GEMTEC
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Phase Two
Environmental Site Assessment
5455 Boundary Road
Navan, Ontario

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Submitted to:

D-Squared Construction Limited
6811 Hiram Road, P.O Box 14
Greely, Ontario
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Phase Two Environmental Site Assessment 5455 Boundary Road Navan, Ontario

May 29, 2020
Project: 61774.48 – V03

experience • knowledge • integrity

GEMTEC Consulting Engineers and Scientists Limited
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May 29, 2020 File: 61774.48 – V03

D-Squared Construction Limited
6811 Hiram Road, P.O Box 14
Greely, Ontario
K4P 1A2

Attention: Mr. Craig O'Regan

Re: Phase Two Environmental Site Assessment
5455 Boundary Road
Navan, Ontario

Enclosed is our Phase Two ESA report for the property located at 5455 Boundary Road. The Phase Two ESA was completed in general accordance with Ontario Regulation 153/04, and describes the environmental conditions at the test locations of the property based on available information and observations.

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 D-Squared Construction Limited, to complete a Phase Two Environmental Site Assessment (ESA) as a due diligence measure for the property located at 5455 Boundary Road, in Navan, Ontario.

Nine Areas of Potential Environmental Concern (APECs) were identified through the Phase One ESA and were investigated during the Phase Two ESA. APECs identified on the subject property include Importation of Fill Material of Unknown Quality, Gasoline and Associated Products Storage in Fixed Tanks, Waste Disposal and Waste Management, Asphalt and Bitumen Manufacturing, and Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems.

A total of five boreholes (BH19-4, BH19-5, BH19-9, BH19-18, and BH19-20), completed as monitoring wells (MW19-4, MW19-5, MW19-9, MW19-18, and MW19-20) were advanced on the subject property between December 11 and December 16, 2019, in order to facilitate soil and groundwater sampling. The surficial geology of the subject site can be generally identified fill material, overlaying silty sand, and silty clay.

A total of 11 soil samples, including one duplicate, were selected for analytical analysis based on the combustible headspace gas readings, visual, olfactory and tactile evidence of impacts and submitted to ALS Laboratory Group for analysis of contaminants of potential concern associated with each APEC. Soil analytical results met the applicable MECP standards for all parameters analyzed.

Five groundwater monitoring wells (MW19-04, MW19-05, MW19-09, MW19-18 and MW19-20) were sampled on December 12, 2020, submitted to ALS Laboratory Group (ALS) for analysis of metals, inorganics, PHCs, VOCs and PAHs. Following two exceedances of MECP Table 2 standards, an additional round of groundwater sampling was conducted at MW19-09 and MW19-18 on May 6 and May 7, 2020, and submitted to ALS for analysis of PAHs and metals, respectively. A summary of groundwater analytical results is provided below:

- Samples MW19-04, MW19-05, and MW19-20 met the MECP standards for all parameters analyzed;
- MECP Table 2 exceedance of benzo[a]pyrene was identified in groundwater at MW19-09 on December 16, 2019, but meet the Table 2 standard on May 7, 2020; and
- MECP Table 2 exceedance of cobalt was identified in groundwater at MW19-18 on December 16, 2019, but meet the Table 2 standard on May 6, 2020.

The exceedance of benzo[a]pyrene identified in groundwater at MW19-09 in December, 2019, does not appear to be associated with a broader contamination issue, rather that low-level PAH parameters in soil that were included as silt or colloidal material within the un-filtered groundwater

sample. This is supported by the absence or low concentrations of low-molecular weight PAH parameters within the groundwater sample at MW19-09, such as acenapthalene or phenantherene whose solubility limits are lower and whose presence would be anticipated if PAH contamination in groundwater was present. This is corroborated based on the results of the resampling of MW19-09 on May 7, 2020, where no PAH parameters were detected.

Although the cause of the elevated concentrations of cobalt in groundwater at MW19-18 is not immediately evident, the re-sampling of MW19-18 on May 6, 2020, indicates that groundwater in the vicinity of MW19-18 meets the applicable MECP Table 2 standard for groundwater. Based on the completion of the monitoring well within native clay, it is likely that the elevated concentrations of cobalt in groundwater in the vicinity of MW19-18 is naturally occurring.

Based on the result of the soil and groundwater investigations completed at the subject property between December 11, 2019 and May 7, 2020, soil and groundwater meet the applicable MECP Table 2 site condition standards. As such, no further investigations are required at this time.

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1.0 INTRODUCTION

GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) was retained by D-Squared Construction Limited, to complete a Phase Two Environmental Site Assessment (ESA) for the property located at 5455 Boundary Road, in Navan, Ontario. The location is provided on the inset map on Figure A.1 in Appendix A.

The Phase Two ESA and supplementary sampling was completed following a Phase One ESA completed and submitted to D-Squared Construction Limited, under separate cover. GEMTECs understands that the Phase Two ESA is being completed as a due diligence measure. As the property will not be changing to a more sensitive land use, the filing of a Record of Site Condition (RSC), as regulated by Ontario Regulation 153/04 under the Environmental Protection Act, is not mandatory. This Phase Two ESA has been completed in 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 and O.Reg 406/19.

1.1 Site Description

The subject property is currently used as a construction yard by Pomerleau Inc., and is owned by 7058578 CANADA LIMITED. The subject property consists of construction parking, piles of material, material storage and gravel access roads.

The subject property is located at 5455 Boundary Road in Ottawa, Ontario, with a total area of approximately 11.8 hectares (29.2 acres). The legal description for the subject property is PART OF LOT 22, CONCESSION 11, CUMBERLAND; TOGETHER WITH AN EASEMENT OVER PART OF LOT 22, CONCESSION 11, CUMBERLAND BEING PART 2 ON PLAN 4R-27827 AS IN OC1584555; CITY OF OTTAWA. PIN 14558-0409 (LT).

The representative for the subject site is Mr. David Meikle of D-Squared Construction Ltd.

1.2 Property Ownership

The site is currently owned by 7058578 Canada Limited who acquired the property in 2008.

1.3 Current and Proposed Future Uses

The site is currently comprised of a Pomerleau Inc., construction yard, and consists of construction parking, piles of material, material storage, and gravel access roads.

Proposed future use / development of the property is currently unknown.

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 (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 77 metres above sea level and topography at the subject property and surrounding area is generally flat.

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 offshore marine sediments, clay and silt with a thickness of between 15 and 25 metres (ESRI, 2016). The bedrock is mapped as interbedded dark grey shale, fossiliferous calcareous siltstone and silty bioclastic limestone of the Carlsbad Formation (ESRI, 2016).

2.2 Past Investigations

One historical assessment report was available for review at part of this Phase Two ESA.

2.2.1 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, 5455 Boundary Road, Navan, Ontario”.

A review of historical information pertaining to the subject site and adjacent properties identified 17 potentially contaminating activities (PCAs). On-site and off-site PCAs resulted in the identification of nine APECs on the subject property. APECs identified at the subject property are identified on Figure A.1 in Appendix A and include:

- **APEC 1**: Importation of Fill Material of Unknown Quality on the subject property;
- **APEC 2**: Gasoline and Associated Products Storage in Fixed Tanks on the subject property;
- **APEC 3**: Gasoline and Associated Products Storage in Fixed Tanks at 5425 Boundary Road;
- **APEC 4**: Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners at 5425 Boundary Road;
- **APEC 5**: Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners at 145 Indcum Road;
- **APEC 6**: Asphalt and Bitumen Manufacturing at 145 Indcum Road;
- **APEC 7**: Gasoline and Associated Products Storage in Fixed Tanks at 5495 Boundary Road;
- **APEC 8**: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems at 5495 Boundary Road; and,
- **APEC 9**: Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners at 336 Entrepreneur Crescent.

Based on the APECs identified on the subject property, a Phase Two Environmental Site Assessment was recommended to investigate the impacts of the identified Contaminants of Potential Concerns (COPCs) in soil and groundwater on the subject property.

3.0 METHODOLOGY

3.1 Borehole Drilling

Field work completed for this investigation was carried out between December 11, 2019, and December 16, 2019. During that time, a total of five boreholes (BH19-4, BH19-5, BH19-9, BH19-18, and BH19-20) were advanced on the subject property, using a truck mounted drill rig owned and operated by Marathon Underground, a Drilling contractor of Greely, Ontario.

The approximate locations of the boreholes are shown on the Borehole Location Plan, Figure A.2, Appendix A. The borehole locations were selected by GEMTEC personnel and positioned at the site relative to identified APECs and existing site features. The locations of the boreholes and ground surface elevations at the borehole locations were determined using a Trimble R10 GPS survey instrument. The coordinates of the boreholes are referenced to NAD83 (CSRS) Epoch 2010, vertical network CGVD28 and are considered to be accurate within the tolerance of the instrument (0.002 m).

3.2 Soil Sampling

Soil samples were recovered at regular intervals during drilling 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.

Soil samples were inspected in the field for visual, tactile and olfactory evidence of impact, and following a period of equilibration to ambient temperature, soil sample vapours were screened using a combustible gas detector (RKI Eagle combustible gas detector calibrated to hexane standards, with methane elimination enabled). The results of the soil vapour readings are provided on the Record of Borehole Sheets in Appendix B.

The soil sampling program included the submission of two soil samples per borehole. Soil samples were selected based on soil vapour concentrations, visual, olfactory and tactile evidence of impact. A total of 11 soil samples, including one duplicate sample, were submitted to ALS Laboratory Group, a CALA certified laboratory, for analysis of selected parameters. Soil samples submitted for analyses of selected parameters are summarized in Table 3.1.

Table 3.1: Summary of Soil Analyses

Borehole	Sample	Depth Interval (m bgs)	Soil Description	Analytical Analyses
BH19-04	SA1	0.00 – 0.61	Brown silty sand	BTEX, PHCs, PAHs, Metals
BH19-04	SA5	3.05 – 3.66	Grey silty clay	VOCs, PHCs, Metals
BH19-05	SA2	0.76 – 1.37	Dark grey silty clay, some sand with cement	BTEX, PHCs, PAHs, Metals
BH19-05	SA5	3.05 – 3.66	Grey silty clay	VOCs, PHCs, Metals
BH19-09	SA2	0.76 – 1.37	Grey brown silty sand	VOCs, PHCs, PAHs, Metals
BH19-09	SA4	2.29 – 2.90	Grey silty clay	BTEX, PHCs, Metals
BH19-18	SA1	0.00 – 0.61	Brown silty slay, some sand, some gravel	VOCs, PHCs, Metals
BH19-18	SA101	0.00 – 0.61	Brown silty slay, some sand, some gravel	VOCs, PHCs, Metals

Borehole	Sample	Depth Interval (m bgs)	Soil Description	Analytical Analyses
BH19-18	SA4	2.29 – 2.90	Grey silty clay	BTEX, PHCs, Metals, ABNs
BH19-20	SA1	0.00 – 0.61	Brown silty clay	VOC, PHCs, Metals, ABNs
BH19-20	SA5	3.05 – 3.66	Grey silty clay	BTEX, PHCs, Metals

1. bgs – Below ground surface
2. BTEX – Benzene, Toluene, Ethylbenzene and Xylene
3. PHCs – Petroleum Hydrocarbons
4. PAHs –Polycyclic Aromatic Hydrocarbons
5. VOCs –Volatile Organic Compounds
6. ABNs – Acid, Base, Neutrals
7. BH19-18 SA101 is a duplicate soil sample of BH19-18 SA1

For soil samples collected for the analysis of PHCs and for BTEX, a core of soil was placed in a pre-weighed laboratory prepared vial containing a measured amount of methanol.

3.3 Monitoring Wells

Well screens were installed within the overburden at all borehole locations to measure the depth to groundwater and to permit groundwater sampling. Monitoring wells were constructed of 50-mm diameter, 3.05 metre length, flush-threaded PVC screen and risers with a silica sand pack and bentonite seal. Silica sand was placed around the screened intervals and bentonite hole plug was used to seal the borehole to ground surface. Each monitoring well was finished at surface with flush-mount protective casing. Monitoring well instrumentation details are included on the borehole stratigraphic logs in Appendix B. Monitoring well instrumentation was completed by Marathon Underground, under the direct supervision of GEMTEC personnel.

3.4 Groundwater Monitoring and Sampling

Groundwater samples were collected using a peristaltic pump and dedicated sample tubing following low-flow parameter stabilization techniques. Samples were collected directly into laboratory supplied sample containers and released to laboratory under chain-of-custody procedures. Samples were collected for analysis of metals & inorganics, PHCs/BTEX, and VOCs. metal samples were field filtered using disposable filters.

A total of five groundwater samples were submitted December 17, 2019 to ALS Laboratory Group for analysis of selected parameters.

After completion of the first round of groundwater sampling and review of laboratory analytical results, re-sampling of MW19-09 and MW19-18 was recommended. The additional sampling was

completed to confirm if identified exceedances in groundwater may be attributable to sediment or colloidal material within the sample matrix, as opposed to being representative of localized groundwater contamination. Accordingly, two additional groundwater samples were collected and submitted to ALS laboratory on May 6 and 7, 2020 for analysis of selected parameters.

Groundwater samples submitted for analyses of selected parameters are summarized in Table 3.2, a more detailed description can be found in Table C2 in Appendix C.

Table 3.2: Summary of Groundwater Analyses

Monitoring Well ID	Screened Interval (mbgs)	Analysis
MW19-04	0.76 – 3.81	Metals, & inorganics, PHCs, VOCs, PAHs
MW19-05	0.76 – 3.81	Metals, & inorganics, PHCs, VOCs, PAHs
MW19-09	0.76 – 3.81	Metals, & inorganics, PHCs, VOCs, PAHs Re-sample: PAHs
MW19-18	0.76 – 3.81	Metals, & inorganics, PHCs, VOCs, ABNs Re- Sample: Metals
MW19-20	0.76 – 3.81	Metals, & inorganics, PHCs, VOCs, ABNs

4.0 RESULTS OF THE INVESTIGATION

4.1 General

Soil and groundwater conditions identified in boreholes advanced as part of this investigation are provided on the Record of Borehole sheets in Appendix B. The borehole logs indicate the subsurface conditions at the specific test locations only. Boundaries between zones on the logs are often not distinct, but rather are transitional and have been interpreted. Subsurface conditions at other than the test locations may vary from the conditions encountered in the boreholes. The following presents an overview of the subsurface conditions encountered in the boreholes advanced as part of this investigation.

4.1.1 Site Geology

The following presents an overview of the subsurface conditions encountered in the boreholes advanced as part of this investigation.

Fill Material

Fill material generally composed of sand and gravel with some silt was encountered from ground surface at boreholes 19-5, 19-9, and 19-18. The fill thickness at these borehole locations ranged from 0.2 to 1.5 metres.

Silty Sand

Silty sand was encountered either from ground surface or beneath the fill material at all borehole locations. The silty sand extended from depths ranging from 0 to 1.5 metres to depths ranging from 1.0 to 2.8 metres below ground surface at the borehole locations.

Silty Clay

Silty clay was encountered beneath the silty sand at all borehole locations at depths ranging from 1.0 to 2.8 metres below ground surface. Boreholes were terminated in the silty clay.

4.2 Soil Analytical Results

Soil analytical results met the applicable MECP SCS for all parameters analyzed; however, an elevated concentration of PHC F1 was identified in sample BH19-18 SA1.

Analytical results for the soil samples submitted for analyses and the selected MECP SCS are presented in Table C1; laboratory certificates of analysis for soil samples are provided in Appendix D.

4.3 Groundwater Elevations and Analytical Results

Static groundwater levels in monitoring wells were measured December 13, 2019, and December 16, 2019, using an electronic water level tape (Heron Instruments water meter). Groundwater samples were obtained from all boreholes on December 16, 2019.

Groundwater analytical results and the associated MECP SCS are presented in Table C2. Laboratory certificates of analysis for groundwater analytical results are provided in Appendix D. Table 4.1 subsection presents a summary of the measure groundwater levels and analytical results.

Table 4.1: Summary of Groundwater Sample Results

Well ID	Groundwater Depth (mbgs)			Groundwater Elevation (m, elevation)			MECP Table 2 Exceedances
	13/12/19	16/12/19	6&7/5/20	13/12/19	16/12/19	6&7/5/20	
MW19-04	1.5	1.32	-	75.43	75.61	-	None
MW19-05	1.06	0.95	-	76.57	76.68	-	None
MW19-09	1.19	1.04	0.74	76.14	76.29	76.59	Benzo[a]pyrene Resample: None
MW19-18	0.93	0.92	1.03	76.47	76.48	76.37	Cobalt Resample: None
MW19-20	0.98	0.94	-	76.01	76.05	-	None

The exceedance of benzo[a]pyrene identified in groundwater at MW19-09 in December, 2019, does not appear to be associated with a broader contamination issue, rather that low-level PAH parameters in soil that were included as silt or colloidal material within the un-filtered groundwater

sample. This is supported by the absence or low concentrations of low-molecular weight PAH parameters within the groundwater sample at MW19-09, such as acenapthalene or phenantherene whose solubility limits are lower and whose presence would be anticipated if PAH contamination in groundwater was present. This is corroborated based on the results of the resampling of MW19-09 on May 7, 2020, where no PAH parameters were detected.

