50-140	03-JAN-20
Surrogate: p-Terphenyl d14			83.7		%		50-140	03-JAN-20
WG3251665-4 MS		**WG3251665-5**						
1-Methylnaphthalene			90.8		%		50-140	03-JAN-20
2-Methylnaphthalene			87.3		%		50-140	03-JAN-20
Acenaphthene			94.9		%		50-140	03-JAN-20
Acenaphthylene			96.3		%		50-140	03-JAN-20
Anthracene			94.3		%		50-140	03-JAN-20
Benzo(a)anthracene			101.7		%		50-140	03-JAN-20
Benzo(a)pyrene			97.8		%		50-140	03-JAN-20
Benzo(b)fluoranthene			101.4		%		50-140	03-JAN-20
Benzo(g,h,i)perylene			101.1		%		50-140	03-JAN-20
Benzo(k)fluoranthene			93.9		%		50-140	03-JAN-20
Chrysene			108.2		%		50-140	03-JAN-20
Dibenzo(ah)anthracene			103.5		%		50-140	03-JAN-20
Fluoranthene			97.7		%		50-140	03-JAN-20
Fluorene			93.0		%		50-140	03-JAN-20
Indeno(1,2,3-cd)pyrene			108.1		%		50-140	03-JAN-20
Naphthalene			90.0		%		50-140	03-JAN-20
Phenanthrene			95.7		%		50-140	03-JAN-20
Pyrene			96.0		%		50-140	03-JAN-20

Quality Control Report

Workorder: L2399551 Report Date: 03-JAN-20

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Drive
Ottawa ON K2K 2A9
Contact: Nicole Soucy

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2399551-COFC

COC Number: 17 -

Report To	Contact and company name below will appear on the final report
Company:	Gemtec
Contact:	Nicole Soucy
Phone:	613-836-1422 x265
	Company address below will appear on the final report
Street:	32 Steacie Drive
City/Province:	Kanata, ON
Postal Code:	K2K 2A9
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Quality Control (QC) Report with Report ☒ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax nicole.soucy@gemtec.ca
Email 2
Email 3

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax nicole.soucy@gemtec.ca
Email 2

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] ☒ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] ☐ | 3 day [P3-25%] ☐ | 2 day [P2-50%] ☐

EMERGENCY: 1 Business day [E - 100%] ☐ | Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Project Information

ALS Account # / Quote #:	27661
Job #:	64742.02
PO / AFE:	
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only): L2399551

ALS Contact: Emily Smith

Sampler:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	ICP METALS	PAH	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
1	TP19-1	20-12-19		Soil		X	X		
2	TP19-2			Soil		X	X		
3	TP19-3			Soil		X	X		
4	TP19-4			Soil		X	X		
5	TP19-5			Soil		X	X		
6	TP19-13			Soil		X	X		
7	TP19-6			Soil		X	X		
8	TP19-7			Soil		X	X		
9	TP19-8			Soil		X	X		
10	TP19-9			Soil		X	X		
11	TP19-10			Soil		X	X		
12	TP19-11			Soil		X	X		

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ | SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☒ | Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
4.4				8.8			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
Nicole Soucy	Dec 20/19	

INITIAL SHIPMENT RECEPTION (lab use only)

Received by:	Date:	Time:
GUSTAS PARASCIVOU	12/20/19	10:30

FINAL SHIPMENT RECEPTION (lab use only)

Received by:	Date:	Time:
	Dec 21/19	10:30

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NOV 2015 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

Chain of Custody (COC) / Analytica Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2399551-COFC

COC Number: 17 -

Page 2 of 2

Report To	Contact and company name below will appear on the final report
Company:	Gemtec
Contact:	Nicole Soucy
Phone:	613-836-1422 x265
	Company address below will appear on the final report
Street:	32 Steacie Drive
City/Province:	Kanata, ON
Postal Code:	K2K 2A9
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution	
Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Quality Control (QC) Report with Report	☒ YES ☐ NO
	☐ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	nicole.soucy@gemtec.ca
Email 2	
Email 3	

Invoice Distribution	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	nicole.soucy@gemtec.ca
Email 2	

Project Information	
ALS Account # / Quote #:	27661
Job #:	64742.02
PO / AFE:	
LSD:	

Oil and Gas Required Fields (client use)	
AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only): L2399551

ALS Contact: Emily Smith **Sampler:**

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] ☒ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] ☐ | 3 day [P3-25%] ☐ | 2 day [P2-50%] ☐

EMERGENCY: 1 Business day [E - 100%] ☐ | Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	ICP METALS	PAH	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
L3	TP19-12	20-12-19		Soil		X			
				Soil					
				Soil					
				Soil					
				Soil					
				Soil					
				Soil					
				Soil					
				Soil					
				Soil					
				Soil					
				Soil					

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ | SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☒ | Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
4.4				8.9			

SHIPMENT RELEASE (client use)		
Released by: Nicole Soucy	Date: Dec 20/19	Time:

INITIAL SHIPMENT RECEPTION (lab use only)		
Received by: COSTAS FARASSOGLOU	Date: 12/20/19	Time: 10:30

FINAL SHIPMENT RECEPTION (lab use only)		
Received by:	Date: Dec 21/19	Time: 10:30

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

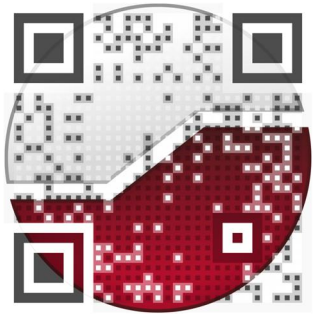
WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NOV 2018 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

experience • knowledge • integrity



civil	civil
geotechnical	géotechnique
environmental	environnementale
field services	surveillance de chantier
materials testing	service de laboratoire des matériaux

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