Although the cause of the elevated concentrations of cobalt in groundwater at MW19-18 is not immediately evident, the re-sampling of MW19-18 on May 6, 2020, indicates that groundwater in the vicinity of MW19-18 meets the applicable MECP Table 2 standard for groundwater. Based on the completion of the monitoring well within native clay, it is likely that the elevated concentrations of cobalt in groundwater in the vicinity of MW19-18 is naturally occurring.

Based on the measured groundwater levels from December 2019, the shallow groundwater flow is split across the subject site, resulting in radial flow away from the subject property. This data is consistent with the site being relatively flat with multiple drainage pathways in the study area.

4.4 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.

GEMTECs review of ALSs QA/QC certificates indicate that analytical results fell within acceptable QA/QC limits for constituent recovery as defined by the protocols for the analytical methods for the majority of parameters analyzed.

Additionally, a duplicate soil sample was submitted to ALS Laboratory Group for analysis of selected parameters. The soil sample BH19-18 SA101 is a duplicate of sample BH19-18 SA1. Relative Standards Deviations (RPDs) were calculated for all parameters where the original and duplicate sample concentrations exceeded five times the reportable detection limits (RDL). 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 n-Hexane and Xylenes.

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

GEMTEC Consulting Engineers and Scientists Limited was retained by D-Squared Construction Limited, to complete a Phase Two ESA for the property located at 5455 Boundary Road, in Navan, Ontario.

Nine APECs were identified in the Phase One ESA and were investigated during the Phase Two ESA, a summary of the APECs can be found below:

- **APEC 1:** Importation of Fill Material of Unknown Quality on the subject property
- **APEC 2:** Gasoline and Associated Products Storage in Fixed Tanks on the subject property
- **APEC 3:** Gasoline and Associated Products Storage in Fixed Tanks at 5425 Boundary Road
- **APEC 4:** Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners at 5425 Boundary Road
- **APEC 5:** Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners at 145 Indcum Road
- **APEC 6:** Asphalt and Bitumen Manufacturing at 145 Indcum Road
- **APEC 7:** Gasoline and Associated Products Storage in Fixed Tanks at 5495 Boundary Road
- **APEC 8:** Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems at 5495 Boundary Road
- **APEC 9:** Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners at 336 Entrepreneur Crescent

The surficial geology of the subject site can be generally identified fill material, overlaying silty sand, and silty clay.

A total of 11 soil samples, including one duplicate, were selected for analytical analysis based on the combustible headspace gas readings, visual, olfactory and tactile evidence of impacts and submitted to ALS Laboratory Group for analysis of contaminants of potential concern associated with each APEC. Soil sample analytical results met the applicable MECP SCS for all parameters analyzed.

Five groundwater monitoring wells (MW19-04, MW19-05, MW19-09, MW19-18 and MW19-20) were sampled on December 12, 2020, submitted to ALS Laboratory Group (ALS) for analysis of metals, inorganics, PHCs, VOCs and PAHs. Following two exceedances of MECP Table 2 standards, an additional round of groundwater sampling was conducted at MW19-09 and MW19-18 on May 6 and May 7, 2020, and submitted to ALS for analysis of PAHs and metals, respectively. A summary of groundwater analytical results is provided below:

- Samples MW19-04, MW19-05, and MW19-20 met the MECP standards for all parameters analyzed;

- MECP Table 2 exceedance of benzo[a]pyrene was identified in groundwater at MW19-09 on December 16, 2019, but meet the Table 2 standard on May 7, 2020; and
- MECP Table 2 exceedance of cobalt was identified in groundwater at MW19-18 on December 16, 2019, but meet the Table 2 standard on May 6, 2020.

The exceedance of benzo[a]pyrene identified in groundwater at MW19-09 in December, 2019, does not appear to be associated with a broader contamination issue, rather that low-level PAH parameters in soil that were included as silt or colloidal material within the un-filtered groundwater sample. This is supported by the absence or low concentrations of low-molecular weight PAH parameters within the groundwater sample at MW19-09, such as acenapthalene or phenantherene whose solubility limits are lower and whose presence would be anticipated if PAH contamination in groundwater was present. This is corroborated based on the results of the resampling of MW19-09 on May 7, 2020, where no PAH parameters were detected.

Although the cause of the elevated concentrations of cobalt in groundwater at MW19-18 is not immediately evident, the re-sampling of MW19-18 on May 6, 2020, indicates that groundwater in the vicinity of MW19-18 meets the applicable MECP Table 2 standard for groundwater. Based on the completion of the monitoring well within native clay, it is likely that the elevated concentrations of cobalt in groundwater in the vicinity of MW19-18 is naturally occurring.

6.0 RECOMMENDATIONS

Based on the result of the soil and groundwater investigations completed at the subject property between December 11, 2019 and May 7, 2020, soil and groundwater meet the applicable MECP Table 2 site condition standards. As such, no further investigations are required at this time.

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 the undersigned.

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

Drew Paulusse, B.Sc.
Manager, Environmental Services

7.0 REFERENCES

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8.0 LIMITATION OF LIABILITY

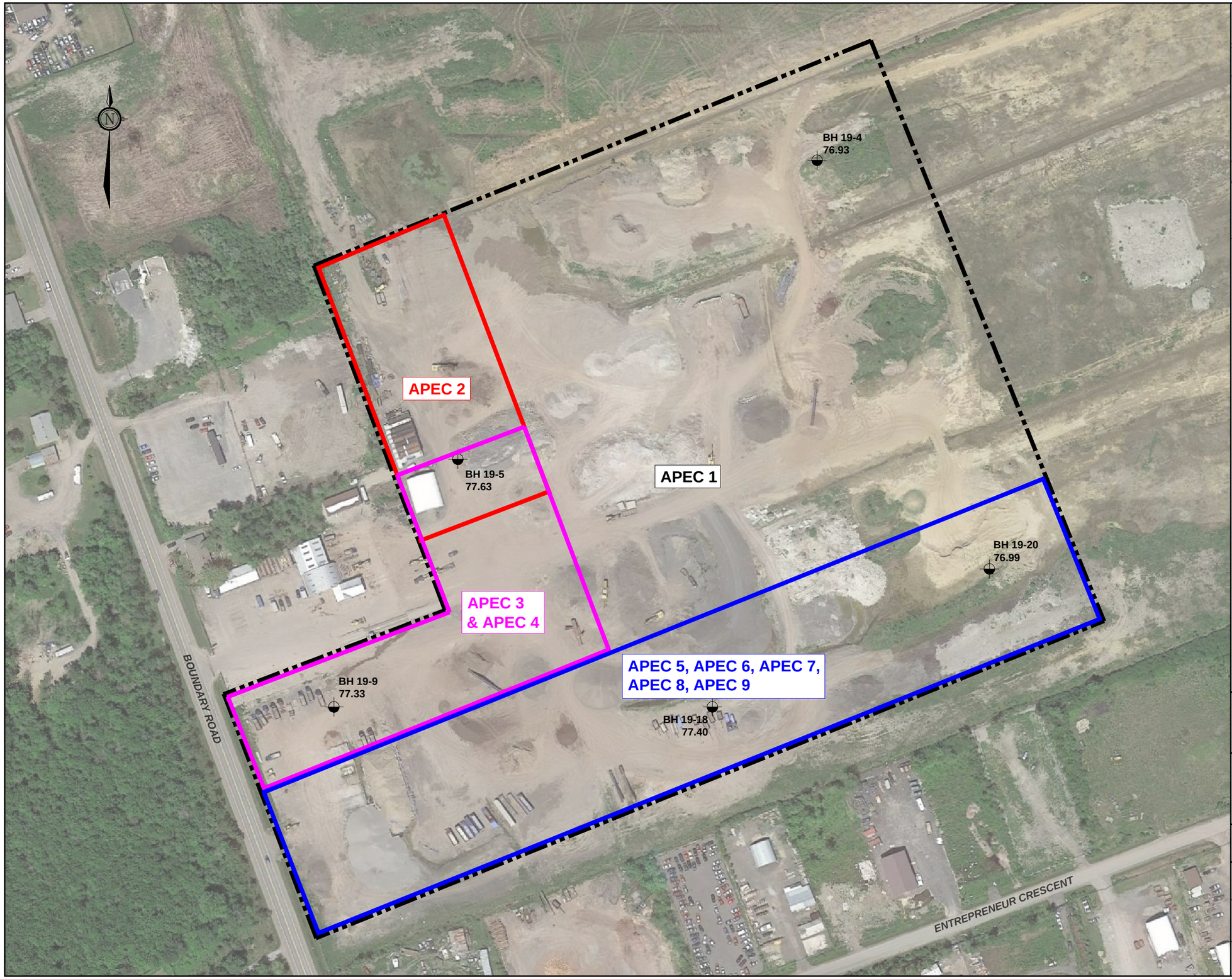
This report was prepared for and the work referred to within it has been undertaken by GEMTEC Consulting Engineers and Scientists Ltd for D-Squared Construction Limited It is intended for the exclusive use of D-Squared Construction Limited. This report may not be relied upon by any other person or entity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

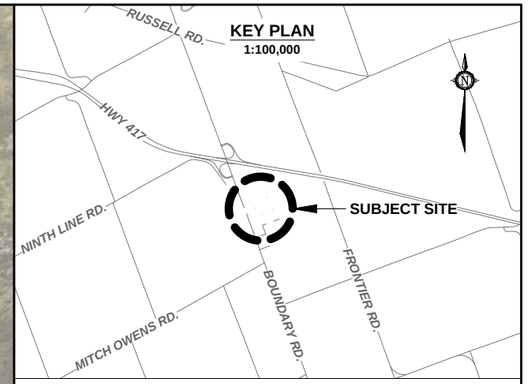
The investigation undertaken by GEMTEC with respect to this report and any conclusions or recommendations made in this report reflect the best judgements of GEMTEC based on the site conditions observed during the investigations undertaken at the date(s) identified in the report and on the information 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





LEGEND

SUBJECT SITE

BOREHOLE WITH MONITORING WELL LOCATION
(current investigation by GEMTEC)

BH # — BOREHOLE ID
XX.XX — GROUND SURFACE ELEVATION, IN METRES GEODETIC DATUM

Areas of Potential Environmental Concern (APEC)

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

APEC 2: Gasoline and Associated Products Storage in Fixed Tanks on the subject property.

APEC 3: Gasoline and Associated Products Storage in Fixed Tanks at 5425 Boundary Road.

APEC 4: Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners at 5425 Boundary Road.

APEC 5: Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners at 145 Indcum Road.

APEC 6: Asphalt and Bitumen Manufacturing at 145 Indcum Road.

APEC 7: Gasoline and Associated Products Storage in Fixed Tanks at 5495 Boundary Road.

APEC 8: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems at 5495 Boundary Road.

APEC 9: Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners at 336 Entrepreneur Crescent.

Scale 1:2000

0 40 80 120m

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www.gemtec.ca
ottawa@gemtec.ca

Client	Project
D-SQUARED CONSTRUCTION LIMITED	61774.48

Location: 5455 BOUNDARY ROAD, OTTAWA, ON

Drwn by	Chkd by	
P.C.	N.S.	BOREHOLE LOCATION PLAN

Date	Rev.	
JANUARY 2020	0	**FIGURE A.1**

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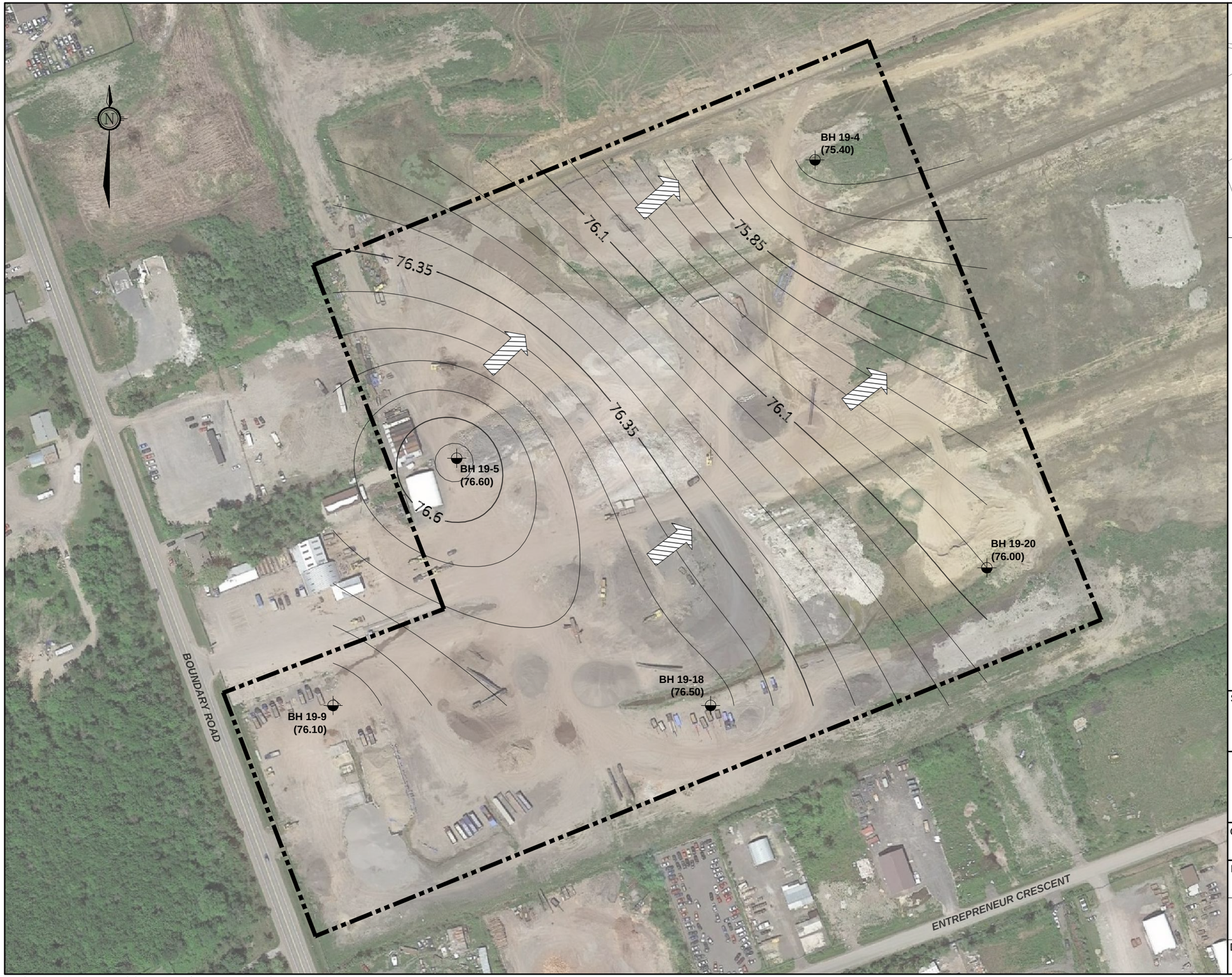

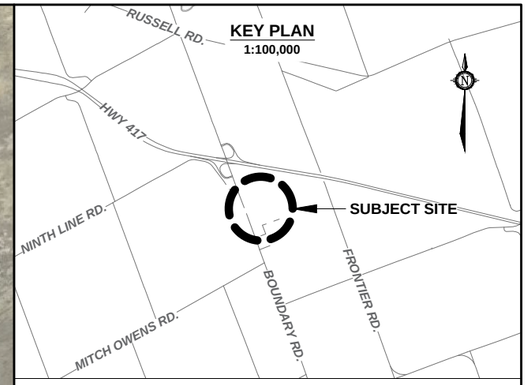

LEGEND

- SUBJECT SITE
- **BOREHOLE WITH MONITORING WELL LOCATION**
  (current investigation by GEMTEC)
- **BH #** — BOREHOLE ID
- **(XX.XX)** — GROUNDWATER ELEVATION, IN METRES GEODETIC DATUM
- GROUNDWATER FLOW DIRECTION

Scale 1:2000

0 40 80 120m

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Client	D-SQAURED CONSTRUCTION LIMITED	Project	61774.48
Location	5455 BOUNDARY ROAD OTTAWA, ON		
Drwn by: P.C.	Chkd by: N.S.	GROUNDWATER ELEVATIONS & FLOW	
Date: JANUARY 2020	Rev.: 0	**FIGURE A.2**	

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APPENDIX B

Borehole Logs

RECORD OF BOREHOLE 19-04

CLIENT: D-Squared Construction
PROJECT: Geotechnical Investigation
JOB#: 61774.48
LOCATION: 5455 Boundary Road

SHEET: 1 OF 1
DATUM: CGVD2013
BORING DATE: Dec 11 2019

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLE DATA: NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m	LABORATORY ANALYSES	COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		Ground Surface		76.93									
0		Compact, dark grey brown SILTY SAND, with organics		76.02	1	SS	508	15	BTEX, PHCs, PAHs, Metals	0			Flush Mount; Bentonite; Filter sand; TOP OF SCREEN ELEV.: 76.17 m
1		Compact, light grey brown fine SAND, some silt		0.91 / 75.41	2	SS	406	13		0			
		Grey brown SILTY CLAY		1.52	3	SS	152	2		0			
2					4	SS	0	W.H.					Screen
3					5	SS	610	W.H.	VOCs, PHCs, Metals	10			
		Very loose, grey SAND, some silt		3.66									
4					6	SS	610	3		10			BOTTOM OF SCREEN ELEV.: 73.12 m
				72.51									
		End of borehole		4.42									

GROUNDWATER OBSERVATIONS

DATE	DEPTH (m)	ELEVATION (m)
Dec. 13/19	1.50 ▽	75.43
Dec. 16/19	1.32 ▼	75.61

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CHECKED: J.B.

ENV - BOREHOLE LOG 61774.48_GINT_V01_2019-12-19.GPJ GEMTEC 2018.GDT 29/5/20

RECORD OF BOREHOLE 19-05

CLIENT: D-Squared Construction
PROJECT: Geotechnical Investigation
JOB#: 61774.48
LOCATION: 5455 Boundary Road

SHEET: 1 OF 1
DATUM: CGVD2013
BORING DATE: Dec 12 2019

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLE DATA: NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m	LABORATORY ANALYSES	COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		Ground Surface		77.63									
0		Very dense, grey sand and gravel (ROADWAY BASE/SUBBASE)			1	SS	203	50 for 130mm		0			Flush Mount
				76.87									Bentonite
		Compact, grey sand, some gravel, some silt (FILL MATERIAL)		0.76	2	SS	203	15	BTEX, PHCs, PAHs, Metals	0			Filter sand TOP OF SCREEN ELEV.: 76.87 m
1				76.11									
		Loose, grey brown SILTY SAND		1.52	3	SS	457	5		10			
2													Screen
					4	SS	457	W.H.		5			
				74.83									
		Grey SILTY CLAY		2.80									
3					5	SS	610	W.H.	VOCs, PHCs, Metals	5			
4					6	SS	610	14		10			BOTTOM OF SCREEN ELEV.: 73.82 m
				73.36									
		Grey SILTY SAND		4.27									
		End of borehole		73.21 4.42									

GROUNDWATER OBSERVATIONS

DATE	DEPTH (m)	ELEVATION (m)
Dec. 13/19	1.06 ▽	76.57
Dec. 16/19	0.95 ▼	76.68

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CHECKED: J.B.

ENV - BOREHOLE LOG 61774.48_GINT_V01_2019-12-19.GPJ GEMTEC 2018.GDT 29/5/20

RECORD OF BOREHOLE 19-07

CLIENT: D-Squared Construction
PROJECT: Geotechnical Investigation
JOB#: 61774.48
LOCATION: 5455 Boundary Road

SHEET: 1 OF 2
DATUM: CGVD2013
BORING DATE: Dec 16 2019

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA PLOT	SOIL PROFILE: ELEV. / DEPTH (m)	SAMPLE DATA: NUMBER	SAMPLE DATA: TYPE	SAMPLE DATA: RECOVERY (mm)	SAMPLE DATA: BLOWS/0.3m	SAMPLE DATA: LABORATORY ANALYSES	COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		Ground Surface		76.73									
0		Refer to CPT 19-07 for Soil Stratigraphy											
1													
2													
3													
4													
5					1	TO							
6													
7													
8					2	TO							
9													

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LOGGED: M.L.
CHECKED: J.B.

ENV - BOREHOLE LOG 61774.48 GINT V01 2019-12-19.GPJ GEMTEC 2018.GDT 29/5/20

RECORD OF BOREHOLE 19-07

CLIENT: D-Squared Construction
PROJECT: Geotechnical Investigation
JOB#: 61774.48
LOCATION: 5455 Boundary Road

SHEET: 2 OF 2
DATUM: CGVD2013
BORING DATE: Dec 16 2019

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA PLOT	SOIL PROFILE: ELEV. / DEPTH (m)	SAMPLE DATA: NUMBER	SAMPLE DATA: TYPE	SAMPLE DATA: RECOVERY (mm)	SAMPLE DATA: BLOWS/0.3m	SAMPLE DATA: LABORATORY ANALYSES	COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
10													
11													
12													
13													
14													
15													
					3	TO							
				60.88									
		End of borehole		15.85									

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LOGGED: M.L.
CHECKED: J.B.

ENV - BOREHOLE LOG 61774.48_GINT_V01_2019-12-19.GPJ GEMTEC 2018.GDT 29/5/20

RECORD OF BOREHOLE 19-09

CLIENT: D-Squared Construction
PROJECT: Geotechnical Investigation
JOB#: 61774.48
LOCATION: 5455 Boundary Road

SHEET: 1 OF 1
DATUM: CGVD2013
BORING DATE: Dec 11 2019

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLE DATA: NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m	LABORATORY ANALYSES	COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		Ground Surface		77.33									
0		Compact, grey sand and gravel (ROADWAY BASE/SUBBASE)		77.10									Flush Mount
		Compact, grey brown SILTY SAND, with organics		0.23	1	SS	406	22					Bentonite
													Filter sand
1				76.29									TOP OF SCREEN ELEV.: 76.57 m
		Reddish brown SILTY CLAY		1.04	2	SS	406	16	VOCs, PHCs, PAHs, Metals	25			
				75.81									
		Grey SILTY CLAY		1.52	3	SS	305	1		5			
2													
					4	SS	457	W.H.	BTEX, PHCs, Metals	5			Screen
3													
					5	SS	610	W.H.		5			
				73.52									
		Very loose, grey SANDY SILT		3.81									
4				73.22	6	SS	610	1		5			BOTTOM OF SCREEN ELEV.: 73.52 m
		Grey SILTY CLAY		4.11									
				72.91									
		End of borehole		4.42									

GROUNDWATER OBSERVATIONS

DATE	DEPTH (m)	ELEVATION (m)
Dec. 13/19	1.19 ▽	76.14
Dec. 16/19	1.04 ▼	76.29
Jul. 05/20	0.74 ▼	76.59

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CHECKED: J.B.

ENV - BOREHOLE LOG 61774.48_GINT_V01_2019-12-19.GPJ GEMTEC 2018.GDT 29/5/20

RECORD OF BOREHOLE 19-18

CLIENT: D-Squared Construction
PROJECT: Geotechnical Investigation
JOB#: 61774.48
LOCATION: 5455 Boundary Road

SHEET: 1 OF 1
DATUM: CGVD2013
BORING DATE: Dec 11 2019

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLE DATA: NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m	LABORATORY ANALYSES	COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		Ground Surface		77.40									
0		Compact, brown silty clay, some sand, some gravel (FILL MATERIAL)			1	SS	356	27	VOCs, PHCs, Metals + Duplicate	80			Flush Mount
				76.71									Bentonite
		Dense, grey brown silt and gravel, some sand (FILL MATERIAL)		0.69									Filter sand
1					2	SS	76	33		10			TOP OF SCREEN ELEV.: 76.64 m
				75.95									
		Loose, brown SILTY SAND		1.45									
2					3	SS	229	5		20			
				75.19									
		Grey SILTY CLAY		2.21									Screen
					4	SS	610	W.H.	BTEX, PHCs, Metals, ABNs	5			
3													
					5	SS	610	W.H.		0			
4				73.29									BOTTOM OF SCREEN ELEV.: 73.59 m
		Compact, grey SILTY SAND		4.11	6	SS	610	14		5			
				72.98									
		End of borehole		4.42									

GROUNDWATER OBSERVATIONS

DATE	DEPTH (m)	ELEVATION (m)
Dec. 13/19	0.93	76.47
Dec. 16/19	0.92	76.48
Jun. 05/20	1.03	76.37

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ENV - BOREHOLE LOG 61774.48_GINT_V01_2019-12-19.GPJ GEMTEC 2018.GDT 29/5/20

RECORD OF BOREHOLE 19-20

CLIENT: D-Squared Construction
PROJECT: Geotechnical Investigation
JOB#: 61774.48
LOCATION: 5455 Boundary Road

SHEET: 1 OF 1
DATUM: CGVD2013
BORING DATE: Dec 11 2019

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLE DATA: NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m	LABORATORY ANALYSES	COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		Ground Surface		76.99									
0		Compact, brown SILTY SAND			1	SS	457	16	VOC, PHCs, Metals, ABNs	0			Flush Mount
													Bentonite
													Filter sand
1					2	SS	457	17		0			TOP OF SCREEN ELEV.: 76.23 m
				75.44									
		Grey SILTY CLAY		1.55									
2					3	SS	76	1		0			
													Screen
					4	SS	610	W.H.		5			
3													
					5	SS	610	W.H.	BTEX, PHCs, Metals	0			
4				72.88									BOTTOM OF SCREEN ELEV.: 73.18 m
		Very loose, grey SILTY SAND		4.11	6	SS	152	1		5			
				72.57									
		End of borehole		4.42									

GROUNDWATER OBSERVATIONS

DATE	DEPTH (m)	ELEVATION (m)
Dec. 13/19	0.98 ▽	76.01
Dec. 16/19	0.94 ▼	76.05

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ENV - BOREHOLE LOG 61774.48_GINT_V01_2019-12-19.GPJ GEMTEC 2018.GDT 29/5/20

APPENDIX C

Analytical Summary Tables

TABLE C1
SOIL ANALYTICAL RESULTS

				5455 Boundary Road										
	Sample Location:													
	Sample ID:			BH19-4 SA1	BH19-4 SA5	BH19-5 SA2	BH19-5 SA5	BH19-9 SA2	BH19-9 SA4	BH19-18 SA1	BH19-18 SA101	BH19-18 SA4	BH19-20 SA1	BH19-20 SA5
	Sample Depth (mbgs):			0.00 – 0.61	3.05 – 3.66	0.76 – 1.37	3.05 – 3.66	0.76 – 1.37	2.29 – 2.90	0.00 – 0.61	0.00 – 0.61	2.29 – 2.90	0.00 – 0.61	3.05 – 3.66
	Date Sampled:			11-Dec-19	11-Dec-19	12-Dec-19	12-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19
Parameter	**Units**	**RDL**	**Table 2**											
Physical Tests (Soil)														
% Moisture	%	0.25	NS	21.1	23	25.1	39.2	19.2	37.8	9.92	10.9	41.5	17.9	39.5
Metals (Soil)														
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
Arsenic (As)	ug/g	1	18	1.1	1.8	2.8	2.9	1	2.8	6.3	5.6	3.1	1	3.3
Barium (Ba)	ug/g	1	670	27.7	105	182	186	19	135	124	137	198	18.9	186
Beryllium (Be)	ug/g	0.5	8	<0.50	<0.50	0.79	0.82	<0.50	0.71	<0.50	<0.50	0.88	<0.50	1.11
Boron (B)	ug/g	5	120	6	6.2	7.5	10.6	<5.0	9.6	5.8	5.9	11.6	<5.0	18.4
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
Chromium (Cr)	ug/g	1	160	15.5	51.1	67	91.1	16.5	76.6	27.5	31.4	102	17.4	101
Cobalt (Co)	ug/g	1	80	2.9	9.7	15.1	16.7	3.7	14.3	7.5	8.6	19.2	3.1	18.4
Copper (Cu)	ug/g	1	230	4.4	21.9	30.3	35.8	5.6	30.9	17.6	18.8	40.9	4.9	40
Lead (Pb)	ug/g	1	120	4.6	4.3	6.8	7.4	1.5	7	90.5	92.7	8.9	2	9.7
Molybdenum (Mo)	ug/g	1	40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	1.2	<1.0	<1.0	<1.0
Nickel (Ni)	ug/g	1	270	6.5	27.4	39.8	48.3	8.1	41.7	17.9	21.5	55.3	6.6	53.9
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
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	<0.20
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
Uranium (U)	ug/g	1	33	<1.0	<1.0	<1.0	1.3	<1.0	1.2	<1.0	<1.0	2.3	<1.0	1.2
Vanadium (V)	ug/g	1	86	21.2	45	62.6	74.4	22.9	68.8	39.1	38.8	81.5	27.6	79.6
Zinc (Zn)	ug/g	5	340	15.5	44.5	59	82.1	11	71.9	111	107	91.8	11.1	86.5
Volatile Organic Compounds														
Acetone	ug/g	0.5	16	NA	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	NA	<0.50	NA
Benzene	ug/g	0.0068	0.32	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068
Bromodichloromethane	ug/g	0.05	1.5	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
Bromoform	ug/g	0.05	0.61	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
Bromomethane	ug/g	0.05	0.05	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
Carbon tetrachloride	ug/g	0.05	0.21	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
Chlorobenzene	ug/g	0.05	2.4	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
Dibromochloromethane	ug/g	0.05	2.3	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
Chloroform	ug/g	0.05	0.47	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
1,2-Dibromoethane	ug/g	0.05	NS	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
1,2-Dichlorobenzene	ug/g	0.05	1.2	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
1,3-Dichlorobenzene	ug/g	0.05	9.6	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
1,4-Dichlorobenzene	ug/g	0.05	0.2	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
Dichlorodifluoromethane	ug/g	0.05	16	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
1,1-Dichloroethane	ug/g	0.05	0.47	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
1,2-Dichloroethane	ug/g	0.05	0.05	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
1,1-Dichloroethylene	ug/g	0.05	0.064	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
cis-1,2-Dichloroethylene	ug/g	0.05	1.9	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
trans-1,2-Dichloroethylene	ug/g	0.05	1.3	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
Methylene Chloride	ug/g	0.05	1.6	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
1,2-Dichloropropane	ug/g	0.05	0.16	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
cis-1,3-Dichloropropene	ug/g	0.03	NS	NA	<0.030	NA	<0.030	<0.030	NA	<0.030	<0.030	NA	<0.030	NA
trans-1,3-Dichloropropene	ug/g	0.03	NS	NA	<0.030	NA	<0.030	<0.030	NA	<0.030	<0.030	NA	<0.030	NA
1,3-Dichloropropene (cis & trans)	ug/g	0.042	0.059	NA	<0.042	NA	<0.042	<0.042	NA	<0.042	<0.042	NA	<0.042	NA
Ethylbenzene	ug/g	0.018	1.1	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	0.081	0.022	<0.018	<0.018	<0.018
n-Hexane	ug/g	0.05	46	NA	<0.050	NA	<0.050	<0.050	NA	2.94	0.731	NA	<0.050	NA
Methyl Ethyl Ketone	ug/g	0.5	70	NA	<0.50	NA	<0.50	<0.50	NA	<0.85	<0.50	NA	<0.50	NA

TABLE C1
SOIL ANALYTICAL RESULTS
CONTINUED

		Sample Location:		5455 Boundary Road									
		Sample ID:		BH19-4 SA1	BH19-4 SA5	BH19-5 SA2	BH19-5 SA5	BH19-9 SA2	BH19-9 SA4	BH19-18 SA1	BH19-18 SA101	BH19-18 SA4	BH19-20 SA1	BH19-20 SA5
		Sample Depth (mbgs):		0.00 – 0.61	3.05 – 3.66	0.76 – 1.37	3.05 – 3.66	0.76 – 1.37	2.29 – 2.90	0.00 – 0.61	0.00 – 0.61	2.29 – 2.90	0.00 – 0.61	3.05 – 3.66
		Date Sampled:		11-Dec-19	11-Dec-19	12-Dec-19	12-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19
Parameter	**Units**	**RDL**	**Table 2**											
Methyl Isobutyl Ketone	ug/g	0.5	31	NA	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	NA	<0.50	NA
MTBE	ug/g	0.05	1.6	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
Styrene	ug/g	0.05	34	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.087	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
Tetrachloroethylene	ug/g	0.05	1.9	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
Toluene	ug/g	0.08	6.4	0.21	<0.080	<0.080	<0.080	<0.080	0.081	0.456	0.114	<0.080	<0.080	<0.080
1,1,1-Trichloroethane	ug/g	0.05	6.1	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
1,1,2-Trichloroethane	ug/g	0.05	0.05	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
Trichloroethylene	ug/g	0.01	0.55	NA	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	NA
Trichlorofluoromethane	ug/g	0.05	4	NA	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	NA
Vinyl chloride	ug/g	0.02	0.032	NA	<0.020	NA	<0.020	<0.020	NA	<0.020	<0.020	NA	<0.020	NA
o-Xylene	ug/g	0.02	NS	<0.020	<0.020	0.027	<0.020	<0.020	<0.020	0.249	0.07	<0.020	<0.020	<0.020
m+p-Xylenes	ug/g	0.03	NS	<0.030	<0.030	0.057	<0.030	<0.030	<0.030	0.95	0.255	<0.030	<0.030	<0.030
Xylenes (Total)	ug/g	0.05	26	<0.050	<0.050	0.084	<0.050	<0.050	<0.050	1.2	0.325	<0.050	<0.050	<0.050
4-Bromofluorobenzene	%	-	NS	128	62.8	94	67.2	69.7	87.4	79.9	83	95.5	82.3	87.3
1,4-Difluorobenzene	%	-	NS	144.2	71.9	105.4	84.1	90	97.8	103.4	97.5	105.2	94.7	96.8
Hydrocarbons (Soil)														
F1 (C6-C10)	ug/g	5	55	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	44.4	12.5	<5.0	<5.0	<5.0
F1-BTEX	ug/g	5	55	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	42.6	12	<5.0	<5.0	<5.0
F2 (C10-C16)	ug/g	10	230	<10	<10	<10	<10	<10	<10	12	16	<10	<10	<10
F2-Naphth	ug/g	10	230	<10	NA	<10	NA	<10	NA	NA	NA	<10	<10	<10
F3 (C16-C34)	ug/g	50	1700	<50	<50	<50	<50	<50	<50	124	124	<50	<50	<50
F3-PAH	ug/g	50	1700	<50	NA	<50		<50	NA	NA	NA	<50	<50	<50
F4 (C34-C50)	ug/g	50	3300	<50	<50	<50	<50	<50	<50	193	170	<50	<50	<50
F4G-SG (GHH-Silica)	ug/g	250	3300	NS	NA	NA	NA	NA	NA	820	680	NA	NA	NA
Total Hydrocarbons (C6-C50)	ug/g	72	NS	<72	<72	<72	<72	<72	<72	373	323	<72	<72	<72
Chrom. to baseline at nC50	-	-	NS	YES	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES
2-Bromobenzotrifluoride	%	-	NS	87	84.3	89.5	89	84.8	88	94.8	104.2	83.6	89.2	88.9
3,4-Dichlorotoluene	%	-	NS	103.7	65	81.5	61.1	71.2	76.3	83.3	86	84.5	94.7	76.8
Polycyclic Aromatic Hydrocarbons														
Acenaphthene	ug/g	0.05	21	<0.050	NA	<0.050	NA	<0.050	NA	NA	NA	<0.050	<0.050	NA
Acenaphthylene	ug/g	0.05	0.15	<0.050	NA	<0.050	NA	<0.050	NA	NA	NA	<0.050	<0.050	NA
Anthracene	ug/g	0.05	0.67	<0.050	NA	<0.050	NA	<0.050	NA	NA	NA	<0.050	<0.050	NA
Benzo(a)anthracene	ug/g	0.05	0.96	<0.050	NA	<0.050	NA	<0.050	NA	NA	NA	<0.050	<0.050	NA
Benzo(a)pyrene	ug/g	0.05	0.3	<0.050	NA	<0.050	NA	<0.050	NA	NA	NA	<0.050	<0.050	NA
Benzo(b)fluoranthene	ug/g	0.05	0.96	<0.050	NA	<0.050	NA	<0.050	NA	NA	NA	<0.050	<0.050	NA
Benzo(g,h,i)perylene	ug/g	0.05	9.6	<0.050	NA	<0.050	NA	<0.050	NA	NA	NA	<0.050	<0.050	NA
Benzo(k)fluoranthene	ug/g	0.05	0.96	<0.050	NA	<0.050	NA	<0.050	NA	NA	NA	<0.050	<0.050	NA
Chrysene	ug/g	0.05	9.6	<0.050	NA	<0.050	NA	<0.050	NA	NA	NA	<0.050	<0.050	NA
Dibenzo(ah)anthracene	ug/g	0.05	0.1	<0.050	NA	<0.050	NA	<0.050	NA	NA	NA	<0.050	<0.050	NA
Fluoranthene	ug/g	0.05	9.6	<0.050	NA	<0.050	NA	<0.050	NA	NA	NA	<0.050	<0.050	NA
Fluorene	ug/g	0.05	62	<0.050	NA	<0.050	NA	<0.050	NA	NA	NA	<0.050	<0.050	NA
Indeno(1,2,3-cd)pyrene	ug/g	0.05	0.76	<0.050	NA	<0.050	NA	<0.050	NA	NA	NA	<0.050	<0.050	NA
1+2-Methylnaphthalenes	ug/g	0.0424	30	<0.042	NA	<0.042	NA	<0.042	NA	NA	NA	<0.042	<0.042	NA
1-Methylnaphthalene	ug/g	0.03	30	<0.030	NA	<0.030	NA	<0.030	NA	NA	NA	<0.030	<0.030	NA
2-Methylnaphthalene	ug/g	0.03	30	<0.030	NA	<0.030	NA	<0.030	NA	NA	NA	<0.030	<0.030	NA
Naphthalene	ug/g	0.013	9.6	<0.013	NA	<0.013	NA	<0.013	NA	NA	NA	<0.013	<0.013	NA
Phenanthrene	ug/g	0.046	12	<0.046	NA	0.051	NA	<0.046	NA	NA	NA	<0.046	<0.046	NA

TABLE C1
SOIL ANALYTICAL RESULTS
CONTINUED

			Sample Location:	5455 Boundary Road										
			Sample ID:	BH19-4 SA1	BH19-4 SA5	BH19-5 SA2	BH19-5 SA5	BH19-9 SA2	BH19-9 SA4	BH19-18 SA1	BH19-18 SA101	BH19-18 SA4	BH19-20 SA1	BH19-20 SA5
			Sample Depth (mbgs):	0.00 – 0.61	3.05 – 3.66	0.76 – 1.37	3.05 – 3.66	0.76 – 1.37	2.29 – 2.90	0.00 – 0.61	0.00 – 0.61	2.29 – 2.90	0.00 – 0.61	3.05 – 3.66
			Date Sampled:	11-Dec-19	11-Dec-19	12-Dec-19	12-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19	11-Dec-19
Parameter	**Units**	**RDL**	**Table 2**											
Pyrene	ug/g	0.05	96	<0.050	NA	<0.050	NA	<0.050	NA	NA	NA	<0.050	<0.050	NA
2-Fluorobiphenyl	%		NS	89.1	NA	88	NA	85.9	NA	NA	NA	88.1	91.7	NA
p-Terphenyl d14	%		NS	83.8	NA	80.4	NA	78.1	NA	NA	NA	82.4	85.2	NA
Semi-Volatile Organics														
Biphenyl	ug/g	0.05	52	NA	NA	NA	NA	NA	NA	NA	NA	<0.050	<0.050	NA
4-Chloroaniline	ug/g	0.1	0.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	<0.10	NA
Bis(2-chloroethyl)ether	ug/g	0.1	0.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	<0.10	NA
Bis(2-chloroisopropyl)ether	ug/g	0.1	11	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	<0.10	NA
3,3'-Dichlorobenzidine	ug/g	0.1	1	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	<0.10	NA
Diethylphthalate	ug/g	0.1	0.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	<0.10	NA
Dimethylphthalate	ug/g	0.1	0.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	<0.10	NA
2,4-Dimethylphenol	ug/g	0.1	38	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	<0.10	NA
2,4-Dinitrophenol	ug/g	1	2	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
2,4-Dinitrotoluene	ug/g	0.1	0.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	<0.10	NA
2,6-Dinitrotoluene	ug/g	0.1	0.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	<0.10	NA
2,4+2,6-Dinitrotoluene	ug/g	0.141	0.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.14	<0.14	NA
Bis(2-ethylhexyl)phthalate	ug/g	0.1	28	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	<0.10	NA
Phenol	ug/g	0.1	9.4	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	<0.10	NA
1,2,4-Trichlorobenzene	ug/g	0.05	3.2	NA	NA	NA	NA	NA	NA	NA	NA	<0.050	<0.050	NA
2-Fluorobiphenyl	%	-	NS	NA	NA	NA	NA	NA	NA	NA	NA	90.9	87.3	NA
Nitrobenzene d5	%	-	NS	NA	NA	NA	NA	NA	NA	NA	NA	93.1	89.8	NA
p-Terphenyl d14	%	-	NS	NA	NA	NA	NA	NA	NA	NA	NA	90.2	93.9	NA
2,4,6-Tribromophenol	%	-	NS	NA	NA	NA	NA	NA	NA	NA	NA	70.7	71.1	NA

Notes:

1 RDL - Reported Detection Limit
2 NS - No Standard
3 NA - Not Analyzed
4 mbgs - Metres Below Ground Surface
5 Table 2: Full Depth Generic Site Condition Standards in a Potable Groundwater Condition, Commercial Property Use, Coarse Soils (MOE, April 15, 2011)
6 **Bolded** - Exceeds MECP Table 2 SCS

TABLE C2
GROUNDWATER ANALYTICAL RESULTS

			Sample Location:	5455 Boundary Road						
			Sample ID:	MW19-04	MW19-05	MW19-09	MW19-09 R1	MW19-18	MW19-18 R1	MW19-20
			Screened Interval (mbgs):	0.76 – 3.81	0.76 – 3.81	0.76 – 3.81	0.76 – 3.81	0.76 – 3.81	0.76 – 3.81	0.76 – 3.81
			Date Sampled:	16/12/2019	16/12/2019	16/12/2019	07/05/2020	16/12/2019	06/05/2020	16/12/2019
Parameter	Units	RDL	Table 2							
Physical Tests										
Conductivity	mS/cm	0.003	NS	0.638	0.22	0.213	NA	1.89	NA	0.789
pH	pH units	0.1	NS	7.87	8.09	8.2	NA	7.23	NA	7.16
Anions and Nutrients										
Chloride (Cl)	mg/L	0.5	790	34.2	6.96	10.1	NA	192	NA	27.9
Cyanides (Water)										
Cyanide, Weak Acid Diss	ug/L	2	66	<2.0	<2.0	<2.0	NA	<2.0	NA	<2.0
Dissolved Metals										
Antimony (Sb)-Dissolved	ug/L	0.1	6	0.1	0.22	0.11	NA	0.13	0.23	0.13
Arsenic (As)-Dissolved	ug/L	0.1	25	1.63	0.55	0.43	NA	0.59	0.61	0.52
Barium (Ba)-Dissolved	ug/L	0.1	1000	115	12.2	11.7	NA	160	92	82.2
Beryllium (Be)-Dissolved	ug/L	0.1	4	<0.10	<0.10	<0.10	NA	<0.10	<0.10	<0.10
Boron (B)-Dissolved	ug/L	10	5000	82	20	20	NA	86	61	25
Cadmium (Cd)-Dissolved	ug/L	0.01	2.7	0.013	<0.010	0.01	NA	0.075	0.027	0.045
Chromium (Cr)-Dissolved	ug/L	0.5	50	<0.50	<0.50	<0.50	NA	0.65	0.64	<0.50
Cobalt (Co)-Dissolved	ug/L	0.1	3.8	0.87	0.1	0.13	NA	**6.46**	3.72	1.34
Copper (Cu)-Dissolved	ug/L	0.2	87	1.93	1.81	1.94	NA	1.59	2.9	3.04
Lead (Pb)-Dissolved	ug/L	0.05	10	<0.050	<0.050	0.059	NA	<0.050	0.063	0.051
Mercury (Hg)-Dissolved	ug/L	0.005	0.29	<0.0050	<0.0050	<0.0050	NA	0.0098	NA	<0.0050
Molybdenum (Mo)-Dissolved	ug/L	0.05	70	1.1	5.02	6.71	NA	1.95	3.6	1.05
Nickel (Ni)-Dissolved	ug/L	0.5	100	1.16	0.81	0.6	NA	8.82	4.8	2.83
Selenium (Se)-Dissolved	ug/L	0.05	10	0.107	0.226	0.149	NA	0.224	0.204	0.184
Silver (Ag)-Dissolved	ug/L	0.05	1.5	<0.050	<0.050	<0.050	NA	<0.050	<0.050	<0.050
Sodium (Na)-Dissolved	ug/L	500	490000	58200	15300	19800	NA	105000	110000	65300
Thallium (Tl)-Dissolved	ug/L	0.01	2	<0.010	<0.010	<0.010	NA	0.013	<0.010	<0.010
Uranium (U)-Dissolved	ug/L	0.01	20	1.7	0.967	1.12	NA	2.77	2.23	2.23
Vanadium (V)-Dissolved	ug/L	0.5	6.2	0.59	1.94	0.94	NA	1.36	1.18	<0.50
Zinc (Zn)-Dissolved	ug/L	1	1100	1.4	<1.0	1.1	NA	2.5	4.4	2.4
Speciated Metals										
Chromium, Hexavalent	ug/L	0.5	25	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
Volatile Organic Compounds										
Acetone	ug/L	30	2700	<30	<30	<30	NA	<30	NA	<30
Benzene	ug/L	0.5	5	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
Bromodichloromethane	ug/L	2	16	<2.0	<2.0	<2.0	NA	<2.0	NA	<2.0
Bromoform	ug/L	5	25	<5.0	<5.0	<5.0	NA	<5.0	NA	<5.0
Bromomethane	ug/L	0.5	0.89	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
Carbon tetrachloride	ug/L	0.2	0.79	<0.20	<0.20	<0.20	NA	<0.20	NA	<0.20
Chlorobenzene	ug/L	0.5	30	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
Dibromochloromethane	ug/L	2	25	<2.0	<2.0	<2.0	NA	<2.0	NA	<2.0
Chloroform	ug/L	1	2.4	<1.0	<1.0	<1.0	NA	<1.0	NA	<1.0
1,2-Dibromoethane	ug/L	0.2	NS	<0.20	<0.20	<0.20	NA	<0.20	NA	<0.20
1,2-Dichlorobenzene	ug/L	0.5	3	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
1,3-Dichlorobenzene	ug/L	0.5	59	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
1,4-Dichlorobenzene	ug/L	0.5	1	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
Dichlorodifluoromethane	ug/L	2	590	<2.0	<2.0	<2.0	NA	<2.0	NA	<2.0
1,1-Dichloroethane	ug/L	0.5	5	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
1,2-Dichloroethane	ug/L	0.5	1.6	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
1,1-Dichloroethylene	ug/L	0.5	1.6	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
cis-1,2-Dichloroethylene	ug/L	0.5	1.6	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
trans-1,2-Dichloroethylene	ug/L	0.5	1.6	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
Methylene Chloride	ug/L	5	50	<5.0	<5.0	<5.0	NA	<5.0	NA	<5.0
1,2-Dichloropropane	ug/L	0.5	5	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
cis-1,3-Dichloropropene	ug/L	0.3	0.5	<0.30	<0.30	<0.30	NA	<0.30	NA	<0.30
trans-1,3-Dichloropropene	ug/L	0.3	0.5	<0.30	<0.30	<0.30	NA	<0.30	NA	<0.30
1,3-Dichloropropene (cis & trans)	ug/L	0.5	0.5	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
Ethylbenzene	ug/L	0.5	2.4	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
n-Hexane	ug/L	0.5	51	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
Methyl Ethyl Ketone	ug/L	20	1800	<20	<20	<20	NA	<20	NA	<20
Methyl Isobutyl Ketone	ug/L	20	640	<20	<20	<20	NA	<20	NA	<20
MTBE	ug/L	2	15	<2.0	<2.0	<2.0	NA	<2.0	NA	<2.0
Styrene	ug/L	0.5	5.4	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
1,1,1,2-Tetrachloroethane	ug/L	0.5	1.1	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
1,1,2,2-Tetrachloroethane	ug/L	0.5	1	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
Tetrachloroethylene	ug/L	0.5	1.6	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
Toluene	ug/L	0.5	24	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
1,1,1-Trichloroethane	ug/L	0.5	200	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
1,1,2-Trichloroethane	ug/L	0.5	4.7	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
Trichloroethylene	ug/L	0.5	1.6	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
Trichlorofluoromethane	ug/L	5	150	<5.0	<5.0	<5.0	NA	<5.0	NA	<5.0
Vinyl chloride	ug/L	0.5	0.5	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
o-Xylene	ug/L	0.3	NS	<0.30	<0.30	<0.30	NA	<0.30	NA	<0.30
m+p-Xylenes	ug/L	0.4	NS	<0.40	<0.40	<0.40	NA	<0.40	NA	<0.40
Xylenes (Total)	ug/L	0.5	300	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50
4-Bromofluorobenzene	%	-	NS	83.7	84.1	84	NA	83.7	NA	83.1
1,4-Difluorobenzene	%	-	NS	96.6	96.1	96	NA	96.3	NA	96
Hydrocarbons										
F1 (C6-C10)	ug/L	25	750	<25	<25	<25	NA	<25	NA	<25
F1-BTEX	ug/L	25	750	<25	<25	<25	NA	<25	NA	<25
F2 (C10-C16)	ug/L	100	150	<100	<100	<100	NA	<100	NA	<100
F2-Naphth	ug/L	100	150	<100	<100	<100	NA	<100	NA	<100
F3 (C16-C34)	ug/L	250	500	<250	<250	<250	NA	<250	NA	<250
F3-PAH	ug/L	250	500	<250	<250	<250	NA	<250	NA	<250
F4 (C34-C50)	ug/L	250	500	<250	<250	<250	NA	<250	NA	<250
Total Hydrocarbons (C6-C50)	ug/L	370	500	<370	<370	<370	NA	<370	NA	<370
Chrom. to baseline at nC50	-	-	NS	YES	YES	YES	NA	YES	NA	YES
2-Bromobenzotrifluoride	%	-	NS	91.7	89.1	90.2	NA	87.6	NA	88.3
3,4-Dichlorotoluene	%	-	NS	74.2	86.3	87.1	NA	76.3	NA	79.7
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	ug/L	0.02	4.1	<0.020	0.109	<0.020	<0.020	<0.020	NA	<0.020
Acenaphthylene	ug/L	0.02	1	<0.020	0.074	<0.020	<0.020	<0.020	NA	<0.020
Anthracene	ug/L	0.02	2.4	<0.020	0.033	<0.020	<0.020	<0.020	NA	<0.020
Benzo(a)anthracene	ug/L	0.02	1	<0.020	<0.020	0.03	<0.020	<0.020	NA	<0.020
Benzo(a)pyrene	ug/L	0.01	0.01	<0.010	<0.010	**0.023**	<0.010	<0.010	NA	<0.010
Benzo(b)fluoranthene	ug/L	0.02	0.1	<0.020	<0.020	0.042	<0.020	<0.020	NA	<0.020
Benzo(g,h,i)perylene	ug/L	0.02	0.2	<0.020	<0.020	0.02	<0.020	<0.020	NA	<0.020
Benzo(k)fluoranthene	ug/L	0.02	0.1	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<0.020
Chrysene	ug/L	0.02	0.1	<0.020	<0.020	0.035	<0.020	<0.020	NA	<0.020
Dibenzo(ah)anthracene	ug/L	0.02	0.2	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<0.020
Fluoranthene	ug/L	0.02	0.41	<0.020	0.046	0.079	<0.020	<0.020	NA	<0.020
Fluorene	ug/L	0.02	120	<0.020	0.119	<0.020	<0.020	<0.020	NA	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.02	0.2	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<0.020
1+2-Methylnaphthalenes	ug/L	0.0283	3.2	<0.028	0.337	<0.028	<0.028	<0.028	NA	<0.028
1-Methylnaphthalene	ug/L	0.02	3.2	<0.020	0.181	<0.020	<0.020	<0.020	NA	<0.020
2-Methylnaphthalene	ug/L	0.02	3.2	<0.020	0.157	<0.020	<0.020	<0.020	NA	<0.020
Naphthalene	ug/L	0.05	11	<0.050	1.05	<0.050	<0.050	<0.050	NA	<0.050
Phenanthrene	ug/L	0.02	1	<0.020	0.184	0.041	<0.020	0.02	NA	<0.020
Pyrene	ug/L	0.02	4.1	<0.020	0.04	0.079	<0.020	<0.020	NA	<0.020
d10-Acenaphthene	%	-	NS	97	90	97.8	96.3	92.5	NA	92.9
d12-Chrysene	%	-	NS	93.9	93.7	98.5	91.5	93.2	NA	93.5
d8-Naphthalene	%	-	NS	96.2	89.1	97.2	95.8	96.7	NA	93
d10-Phenanthrene	%	-	NS	104.1	97.3	101.4	98.3	95.8	NA	98.2

TABLE C2
GROUNDWATER ANALYTICAL RESULTS
CONTINUED

			Sample Location:	5455 Boundary Road						
			Sample ID:	MW19-04	MW19-05	MW19-09	MW19-09 R1	MW19-18	MW19-18 R1	MW19-20
			Screened Interval (mbgs):	0.76 – 3.81	0.76 – 3.81	0.76 – 3.81	0.76 – 3.81	0.76 – 3.81	0.76 – 3.81	0.76 – 3.81
			Date Sampled:	16/12/2019	16/12/2019	16/12/2019	07/05/2020	16/12/2019	06/05/2020	16/12/2019
Parameter	Units	RDL	Table 2							
Semi-Volatile Organics										
Biphenyl	ug/L	0.4	0.5	NA	NA	NA	NA	<0.40	NA	<0.40
4-Chloroaniline	ug/L	0.4	NS	NA	NA	NA	NA	<0.40	NA	<0.40
Bis(2-chloroethyl)ether	ug/L	0.4	5	NA	NA	NA	NA	<0.40	NA	<0.40
Bis(2-chloroisopropyl)ether	ug/L	0.4	120	NA	NA	NA	NA	<0.40	NA	<0.40
2-Chlorophenol	ug/L	0.3	8.9	NA	NA	NA	NA	<0.30	NA	<0.30
3,3'-Dichlorobenzidine	ug/L	0.4	0.5	NA	NA	NA	NA	<0.40	NA	<0.40
2,4-Dichlorophenol	ug/L	0.3	20	NA	NA	NA	NA	<0.30	NA	<0.30
Diethylphthalate	ug/L	0.2	38	NA	NA	NA	NA	<0.20	NA	<0.20
Dimethylphthalate	ug/L	0.2	38	NA	NA	NA	NA	<0.20	NA	<0.20
2,4-Dimethylphenol	ug/L	0.5	59	NA	NA	NA	NA	<0.50	NA	<0.50
2,4-Dinitrophenol	ug/L	1	10	NA	NA	NA	NA	<1.0	NA	<1.0
2,4-Dinitrotoluene	ug/L	0.4	5	NA	NA	NA	NA	<0.40	NA	<0.40
2,6-Dinitrotoluene	ug/L	0.4	5	NA	NA	NA	NA	<0.40	NA	<0.40
2,4+2,6-Dinitrotoluene	ug/L	0.566	5	NA	NA	NA	NA	<0.57	NA	<0.57
Bis(2-ethylhexyl)phthalate	ug/L	2	10	NA	NA	NA	NA	<2.0	NA	<2.0
Pentachlorophenol	ug/L	0.5	30	NA	NA	NA	NA	<0.50	NA	<0.50
Phenol	ug/L	0.5	890	NA	NA	NA	NA	0.62	NA	0.52
1,2,4-Trichlorobenzene	ug/L	0.4	70	NA	NA	NA	NA	<0.40	NA	<0.40
2,4,5-Trichlorophenol	ug/L	0.2	8.9	NA	NA	NA	NA	<0.20	NA	<0.20
2,4,6-Trichlorophenol	ug/L	0.2	2	NA	NA	NA	NA	<0.20	NA	<0.20
2-Fluorobiphenyl	%	-	NS	NA	NA	NA	NA	76.9	NA	80.5
Nitrobenzene d5	%	-	NS	NA	NA	NA	NA	80.4	NA	84.4
p-Terphenyl d14	%	-	NS	NA	NA	NA	NA	77.8	NA	83.4
2,4,6-Tribromophenol	%	-	NS	NA	NA	NA	NA	92.4	NA	103.6

Notes:
1 RDL - Reported Detection Limit
2 NS - No Standard
3 NA - Not Analyzed
4 mbgs - Metres Below Ground Surface
5 Table 2: Full Depth Generic Site Condition Standards in a Potable Groundwater Condition, Commercial Property Use, Coarse Soils (MOE, April 15, 2011)
6 **Bolded** - Exceeds MECP Table 2 SCS

APPENDIX D

Laboratory Analytical Reports

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

Date Received: 13-DEC-19
Report Date: 23-DEC-19 12:50 (MT)
Version: FINAL

Client Phone: 613-858-0886

Certificate of Analysis

Lab Work Order #: L2396546

Project P.O. #: 61774.48
Job Reference: 61774.48
C of C Numbers:
Legal Site Desc: BOUNDARY RD

Emily Smith
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2396546-1 BH19-4 SA1 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	21.1		0.25	%	16-DEC-19	17-DEC-19	R4944392
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Arsenic (As)	1.1		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Barium (Ba)	27.7		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Beryllium (Be)	<0.50		0.50	ug/g	17-DEC-19	17-DEC-19	R4944645
Boron (B)	6.0		5.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Cadmium (Cd)	<0.50		0.50	ug/g	17-DEC-19	17-DEC-19	R4944645
Chromium (Cr)	15.5		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Cobalt (Co)	2.9		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Copper (Cu)	4.4		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Lead (Pb)	4.6		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Molybdenum (Mo)	<1.0		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Nickel (Ni)	6.5		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Selenium (Se)	<1.0		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Silver (Ag)	<0.20		0.20	ug/g	17-DEC-19	17-DEC-19	R4944645
Thallium (Tl)	<0.50		0.50	ug/g	17-DEC-19	17-DEC-19	R4944645
Uranium (U)	<1.0		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Vanadium (V)	21.2		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Zinc (Zn)	15.5		5.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Volatile Organic Compounds							
Benzene	<0.0068		0.0068	ug/g	17-DEC-19	20-DEC-19	R4946080
Ethylbenzene	<0.018		0.018	ug/g	17-DEC-19	20-DEC-19	R4946080
Toluene	0.210		0.080	ug/g	17-DEC-19	20-DEC-19	R4946080
o-Xylene	<0.020		0.020	ug/g	17-DEC-19	20-DEC-19	R4946080
m+p-Xylenes	<0.030		0.030	ug/g	17-DEC-19	20-DEC-19	R4946080
Xylenes (Total)	<0.050		0.050	ug/g		20-DEC-19	
Surrogate: 4-Bromofluorobenzene	128.0		50-140	%	17-DEC-19	20-DEC-19	R4946080
Surrogate: 1,4-Difluorobenzene	144.2	SOL:MI	50-140	%	17-DEC-19	20-DEC-19	R4946080
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	17-DEC-19	18-DEC-19	R4946080
F1-BTEX	<5.0		5.0	ug/g		20-DEC-19	
F2 (C10-C16)	<10		10	ug/g	17-DEC-19	18-DEC-19	R4946283
F2-Naphth	<10		10	ug/g		20-DEC-19	
F3 (C16-C34)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946283
F3-PAH	<50		50	ug/g		20-DEC-19	
F4 (C34-C50)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946283
Total Hydrocarbons (C6-C50)	<72		72	ug/g		20-DEC-19	
Chrom. to baseline at nC50	YES				17-DEC-19	18-DEC-19	R4946283
Surrogate: 2-Bromobenzotrifluoride	87.0		60-140	%	17-DEC-19	18-DEC-19	R4946283
Surrogate: 3,4-Dichlorotoluene	103.7		60-140	%	17-DEC-19	18-DEC-19	R4946080
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
L2396546-1 BH19-4 SA1 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Acenaphthylene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Anthracene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(a)anthracene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(a)pyrene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(b)fluoranthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(k)fluoranthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Chrysene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Fluoranthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Fluorene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		19-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	16-DEC-19	19-DEC-19	R4946243
2-Methylnaphthalene	<0.030		0.030	ug/g	16-DEC-19	19-DEC-19	R4946243
Naphthalene	<0.013		0.013	ug/g	16-DEC-19	19-DEC-19	R4946243
Phenanthrene	<0.046		0.046	ug/g	16-DEC-19	19-DEC-19	R4946243
Pyrene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Surrogate: 2-Fluorobiphenyl	89.1		50-140	%	16-DEC-19	19-DEC-19	R4946243
Surrogate: p-Terphenyl d14	83.8		50-140	%	16-DEC-19	19-DEC-19	R4946243
L2396546-2 BH19-4 SA5 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	23.0		0.25	%	16-DEC-19	17-DEC-19	R4944392
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Arsenic (As)	1.8		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Barium (Ba)	105		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Beryllium (Be)	<0.50		0.50	ug/g	17-DEC-19	17-DEC-19	R4944645
Boron (B)	6.2		5.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Cadmium (Cd)	<0.50		0.50	ug/g	17-DEC-19	17-DEC-19	R4944645
Chromium (Cr)	51.1		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Cobalt (Co)	9.7		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Copper (Cu)	21.9		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Lead (Pb)	4.3		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Molybdenum (Mo)	<1.0		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Nickel (Ni)	27.4		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Selenium (Se)	<1.0		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Silver (Ag)	<0.20		0.20	ug/g	17-DEC-19	17-DEC-19	R4944645
Thallium (Tl)	<0.50		0.50	ug/g	17-DEC-19	17-DEC-19	R4944645

* 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
L2396546-2 BH19-4 SA5 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Metals							
Uranium (U)	<1.0		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Vanadium (V)	45.0		1.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Zinc (Zn)	44.5		5.0	ug/g	17-DEC-19	17-DEC-19	R4944645
Volatile Organic Compounds							
Acetone	<0.50		0.50	ug/g	17-DEC-19	20-DEC-19	R4945179
Benzene	<0.0068		0.0068	ug/g	17-DEC-19	20-DEC-19	R4945179
Bromodichloromethane	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
Bromoform	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
Bromomethane	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
Carbon tetrachloride	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
Chlorobenzene	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
Dibromochloromethane	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
Chloroform	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
1,2-Dibromoethane	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
1,2-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
1,3-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
1,4-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
Dichlorodifluoromethane	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
1,1-Dichloroethane	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
1,2-Dichloroethane	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
1,1-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
Methylene Chloride	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
1,2-Dichloropropane	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	17-DEC-19	20-DEC-19	R4945179
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	17-DEC-19	20-DEC-19	R4945179
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		20-DEC-19	
Ethylbenzene	<0.018		0.018	ug/g	17-DEC-19	20-DEC-19	R4945179
n-Hexane	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
Methyl Ethyl Ketone	<0.50		0.50	ug/g	17-DEC-19	20-DEC-19	R4945179
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	17-DEC-19	20-DEC-19	R4945179
MTBE	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
Styrene	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
Tetrachloroethylene	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
Toluene	<0.080		0.080	ug/g	17-DEC-19	20-DEC-19	R4945179
1,1,1-Trichloroethane	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
1,1,2-Trichloroethane	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
Trichloroethylene	<0.010		0.010	ug/g	17-DEC-19	20-DEC-19	R4945179

* 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
L2396546-2 BH19-4 SA5 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Volatile Organic Compounds							
Trichlorofluoromethane	<0.050		0.050	ug/g	17-DEC-19	20-DEC-19	R4945179
Vinyl chloride	<0.020		0.020	ug/g	17-DEC-19	20-DEC-19	R4945179
o-Xylene	<0.020		0.020	ug/g	17-DEC-19	20-DEC-19	R4945179
m+p-Xylenes	<0.030		0.030	ug/g	17-DEC-19	20-DEC-19	R4945179
Xylenes (Total)	<0.050		0.050	ug/g		20-DEC-19	
Surrogate: 4-Bromofluorobenzene	62.8		50-140	%	17-DEC-19	20-DEC-19	R4945179
Surrogate: 1,4-Difluorobenzene	71.9		50-140	%	17-DEC-19	20-DEC-19	R4945179
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	17-DEC-19	19-DEC-19	R4946080
F1-BTEX	<5.0		5.0	ug/g		20-DEC-19	
F2 (C10-C16)	<10		10	ug/g	17-DEC-19	18-DEC-19	R4946334
F3 (C16-C34)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
F4 (C34-C50)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
Total Hydrocarbons (C6-C50)	<72		72	ug/g		20-DEC-19	
Chrom. to baseline at nC50	YES				17-DEC-19	18-DEC-19	R4946334
Surrogate: 2-Bromobenzotrifluoride	84.3		60-140	%	17-DEC-19	18-DEC-19	R4946334
Surrogate: 3,4-Dichlorotoluene	65.0		60-140	%	17-DEC-19	19-DEC-19	R4946080
L2396546-3 BH19-5 SA2 Sampled By: CLIENT on 12-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	25.1		0.25	%	16-DEC-19	17-DEC-19	R4944392
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Arsenic (As)	2.8		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Barium (Ba)	182		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Beryllium (Be)	0.79		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Boron (B)	7.5		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cadmium (Cd)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Chromium (Cr)	67.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cobalt (Co)	15.1		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Copper (Cu)	30.3		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Lead (Pb)	6.8		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Molybdenum (Mo)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Nickel (Ni)	39.8		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Selenium (Se)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Silver (Ag)	<0.20		0.20	ug/g	18-DEC-19	18-DEC-19	R4946069
Thallium (Tl)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Uranium (U)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Vanadium (V)	62.6		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Zinc (Zn)	59.0		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Volatile Organic Compounds							

* 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
L2396546-3 BH19-5 SA2 Sampled By: CLIENT on 12-DEC-19 Matrix: SOIL							
Volatile Organic Compounds							
Benzene	<0.0068		0.0068	ug/g	17-DEC-19	19-DEC-19	R4946080
Ethylbenzene	<0.018		0.018	ug/g	17-DEC-19	19-DEC-19	R4946080
Toluene	<0.080		0.080	ug/g	17-DEC-19	19-DEC-19	R4946080
o-Xylene	0.027		0.020	ug/g	17-DEC-19	19-DEC-19	R4946080
m+p-Xylenes	0.057		0.030	ug/g	17-DEC-19	19-DEC-19	R4946080
Xylenes (Total)	0.084		0.050	ug/g		19-DEC-19	
Surrogate: 4-Bromofluorobenzene	94.0		50-140	%	17-DEC-19	19-DEC-19	R4946080
Surrogate: 1,4-Difluorobenzene	105.4		50-140	%	17-DEC-19	19-DEC-19	R4946080
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	17-DEC-19	19-DEC-19	R4946080
F1-BTEX	<5.0		5.0	ug/g		19-DEC-19	
F2 (C10-C16)	<10		10	ug/g	17-DEC-19	18-DEC-19	R4946334
F2-Naphth	<10		10	ug/g		19-DEC-19	
F3 (C16-C34)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
F3-PAH	<50		50	ug/g		19-DEC-19	
F4 (C34-C50)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
Total Hydrocarbons (C6-C50)	<72		72	ug/g		19-DEC-19	
Chrom. to baseline at nC50	YES				17-DEC-19	18-DEC-19	R4946334
Surrogate: 2-Bromobenzotrifluoride	89.5		60-140	%	17-DEC-19	18-DEC-19	R4946334
Surrogate: 3,4-Dichlorotoluene	81.5		60-140	%	17-DEC-19	19-DEC-19	R4946080
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Acenaphthylene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Anthracene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(a)anthracene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(a)pyrene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(b)fluoranthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(k)fluoranthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Chrysene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Fluoranthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Fluorene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		19-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	16-DEC-19	19-DEC-19	R4946243
2-Methylnaphthalene	<0.030		0.030	ug/g	16-DEC-19	19-DEC-19	R4946243
Naphthalene	<0.013		0.013	ug/g	16-DEC-19	19-DEC-19	R4946243
Phenanthrene	0.051		0.046	ug/g	16-DEC-19	19-DEC-19	R4946243
Pyrene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Surrogate: 2-Fluorobiphenyl	88.0		50-140	%	16-DEC-19	19-DEC-19	R4946243

* 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
L2396546-3 BH19-5 SA2 Sampled By: CLIENT on 12-DEC-19 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Surrogate: p-Terphenyl d14	80.4		50-140	%	16-DEC-19	19-DEC-19	R4946243
L2396546-4 BH19-5 SA5 Sampled By: CLIENT on 12-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	39.2		0.25	%	16-DEC-19	17-DEC-19	R4944392
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Arsenic (As)	2.9		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Barium (Ba)	186		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Beryllium (Be)	0.82		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Boron (B)	10.6		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cadmium (Cd)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Chromium (Cr)	91.1		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cobalt (Co)	16.7		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Copper (Cu)	35.8		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Lead (Pb)	7.4		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Molybdenum (Mo)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Nickel (Ni)	48.3		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Selenium (Se)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Silver (Ag)	<0.20		0.20	ug/g	18-DEC-19	18-DEC-19	R4946069
Thallium (Tl)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Uranium (U)	1.3		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Vanadium (V)	74.4		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Zinc (Zn)	82.1		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Volatile Organic Compounds							
Acetone	<0.50		0.50	ug/g	17-DEC-19	19-DEC-19	R4946201
Benzene	<0.0068		0.0068	ug/g	17-DEC-19	19-DEC-19	R4946201
Bromodichloromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Bromoform	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Bromomethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Carbon tetrachloride	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Chlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Dibromochloromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Chloroform	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,2-Dibromoethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,2-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,3-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,4-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Dichlorodifluoromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,1-Dichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,2-Dichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201

* 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
L2396546-4 BH19-5 SA5 Sampled By: CLIENT on 12-DEC-19 Matrix: SOIL							
Volatile Organic Compounds							
1,1-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Methylene Chloride	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,2-Dichloropropane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	17-DEC-19	19-DEC-19	R4946201
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	17-DEC-19	19-DEC-19	R4946201
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		19-DEC-19	
Ethylbenzene	<0.018		0.018	ug/g	17-DEC-19	19-DEC-19	R4946201
n-Hexane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Methyl Ethyl Ketone	<0.50		0.50	ug/g	17-DEC-19	19-DEC-19	R4946201
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	17-DEC-19	19-DEC-19	R4946201
MTBE	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Styrene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Tetrachloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Toluene	<0.080		0.080	ug/g	17-DEC-19	19-DEC-19	R4946201
1,1,1-Trichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,1,2-Trichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Trichloroethylene	<0.010		0.010	ug/g	17-DEC-19	19-DEC-19	R4946201
Trichlorofluoromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Vinyl chloride	<0.020		0.020	ug/g	17-DEC-19	19-DEC-19	R4946201
o-Xylene	<0.020		0.020	ug/g	17-DEC-19	19-DEC-19	R4946201
m+p-Xylenes	<0.030		0.030	ug/g	17-DEC-19	19-DEC-19	R4946201
Xylenes (Total)	<0.050		0.050	ug/g		19-DEC-19	
Surrogate: 4-Bromofluorobenzene	67.2		50-140	%	17-DEC-19	19-DEC-19	R4946201
Surrogate: 1,4-Difluorobenzene	84.1		50-140	%	17-DEC-19	19-DEC-19	R4946201
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	17-DEC-19	19-DEC-19	R4946201
F1-BTEX	<5.0		5.0	ug/g		19-DEC-19	
F2 (C10-C16)	<10		10	ug/g	17-DEC-19	18-DEC-19	R4946334
F3 (C16-C34)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
F4 (C34-C50)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
Total Hydrocarbons (C6-C50)	<72		72	ug/g		19-DEC-19	
Chrom. to baseline at nC50	YES				17-DEC-19	18-DEC-19	R4946334
Surrogate: 2-Bromobenzotrifluoride	89.0		60-140	%	17-DEC-19	18-DEC-19	R4946334
Surrogate: 3,4-Dichlorotoluene	61.1		60-140	%	17-DEC-19	19-DEC-19	R4946201
L2396546-5 BH19-9 SA2 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Physical Tests							

* 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
L2396546-5 BH19-9 SA2 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	19.2		0.25	%	16-DEC-19	17-DEC-19	R4944392
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Arsenic (As)	1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Barium (Ba)	19.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Beryllium (Be)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Boron (B)	<5.0		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cadmium (Cd)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Chromium (Cr)	16.5		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cobalt (Co)	3.7		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Copper (Cu)	5.6		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Lead (Pb)	1.5		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Molybdenum (Mo)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Nickel (Ni)	8.1		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Selenium (Se)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Silver (Ag)	<0.20		0.20	ug/g	18-DEC-19	18-DEC-19	R4946069
Thallium (Tl)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Uranium (U)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Vanadium (V)	22.9		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Zinc (Zn)	11.0		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Volatile Organic Compounds							
Acetone	<0.50		0.50	ug/g	17-DEC-19	19-DEC-19	R4946201
Benzene	<0.0068		0.0068	ug/g	17-DEC-19	19-DEC-19	R4946201
Bromodichloromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Bromoform	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Bromomethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Carbon tetrachloride	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Chlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Dibromochloromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Chloroform	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,2-Dibromoethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,2-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,3-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,4-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Dichlorodifluoromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,1-Dichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,2-Dichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,1-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Methylene Chloride	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201

* 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
L2396546-5 BH19-9 SA2 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Volatile Organic Compounds							
1,2-Dichloropropane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	17-DEC-19	19-DEC-19	R4946201
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	17-DEC-19	19-DEC-19	R4946201
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		19-DEC-19	
Ethylbenzene	<0.018		0.018	ug/g	17-DEC-19	19-DEC-19	R4946201
n-Hexane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Methyl Ethyl Ketone	<0.50		0.50	ug/g	17-DEC-19	19-DEC-19	R4946201
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	17-DEC-19	19-DEC-19	R4946201
MTBE	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Styrene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Tetrachloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Toluene	<0.080		0.080	ug/g	17-DEC-19	19-DEC-19	R4946201
1,1,1-Trichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
1,1,2-Trichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Trichloroethylene	<0.010		0.010	ug/g	17-DEC-19	19-DEC-19	R4946201
Trichlorofluoromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946201
Vinyl chloride	<0.020		0.020	ug/g	17-DEC-19	19-DEC-19	R4946201
o-Xylene	<0.020		0.020	ug/g	17-DEC-19	19-DEC-19	R4946201
m+p-Xylenes	<0.030		0.030	ug/g	17-DEC-19	19-DEC-19	R4946201
Xylenes (Total)	<0.050		0.050	ug/g		19-DEC-19	
Surrogate: 4-Bromofluorobenzene	69.7		50-140	%	17-DEC-19	19-DEC-19	R4946201
Surrogate: 1,4-Difluorobenzene	90.0		50-140	%	17-DEC-19	19-DEC-19	R4946201
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	17-DEC-19	19-DEC-19	R4946201
F1-BTEX	<5.0		5.0	ug/g		19-DEC-19	
F2 (C10-C16)	<10		10	ug/g	17-DEC-19	18-DEC-19	R4946334
F2-Naphth	<10		10	ug/g		19-DEC-19	
F3 (C16-C34)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
F3-PAH	<50		50	ug/g		19-DEC-19	
F4 (C34-C50)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
Total Hydrocarbons (C6-C50)	<72		72	ug/g		19-DEC-19	
Chrom. to baseline at nC50	YES				17-DEC-19	18-DEC-19	R4946334
Surrogate: 2-Bromobenzotrifluoride	84.8		60-140	%	17-DEC-19	18-DEC-19	R4946334
Surrogate: 3,4-Dichlorotoluene	71.2		60-140	%	17-DEC-19	19-DEC-19	R4946201
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Acenaphthylene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Anthracene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(a)anthracene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243

* 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
L2396546-5 BH19-9 SA2 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(b)fluoranthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(k)fluoranthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Chrysene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Fluoranthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Fluorene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		19-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	16-DEC-19	19-DEC-19	R4946243
2-Methylnaphthalene	<0.030		0.030	ug/g	16-DEC-19	19-DEC-19	R4946243
Naphthalene	<0.013		0.013	ug/g	16-DEC-19	19-DEC-19	R4946243
Phenanthrene	<0.046		0.046	ug/g	16-DEC-19	19-DEC-19	R4946243
Pyrene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Surrogate: 2-Fluorobiphenyl	85.9		50-140	%	16-DEC-19	19-DEC-19	R4946243
Surrogate: p-Terphenyl d14	78.1		50-140	%	16-DEC-19	19-DEC-19	R4946243
L2396546-6 BH19-9 SA4 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	37.8		0.25	%	16-DEC-19	17-DEC-19	R4944392
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Arsenic (As)	2.8		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Barium (Ba)	135		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Beryllium (Be)	0.71		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Boron (B)	9.6		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cadmium (Cd)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Chromium (Cr)	76.6		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cobalt (Co)	14.3		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Copper (Cu)	30.9		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Lead (Pb)	7.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Molybdenum (Mo)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Nickel (Ni)	41.7		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Selenium (Se)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Silver (Ag)	<0.20		0.20	ug/g	18-DEC-19	18-DEC-19	R4946069
Thallium (Tl)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Uranium (U)	1.2		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Vanadium (V)	68.8		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Zinc (Zn)	71.9		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Volatile Organic Compounds							

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2396546-6 BH19-9 SA4 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Volatile Organic Compounds							
Benzene	<0.0068		0.0068	ug/g	17-DEC-19	18-DEC-19	R4945279
Ethylbenzene	<0.018		0.018	ug/g	17-DEC-19	18-DEC-19	R4945279
Toluene	0.081		0.080	ug/g	17-DEC-19	18-DEC-19	R4945279
o-Xylene	<0.020		0.020	ug/g	17-DEC-19	18-DEC-19	R4945279
m+p-Xylenes	<0.030		0.030	ug/g	17-DEC-19	18-DEC-19	R4945279
Xylenes (Total)	<0.050		0.050	ug/g		18-DEC-19	
Surrogate: 4-Bromofluorobenzene	87.4		50-140	%	17-DEC-19	18-DEC-19	R4945279
Surrogate: 1,4-Difluorobenzene	97.8		50-140	%	17-DEC-19	18-DEC-19	R4945279
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	17-DEC-19	18-DEC-19	R4945279
F1-BTEX	<5.0		5.0	ug/g		19-DEC-19	
F2 (C10-C16)	<10		10	ug/g	17-DEC-19	18-DEC-19	R4946334
F3 (C16-C34)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
F4 (C34-C50)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
Total Hydrocarbons (C6-C50)	<72		72	ug/g		19-DEC-19	
Chrom. to baseline at nC50	YES				17-DEC-19	18-DEC-19	R4946334
Surrogate: 2-Bromobenzotrifluoride	88.0		60-140	%	17-DEC-19	18-DEC-19	R4946334
Surrogate: 3,4-Dichlorotoluene	76.3		60-140	%	17-DEC-19	18-DEC-19	R4945279
L2396546-7 BH19-18 SA1 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	9.92		0.25	%	16-DEC-19	17-DEC-19	R4944392
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Arsenic (As)	6.3		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Barium (Ba)	124		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Beryllium (Be)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Boron (B)	5.8		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cadmium (Cd)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Chromium (Cr)	27.5		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cobalt (Co)	7.5		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Copper (Cu)	17.6		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Lead (Pb)	90.5		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Molybdenum (Mo)	1.1		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Nickel (Ni)	17.9		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Selenium (Se)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Silver (Ag)	<0.20		0.20	ug/g	18-DEC-19	18-DEC-19	R4946069
Thallium (Tl)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Uranium (U)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Vanadium (V)	39.1		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Zinc (Zn)	111		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2396546-7 BH19-18 SA1 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Metals							
Volatile Organic Compounds							
Acetone	<0.50		0.50	ug/g	17-DEC-19	18-DEC-19	R4945179
Benzene	<0.0068		0.0068	ug/g	17-DEC-19	18-DEC-19	R4945179
Bromodichloromethane	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
Bromoform	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
Bromomethane	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
Carbon tetrachloride	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
Chlorobenzene	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
Dibromochloromethane	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
Chloroform	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
1,2-Dibromoethane	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
1,2-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
1,3-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
1,4-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
Dichlorodifluoromethane	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
1,1-Dichloroethane	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
1,2-Dichloroethane	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
1,1-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
Methylene Chloride	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
1,2-Dichloropropane	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	17-DEC-19	18-DEC-19	R4945179
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	17-DEC-19	18-DEC-19	R4945179
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		18-DEC-19	
Ethylbenzene	0.081		0.018	ug/g	17-DEC-19	18-DEC-19	R4945179
n-Hexane	2.94		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
Methyl Ethyl Ketone	<0.85	DLQ	0.85	ug/g	17-DEC-19	18-DEC-19	R4945179
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	17-DEC-19	18-DEC-19	R4945179
MTBE	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
Styrene	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
Tetrachloroethylene	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
Toluene	0.456		0.080	ug/g	17-DEC-19	18-DEC-19	R4945179
1,1,1-Trichloroethane	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
1,1,2-Trichloroethane	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
Trichloroethylene	<0.010		0.010	ug/g	17-DEC-19	18-DEC-19	R4945179
Trichlorofluoromethane	<0.050		0.050	ug/g	17-DEC-19	18-DEC-19	R4945179
Vinyl chloride	<0.020		0.020	ug/g	17-DEC-19	18-DEC-19	R4945179
o-Xylene	0.249		0.020	ug/g	17-DEC-19	18-DEC-19	R4945179

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2396546-7 BH19-18 SA1 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Volatile Organic Compounds							
m+p-Xylenes	0.950		0.030	ug/g	17-DEC-19	18-DEC-19	R4945179
Xylenes (Total)	1.20		0.050	ug/g		18-DEC-19	
Surrogate: 4-Bromofluorobenzene	79.9		50-140	%	17-DEC-19	18-DEC-19	R4945179
Surrogate: 1,4-Difluorobenzene	103.4		50-140	%	17-DEC-19	18-DEC-19	R4945179
Hydrocarbons							
F1 (C6-C10)	44.4		5.0	ug/g	17-DEC-19	18-DEC-19	R4945179
F1-BTEX	42.6		5.0	ug/g		20-DEC-19	
F2 (C10-C16)	12		10	ug/g	19-DEC-19	20-DEC-19	R4949186
F3 (C16-C34)	124		50	ug/g	19-DEC-19	20-DEC-19	R4949186
F4 (C34-C50)	193		50	ug/g	19-DEC-19	20-DEC-19	R4949186
F4G-SG (GHH-Silica)	820		250	ug/g	19-DEC-19	19-DEC-19	R4950066
Total Hydrocarbons (C6-C50)	373		72	ug/g		20-DEC-19	
Chrom. to baseline at nC50	NO				19-DEC-19	20-DEC-19	R4949186
Surrogate: 2-Bromobenzotrifluoride	94.8		60-140	%	19-DEC-19	20-DEC-19	R4949186
Surrogate: 3,4-Dichlorotoluene	83.3		60-140	%	17-DEC-19	18-DEC-19	R4945179
L2396546-8 BH19-18 SA101 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	10.9		0.25	%	16-DEC-19	17-DEC-19	R4944392
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Arsenic (As)	5.6		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Barium (Ba)	137		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Beryllium (Be)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Boron (B)	5.9		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cadmium (Cd)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Chromium (Cr)	31.4		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cobalt (Co)	8.6		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Copper (Cu)	18.8		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Lead (Pb)	92.7		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Molybdenum (Mo)	1.2		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Nickel (Ni)	21.5		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Selenium (Se)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Silver (Ag)	<0.20		0.20	ug/g	18-DEC-19	18-DEC-19	R4946069
Thallium (Tl)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Uranium (U)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Vanadium (V)	38.8		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Zinc (Zn)	107		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Volatile Organic Compounds							
Acetone	<0.50		0.50	ug/g	17-DEC-19	19-DEC-19	R4946068
Benzene	<0.0068		0.0068	ug/g	17-DEC-19	19-DEC-19	R4946068

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2396546-8 BH19-18 SA101 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Volatile Organic Compounds							
Bromodichloromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Bromoform	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Bromomethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Carbon tetrachloride	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Chlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Dibromochloromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Chloroform	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,2-Dibromoethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,2-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,3-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,4-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Dichlorodifluoromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,1-Dichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,2-Dichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,1-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Methylene Chloride	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,2-Dichloropropane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	17-DEC-19	19-DEC-19	R4946068
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	17-DEC-19	19-DEC-19	R4946068
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		19-DEC-19	
Ethylbenzene	0.022		0.018	ug/g	17-DEC-19	19-DEC-19	R4946068
n-Hexane	0.731		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Methyl Ethyl Ketone	<0.50		0.50	ug/g	17-DEC-19	19-DEC-19	R4946068
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	17-DEC-19	19-DEC-19	R4946068
MTBE	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Styrene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Tetrachloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Toluene	0.114		0.080	ug/g	17-DEC-19	19-DEC-19	R4946068
1,1,1-Trichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,1,2-Trichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Trichloroethylene	<0.010		0.010	ug/g	17-DEC-19	19-DEC-19	R4946068
Trichlorofluoromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Vinyl chloride	<0.020		0.020	ug/g	17-DEC-19	19-DEC-19	R4946068
o-Xylene	0.070		0.020	ug/g	17-DEC-19	19-DEC-19	R4946068
m+p-Xylenes	0.255		0.030	ug/g	17-DEC-19	19-DEC-19	R4946068
Xylenes (Total)	0.325		0.050	ug/g		19-DEC-19	
Surrogate: 4-Bromofluorobenzene	83.0		50-140	%	17-DEC-19	19-DEC-19	R4946068

* 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
L2396546-8 BH19-18 SA101 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Volatile Organic Compounds							
Surrogate: 1,4-Difluorobenzene	97.5		50-140	%	17-DEC-19	19-DEC-19	R4946068
Hydrocarbons							
F1 (C6-C10)	12.5		5.0	ug/g	17-DEC-19	19-DEC-19	R4946068
F1-BTEX	12.0		5.0	ug/g		20-DEC-19	
F2 (C10-C16)	16		10	ug/g	19-DEC-19	20-DEC-19	R4949186
F3 (C16-C34)	124		50	ug/g	19-DEC-19	20-DEC-19	R4949186
F4 (C34-C50)	170		50	ug/g	19-DEC-19	20-DEC-19	R4949186
F4G-SG (GHH-Silica)	680		250	ug/g	19-DEC-19	19-DEC-19	R4950066
Total Hydrocarbons (C6-C50)	323		72	ug/g		20-DEC-19	
Chrom. to baseline at nC50	NO				19-DEC-19	20-DEC-19	R4949186
Surrogate: 2-Bromobenzotrifluoride	104.2		60-140	%	19-DEC-19	20-DEC-19	R4949186
Surrogate: 3,4-Dichlorotoluene	86.0		60-140	%	17-DEC-19	19-DEC-19	R4946068
L2396546-9 BH19-18 SA4 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	41.5		0.25	%	16-DEC-19	17-DEC-19	R4944392
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Arsenic (As)	3.1		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Barium (Ba)	198		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Beryllium (Be)	0.88		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Boron (B)	11.6		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cadmium (Cd)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Chromium (Cr)	102		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cobalt (Co)	19.2		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Copper (Cu)	40.9		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Lead (Pb)	8.9		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Molybdenum (Mo)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Nickel (Ni)	55.3		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Selenium (Se)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Silver (Ag)	<0.20		0.20	ug/g	18-DEC-19	18-DEC-19	R4946069
Thallium (Tl)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Uranium (U)	2.3		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Vanadium (V)	81.5		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Zinc (Zn)	91.8		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Volatile Organic Compounds							
Benzene	<0.0068		0.0068	ug/g	17-DEC-19	18-DEC-19	R4945279
Ethylbenzene	<0.018		0.018	ug/g	17-DEC-19	18-DEC-19	R4945279
Toluene	<0.080		0.080	ug/g	17-DEC-19	18-DEC-19	R4945279
o-Xylene	<0.020		0.020	ug/g	17-DEC-19	18-DEC-19	R4945279
m+p-Xylenes	<0.030		0.030	ug/g	17-DEC-19	18-DEC-19	R4945279

* 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
L2396546-9 BH19-18 SA4 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Volatile Organic Compounds							
Xylenes (Total)	<0.050		0.050	ug/g		18-DEC-19	
Surrogate: 4-Bromofluorobenzene	95.5		50-140	%	17-DEC-19	18-DEC-19	R4945279
Surrogate: 1,4-Difluorobenzene	105.2		50-140	%	17-DEC-19	18-DEC-19	R4945279
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	17-DEC-19	18-DEC-19	R4945279
F1-BTEX	<5.0		5.0	ug/g		19-DEC-19	
F2 (C10-C16)	<10		10	ug/g	17-DEC-19	18-DEC-19	R4946334
F2-Naphth	<10		10	ug/g		19-DEC-19	
F3 (C16-C34)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
F3-PAH	<50		50	ug/g		19-DEC-19	
F4 (C34-C50)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
Total Hydrocarbons (C6-C50)	<72		72	ug/g		19-DEC-19	
Chrom. to baseline at nC50	YES				17-DEC-19	18-DEC-19	R4946334
Surrogate: 2-Bromobenzotrifluoride	83.6		60-140	%	17-DEC-19	18-DEC-19	R4946334
Surrogate: 3,4-Dichlorotoluene	84.5		60-140	%	17-DEC-19	18-DEC-19	R4945279
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Acenaphthylene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Anthracene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(a)anthracene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(a)pyrene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(b)fluoranthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Benzo(k)fluoranthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Chrysene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Fluoranthene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Fluorene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		19-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	16-DEC-19	19-DEC-19	R4946243
2-Methylnaphthalene	<0.030		0.030	ug/g	16-DEC-19	19-DEC-19	R4946243
Naphthalene	<0.013		0.013	ug/g	16-DEC-19	19-DEC-19	R4946243
Phenanthrene	<0.046		0.046	ug/g	16-DEC-19	19-DEC-19	R4946243
Pyrene	<0.050		0.050	ug/g	16-DEC-19	19-DEC-19	R4946243
Surrogate: 2-Fluorobiphenyl	88.1		50-140	%	16-DEC-19	19-DEC-19	R4946243
Surrogate: p-Terphenyl d14	82.4		50-140	%	16-DEC-19	19-DEC-19	R4946243
Semi-Volatile Organics							
Biphenyl	<0.050		0.050	ug/g	16-DEC-19	18-DEC-19	R4945214
4-Chloroaniline	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
Bis(2-chloroethyl)ether	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
Bis(2-chloroisopropyl)ether	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2396546-9 BH19-18 SA4 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Semi-Volatile Organics							
3,3'-Dichlorobenzidine	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
Diethylphthalate	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
Dimethylphthalate	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
2,4-Dimethylphenol	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
2,4-Dinitrophenol	<1.0		1.0	ug/g	16-DEC-19	18-DEC-19	R4945214
2,4-Dinitrotoluene	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
2,6-Dinitrotoluene	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
2,4+2,6-Dinitrotoluene	<0.14		0.14	ug/g		18-DEC-19	
Bis(2-ethylhexyl)phthalate	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
Phenol	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
1,2,4-Trichlorobenzene	<0.050		0.050	ug/g	16-DEC-19	18-DEC-19	R4945214
Surrogate: 2-Fluorobiphenyl	90.9		50-140	%	16-DEC-19	18-DEC-19	R4945214
Surrogate: Nitrobenzene d5	93.1		50-140	%	16-DEC-19	18-DEC-19	R4945214
Surrogate: p-Terphenyl d14	90.2		50-140	%	16-DEC-19	18-DEC-19	R4945214
Surrogate: 2,4,6-Tribromophenol	70.7		50-140	%	16-DEC-19	18-DEC-19	R4945214
L2396546-10 BH19-20 SA1 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	17.9		0.25	%	16-DEC-19	17-DEC-19	R4944392
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Arsenic (As)	1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Barium (Ba)	18.9		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Beryllium (Be)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Boron (B)	<5.0		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cadmium (Cd)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Chromium (Cr)	17.4		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cobalt (Co)	3.1		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Copper (Cu)	4.9		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Lead (Pb)	2.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Molybdenum (Mo)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Nickel (Ni)	6.6		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Selenium (Se)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Silver (Ag)	<0.20		0.20	ug/g	18-DEC-19	18-DEC-19	R4946069
Thallium (Tl)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Uranium (U)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Vanadium (V)	27.6		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Zinc (Zn)	11.1		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Volatile Organic Compounds							
Acetone	<0.50		0.50	ug/g	17-DEC-19	19-DEC-19	R4946068
Benzene	<0.0068		0.0068	ug/g	17-DEC-19	19-DEC-19	R4946068

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2396546-10 BH19-20 SA1 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Volatile Organic Compounds							
Bromodichloromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Bromoform	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Bromomethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Carbon tetrachloride	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Chlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Dibromochloromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Chloroform	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,2-Dibromoethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,2-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,3-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,4-Dichlorobenzene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Dichlorodifluoromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,1-Dichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,2-Dichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,1-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Methylene Chloride	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,2-Dichloropropane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	17-DEC-19	19-DEC-19	R4946068
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	17-DEC-19	19-DEC-19	R4946068
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		19-DEC-19	
Ethylbenzene	<0.018		0.018	ug/g	17-DEC-19	19-DEC-19	R4946068
n-Hexane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Methyl Ethyl Ketone	<0.50		0.50	ug/g	17-DEC-19	19-DEC-19	R4946068
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	17-DEC-19	19-DEC-19	R4946068
MTBE	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Styrene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Tetrachloroethylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Toluene	<0.080		0.080	ug/g	17-DEC-19	19-DEC-19	R4946068
1,1,1-Trichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
1,1,2-Trichloroethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Trichloroethylene	<0.010		0.010	ug/g	17-DEC-19	19-DEC-19	R4946068
Trichlorofluoromethane	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946068
Vinyl chloride	<0.020		0.020	ug/g	17-DEC-19	19-DEC-19	R4946068
o-Xylene	<0.020		0.020	ug/g	17-DEC-19	19-DEC-19	R4946068
m+p-Xylenes	<0.030		0.030	ug/g	17-DEC-19	19-DEC-19	R4946068
Xylenes (Total)	<0.050		0.050	ug/g		19-DEC-19	
Surrogate: 4-Bromofluorobenzene	82.3		50-140	%	17-DEC-19	19-DEC-19	R4946068

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2396546-10 BH19-20 SA1 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Volatile Organic Compounds							
Surrogate: 1,4-Difluorobenzene	94.7		50-140	%	17-DEC-19	19-DEC-19	R4946068
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	17-DEC-19	19-DEC-19	R4946068
F1-BTEX	<5.0		5.0	ug/g		19-DEC-19	
F2 (C10-C16)	<10		10	ug/g	17-DEC-19	18-DEC-19	R4946334
F2-Naphth	<10		10	ug/g		19-DEC-19	
F3 (C16-C34)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
F3-PAH	<50		50	ug/g		19-DEC-19	
F4 (C34-C50)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
Total Hydrocarbons (C6-C50)	<72		72	ug/g		19-DEC-19	
Chrom. to baseline at nC50	YES				17-DEC-19	18-DEC-19	R4946334
Surrogate: 2-Bromobenzotrifluoride	89.2		60-140	%	17-DEC-19	18-DEC-19	R4946334
Surrogate: 3,4-Dichlorotoluene	94.7		60-140	%	17-DEC-19	19-DEC-19	R4946068
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946428
Acenaphthylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946428
Anthracene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946428
Benzo(a)anthracene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946428
Benzo(a)pyrene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946428
Benzo(b)fluoranthene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946428
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946428
Benzo(k)fluoranthene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946428
Chrysene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946428
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946428
Fluoranthene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946428
Fluorene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946428
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946428
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		19-DEC-19	
1-Methylnaphthalene	<0.030		0.030	ug/g	17-DEC-19	19-DEC-19	R4946428
2-Methylnaphthalene	<0.030		0.030	ug/g	17-DEC-19	19-DEC-19	R4946428
Naphthalene	<0.013		0.013	ug/g	17-DEC-19	19-DEC-19	R4946428
Phenanthrene	<0.046		0.046	ug/g	17-DEC-19	19-DEC-19	R4946428
Pyrene	<0.050		0.050	ug/g	17-DEC-19	19-DEC-19	R4946428
Surrogate: 2-Fluorobiphenyl	91.7		50-140	%	17-DEC-19	19-DEC-19	R4946428
Surrogate: p-Terphenyl d14	85.2		50-140	%	17-DEC-19	19-DEC-19	R4946428
Semi-Volatile Organics							
Biphenyl	<0.050		0.050	ug/g	16-DEC-19	18-DEC-19	R4945214
4-Chloroaniline	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
Bis(2-chloroethyl)ether	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
Bis(2-chloroisopropyl)ether	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
3,3'-Dichlorobenzidine	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
Diethylphthalate	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214

* 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
L2396546-10 BH19-20 SA1 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Semi-Volatile Organics							
Dimethylphthalate	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
2,4-Dimethylphenol	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
2,4-Dinitrophenol	<1.0		1.0	ug/g	16-DEC-19	18-DEC-19	R4945214
2,4-Dinitrotoluene	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
2,6-Dinitrotoluene	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
2,4+2,6-Dinitrotoluene	<0.14		0.14	ug/g		18-DEC-19	
Bis(2-ethylhexyl)phthalate	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
Phenol	<0.10		0.10	ug/g	16-DEC-19	18-DEC-19	R4945214
1,2,4-Trichlorobenzene	<0.050		0.050	ug/g	16-DEC-19	18-DEC-19	R4945214
Surrogate: 2-Fluorobiphenyl	87.3		50-140	%	16-DEC-19	18-DEC-19	R4945214
Surrogate: Nitrobenzene d5	89.8		50-140	%	16-DEC-19	18-DEC-19	R4945214
Surrogate: p-Terphenyl d14	93.9		50-140	%	16-DEC-19	18-DEC-19	R4945214
Surrogate: 2,4,6-Tribromophenol	71.1		50-140	%	16-DEC-19	18-DEC-19	R4945214
L2396546-11 BH19-20 SA5 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Physical Tests							
% Moisture	39.5		0.25	%	16-DEC-19	17-DEC-19	R4944392
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Arsenic (As)	3.3		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Barium (Ba)	186		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Beryllium (Be)	1.11		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Boron (B)	18.4		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cadmium (Cd)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Chromium (Cr)	101		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Cobalt (Co)	18.4		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Copper (Cu)	40.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Lead (Pb)	9.7		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Molybdenum (Mo)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Nickel (Ni)	53.9		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Selenium (Se)	<1.0		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Silver (Ag)	<0.20		0.20	ug/g	18-DEC-19	18-DEC-19	R4946069
Thallium (Tl)	<0.50		0.50	ug/g	18-DEC-19	18-DEC-19	R4946069
Uranium (U)	1.2		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Vanadium (V)	79.6		1.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Zinc (Zn)	86.5		5.0	ug/g	18-DEC-19	18-DEC-19	R4946069
Volatile Organic Compounds							
Benzene	<0.0068		0.0068	ug/g	17-DEC-19	18-DEC-19	R4945279
Ethylbenzene	<0.018		0.018	ug/g	17-DEC-19	18-DEC-19	R4945279
Toluene	<0.080		0.080	ug/g	17-DEC-19	18-DEC-19	R4945279
o-Xylene	<0.020		0.020	ug/g	17-DEC-19	18-DEC-19	R4945279

* 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
L2396546-11 BH19-20 SA5 Sampled By: CLIENT on 11-DEC-19 Matrix: SOIL							
Volatile Organic Compounds							
m+p-Xylenes	<0.030		0.030	ug/g	17-DEC-19	18-DEC-19	R4945279
Xylenes (Total)	<0.050		0.050	ug/g		18-DEC-19	
Surrogate: 4-Bromofluorobenzene	87.3		50-140	%	17-DEC-19	18-DEC-19	R4945279
Surrogate: 1,4-Difluorobenzene	96.8		50-140	%	17-DEC-19	18-DEC-19	R4945279
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	17-DEC-19	18-DEC-19	R4945279
F1-BTEX	<5.0		5.0	ug/g		19-DEC-19	
F2 (C10-C16)	<10		10	ug/g	17-DEC-19	18-DEC-19	R4946334
F2-Naphth	<10		10	ug/g		19-DEC-19	
F3 (C16-C34)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
F3-PAH	<50		50	ug/g		19-DEC-19	
F4 (C34-C50)	<50		50	ug/g	17-DEC-19	18-DEC-19	R4946334
Total Hydrocarbons (C6-C50)	<72		72	ug/g		19-DEC-19	
Chrom. to baseline at nC50	YES				17-DEC-19	18-DEC-19	R4946334
Surrogate: 2-Bromobenzotrifluoride	88.9		60-140	%	17-DEC-19	18-DEC-19	R4946334
Surrogate: 3,4-Dichlorotoluene	76.8		60-140	%	17-DEC-19	18-DEC-19	R4945279

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

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Naphthalene	DUP-H	L2396546-10
Laboratory Control Sample	F4 (C34-C50)	LCS-H	L2396546-10, -11, -2, -3, -4, -5, -6, -9
Matrix Spike	F2 (C10-C16)	MS-B	L2396546-1
Matrix Spike	F2 (C10-C16)	MS-B	L2396546-10, -11, -2, -3, -4, -5, -6, -9
Comments:	Surrogate recovery outside acceptable limits due to matrix interference.		
Matrix Spike	F3 (C16-C34)	MS-B	L2396546-1
Matrix Spike	Benzo(a)anthracene	MS-B	L2396546-10
Matrix Spike	Benzo(a)pyrene	MS-B	L2396546-10
Matrix Spike	Benzo(b)fluoranthene	MS-B	L2396546-1, -3, -5, -9
Matrix Spike	Benzo(b)fluoranthene	MS-B	L2396546-10
Matrix Spike	Benzo(g,h,i)perylene	MS-B	L2396546-10
Matrix Spike	Benzo(k)fluoranthene	MS-B	L2396546-10
Matrix Spike	Chrysene	MS-B	L2396546-1, -3, -5, -9
Matrix Spike	Chrysene	MS-B	L2396546-10
Matrix Spike	Fluoranthene	MS-B	L2396546-1, -3, -5, -9
Matrix Spike	Fluoranthene	MS-B	L2396546-10
Matrix Spike	Indeno(1,2,3-cd)pyrene	MS-B	L2396546-10
Matrix Spike	Phenanthrene	MS-B	L2396546-10
Matrix Spike	Pyrene	MS-B	L2396546-1, -3, -5, -9
Matrix Spike	Pyrene	MS-B	L2396546-10

Sample Parameter Qualifier key listed:

Qualifier	Description
DLQ	Detection Limit raised due to co-eluting interference. GCMS qualifier ion ratio did not meet acceptance criteria.
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
LCS-H	Lab Control Sample recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
SOL:MI	Surrogate recovery outside acceptable limits due to matrix interference

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
625-511-WT	Soil	ABN-O.Reg 153/04 (July 2011)	SW846 8270 (511)

Soil and sediment samples are dried by mixing with a desiccant prior to extraction. The extracts are dried, concentrated and exchanged into a solvent and analyzed by GC/MS. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

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).

BTX-511-HS-WT	Soil	BTEX-O.Reg 153/04 (July 2011)	SW846 8260

BTX is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

DINITROTOL-CALC-WT	Soil	ABN-Calculated Parameters	SW846 8270
F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.
In samples where BTEX and F1 were analyzed , F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH

Reference Information

represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:
1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:
1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT Soil F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.

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).

F2-F4-511-WT Soil F2-F4-O.Reg 153/04 (July 2011) CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from soil with 1:1 hexane:acetone using a rotary extractor. Extracts are treated with silica gel to remove polar organic interferences. F2, F3, & F4 are analyzed by GC-FID. F4G-sg is analyzed gravimetrically.

Notes:
1. F2 (C10-C16): Sum of all hydrocarbons that elute between nC10 and nC16.
2. F3 (C16-C34): Sum of all hydrocarbons that elute between nC16 and nC34.
3. F4 (C34-C50): Sum of all hydrocarbons that elute between nC34 and nC50.
4. F4G: Gravimetric Heavy Hydrocarbons
5. F4G-sg: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
6. Where both F4 (C34-C50) and F4G-sg are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
7. F4G-sg cannot be added to the C6 to C50 hydrocarbon results to obtain an estimate of total extractable hydrocarbons.
8. This method is validated for use.
9. Data from analysis of validation and quality control samples is available upon request.
10. Reported results are expressed as milligrams per dry kilogram, unless otherwise indicated.

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).

F4G-ADD-511-WT Soil F4G SG-O.Reg 153/04 (July 2011) MOE DECPH-E3398/CCME TIER 1

F4G, gravimetric analysis, is determined if the chromatogram does not return to baseline at or before C50. A soil sample is extracted with a solvent mix, the solvent is evaporated and the weight of the residue is determined.

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).

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.

Reference Information

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).

VOC-1,3-DCP-CALC-WT	Soil	Regulation 153 VOCs	SW8260B/SW8270C
VOC-511-HS-WT	Soil	VOC-O.Reg 153/04 (July 2011)	SW846 8260 (511)

Soil and sediment samples are extracted in methanol and analyzed by headspace-GC/MS.

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

XYLENES-SUM-CALC-WT	Soil	Sum of Xylene Isomer Concentrations	CALCULATION

Total xylenes represents the sum of o-xylene and m&p-xylene.

** 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

Workorder: L2396546 Report Date: 23-DEC-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
625-511-WT	**Soil**							
Batch R4945214								
WG3241782-3 DUP		**WG3241782-5**						
1,2,4-Trichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
2,4-Dimethylphenol		<0.10	<0.10	RPD-NA	ug/g	N/A	40	18-DEC-19
2,4-Dinitrophenol		<1.0	<1.0	RPD-NA	ug/g	N/A	40	18-DEC-19
2,4-Dinitrotoluene		<0.10	<0.10	RPD-NA	ug/g	N/A	40	18-DEC-19
2,6-Dinitrotoluene		<0.10	<0.10	RPD-NA	ug/g	N/A	40	18-DEC-19
3,3'-Dichlorobenzidine		<0.10	<0.10	RPD-NA	ug/g	N/A	40	18-DEC-19
4-Chloroaniline		<0.10	<0.10	RPD-NA	ug/g	N/A	40	18-DEC-19
Biphenyl		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
Bis(2-chloroethyl)ether		<0.10	<0.10	RPD-NA	ug/g	N/A	40	18-DEC-19
Bis(2-chloroisopropyl)ether		<0.10	<0.10	RPD-NA	ug/g	N/A	40	18-DEC-19
Bis(2-ethylhexyl)phthalate		<0.10	<0.10	RPD-NA	ug/g	N/A	40	18-DEC-19
Diethylphthalate		<0.10	<0.10	RPD-NA	ug/g	N/A	40	18-DEC-19
Dimethylphthalate		<0.10	<0.10	RPD-NA	ug/g	N/A	40	18-DEC-19
Phenol		<0.10	<0.10	RPD-NA	ug/g	N/A	40	18-DEC-19
WG3241782-2 LCS								
1,2,4-Trichlorobenzene			93.9		%		50-140	18-DEC-19
2,4-Dimethylphenol			93.2		%		30-130	18-DEC-19
2,4-Dinitrophenol			64.8		%		30-130	18-DEC-19
2,4-Dinitrotoluene			107.2		%		50-140	18-DEC-19
2,6-Dinitrotoluene			105.0		%		50-140	18-DEC-19
3,3'-Dichlorobenzidine			90.2		%		30-130	18-DEC-19
4-Chloroaniline			76.7		%		30-130	18-DEC-19
Biphenyl			99.98		%		50-140	18-DEC-19
Bis(2-chloroethyl)ether			100.9		%		50-140	18-DEC-19
Bis(2-chloroisopropyl)ether			101.1		%		50-140	18-DEC-19
Bis(2-ethylhexyl)phthalate			110.9		%		50-140	18-DEC-19
Diethylphthalate			102.5		%		50-140	18-DEC-19
Dimethylphthalate			100.4		%		50-140	18-DEC-19
Phenol			109.6		%		30-130	18-DEC-19
WG3241782-1 MB								
1,2,4-Trichlorobenzene			<0.050		ug/g		0.05	18-DEC-19
2,4-Dimethylphenol			<0.10		ug/g		0.1	18-DEC-19
2,4-Dinitrophenol			<1.0		ug/g		1	18-DEC-19
							0.1	

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
625-511-WT	**Soil**							
Batch R4945214								
WG3241782-1 MB								
2,4-Dinitrotoluene			<0.10		ug/g		0.1	18-DEC-19
2,6-Dinitrotoluene			<0.10		ug/g		0.1	18-DEC-19
3,3'-Dichlorobenzidine			<0.10		ug/g		0.1	18-DEC-19
4-Chloroaniline			<0.10		ug/g		0.1	18-DEC-19
Biphenyl			<0.050		ug/g		0.05	18-DEC-19
Bis(2-chloroethyl)ether			<0.10		ug/g		0.1	18-DEC-19
Bis(2-chloroisopropyl)ether			<0.10		ug/g		0.1	18-DEC-19
Bis(2-ethylhexyl)phthalate			<0.10		ug/g		0.1	18-DEC-19
Diethylphthalate			<0.10		ug/g		0.1	18-DEC-19
Dimethylphthalate			<0.10		ug/g		0.1	18-DEC-19
Phenol			<0.10		ug/g		0.1	18-DEC-19
Surrogate: 2-Fluorobiphenyl			82.5		%		50-140	18-DEC-19
Surrogate: 2,4,6-Tribromophenol			54.5		%		50-140	18-DEC-19
Surrogate: Nitrobenzene d5			86.4		%		50-140	18-DEC-19
Surrogate: p-Terphenyl d14			92.2		%		50-140	18-DEC-19
WG3241782-4 MS		**WG3241782-5**						
1,2,4-Trichlorobenzene			92.5		%		50-140	18-DEC-19
2,4-Dimethylphenol			99.5		%		30-150	18-DEC-19
2,4-Dinitrophenol			45.4		%		30-150	18-DEC-19
2,4-Dinitrotoluene			105.8		%		50-140	18-DEC-19
2,6-Dinitrotoluene			99.6		%		50-140	18-DEC-19
3,3'-Dichlorobenzidine			83.4		%		30-130	18-DEC-19
4-Chloroaniline			98.0		%		30-130	18-DEC-19
Biphenyl			97.5		%		50-140	18-DEC-19
Bis(2-chloroethyl)ether			97.4		%		50-140	18-DEC-19
Bis(2-chloroisopropyl)ether			96.8		%		50-140	18-DEC-19
Bis(2-ethylhexyl)phthalate			101.8		%		50-140	18-DEC-19
Diethylphthalate			101.9		%		50-140	18-DEC-19
Dimethylphthalate			97.9		%		50-140	18-DEC-19
Phenol			110.7		%		30-130	18-DEC-19
BTX-511-HS-WT	**Soil**							

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BTX-511-HS-WT	**Soil**							
Batch R4945279								
WG3244425-4 DUP		**WG3244425-3**						
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	18-DEC-19
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	18-DEC-19
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	18-DEC-19
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-DEC-19
Toluene		0.081	<0.080	RPD-NA	ug/g	N/A	40	18-DEC-19
WG3244425-2 LCS								
Benzene			107.1		%		70-130	18-DEC-19
Ethylbenzene			106.1		%		70-130	18-DEC-19
m+p-Xylenes			106.1		%		70-130	18-DEC-19
o-Xylene			107.1		%		70-130	18-DEC-19
Toluene			105.8		%		70-130	18-DEC-19
WG3244425-1 MB								
Benzene			<0.0068		ug/g		0.0068	18-DEC-19
Ethylbenzene			<0.018		ug/g		0.018	18-DEC-19
m+p-Xylenes			<0.030		ug/g		0.03	18-DEC-19
o-Xylene			<0.020		ug/g		0.02	18-DEC-19
Toluene			<0.080		ug/g		0.08	18-DEC-19
Surrogate: 1,4-Difluorobenzene			120.8		%		50-140	18-DEC-19
Surrogate: 4-Bromofluorobenzene			108.4		%		50-140	18-DEC-19
WG3244425-5 MS		**L2396546-6**						
Benzene			103.2		%		60-140	18-DEC-19
Ethylbenzene			104.2		%		60-140	18-DEC-19
m+p-Xylenes			104.0		%		60-140	18-DEC-19
o-Xylene			105.0		%		60-140	18-DEC-19
Toluene			101.5		%		60-140	18-DEC-19
Batch R4946080								
WG3243919-4 DUP		**WG3243919-3**						
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	18-DEC-19
Ethylbenzene		0.030	0.029		ug/g	5.4	40	18-DEC-19
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	18-DEC-19
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-DEC-19
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	18-DEC-19
WG3243919-2 LCS								
Benzene			101.1		%		70-130	18-DEC-19

Quality Control Report

Workorder: L2396546 Report Date: 23-DEC-19

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Dr
Kanata ON K2K 2A9

Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BTX-511-HS-WT	**Soil**							
Batch R4946080								
WG3243919-2 LCS								
Ethylbenzene			100.8		%		70-130	18-DEC-19
m+p-Xylenes			101.5		%		70-130	18-DEC-19
o-Xylene			101.3		%		70-130	18-DEC-19
Toluene			100.4		%		70-130	18-DEC-19
WG3243919-1 MB								
Benzene			<0.0068		ug/g		0.0068	18-DEC-19
Ethylbenzene			<0.018		ug/g		0.018	18-DEC-19
m+p-Xylenes			<0.030		ug/g		0.03	18-DEC-19
o-Xylene			<0.020		ug/g		0.02	18-DEC-19
Toluene			<0.080		ug/g		0.08	18-DEC-19
Surrogate: 1,4-Difluorobenzene			116.8		%		50-140	18-DEC-19
Surrogate: 4-Bromofluorobenzene			102.5		%		50-140	18-DEC-19
WG3243919-5 MS		**L2396454-1**						
Benzene			102.8		%		60-140	18-DEC-19
Ethylbenzene			89.0		%		60-140	18-DEC-19
m+p-Xylenes			85.1		%		60-140	18-DEC-19
o-Xylene			88.6		%		60-140	18-DEC-19
Toluene			103.6		%		60-140	18-DEC-19
F1-HS-511-WT	**Soil**							
Batch R4945179								
WG3244565-4 DUP		**WG3244565-3**						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	18-DEC-19
WG3244565-2 LCS								
F1 (C6-C10)			98.0		%		80-120	18-DEC-19
WG3244565-1 MB								
F1 (C6-C10)			<5.0		ug/g		5	18-DEC-19
Surrogate: 3,4-Dichlorotoluene			97.3		%		60-140	18-DEC-19
WG3244565-6 MS		**L2396546-7**						
F1 (C6-C10)			130.0		%		60-140	18-DEC-19
Batch R4945279								
WG3244425-4 DUP		**WG3244425-3**						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	18-DEC-19
WG3244425-2 LCS								
F1 (C6-C10)			100.7		%		80-120	18-DEC-19
WG3244425-1 MB								

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	**Soil**							
Batch R4945279								
WG3244425-1 MB								
F1 (C6-C10)			<5.0		ug/g		5	18-DEC-19
Surrogate: 3,4-Dichlorotoluene			100.7		%		60-140	18-DEC-19
WG3244425-6 MS		**L2396546-9**						
F1 (C6-C10)			92.5		%		60-140	18-DEC-19
Batch R4946068								
WG3244604-4 DUP		**WG3244604-3**						
F1 (C6-C10)		12.5	12.3		ug/g	1.3	30	19-DEC-19
WG3244604-2 LCS								
F1 (C6-C10)			110.0		%		80-120	19-DEC-19
WG3244604-1 MB								
F1 (C6-C10)			<5.0		ug/g		5	19-DEC-19
Surrogate: 3,4-Dichlorotoluene			103.3		%		60-140	19-DEC-19
WG3244604-6 MS		**L2396546-10**						
F1 (C6-C10)			108.5		%		60-140	19-DEC-19
Batch R4946080								
WG3243919-4 DUP		**WG3243919-3**						
F1 (C6-C10)		35.3	36.0		ug/g	2.1	30	18-DEC-19
WG3243919-2 LCS								
F1 (C6-C10)			97.8		%		80-120	18-DEC-19
WG3243919-1 MB								
F1 (C6-C10)			<5.0		ug/g		5	18-DEC-19
Surrogate: 3,4-Dichlorotoluene			103.8		%		60-140	18-DEC-19
WG3243919-6 MS		**L2396454-2**						
F1 (C6-C10)			90.4		%		60-140	18-DEC-19
Batch R4946201								
WG3244883-4 DUP		**WG3244883-3**						
F1 (C6-C10)		8.6	9.1		ug/g	5.7	30	19-DEC-19
WG3244883-2 LCS								
F1 (C6-C10)			100.7		%		80-120	19-DEC-19
WG3244883-1 MB								
F1 (C6-C10)			<5.0		ug/g		5	19-DEC-19
Surrogate: 3,4-Dichlorotoluene			96.3		%		60-140	19-DEC-19
WG3244883-6 MS		**L2396319-2**						
F1 (C6-C10)			89.7		%		60-140	19-DEC-19
F2-F4-511-WT	**Soil**							

Quality Control Report

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Dr
Kanata ON K2K 2A9
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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-511-WT	**Soil**							
Batch R4946283								
WG3243893-3 DUP		**WG3243893-5**						
F2 (C10-C16)		6480	6320		ug/g	2.5	30	18-DEC-19
F3 (C16-C34)		4610	4850		ug/g	5.0	30	18-DEC-19
F4 (C34-C50)		149	174		ug/g	16	30	18-DEC-19
WG3243893-2 LCS								
F2 (C10-C16)			105.7		%		80-120	18-DEC-19
F3 (C16-C34)			102.4		%		80-120	18-DEC-19
F4 (C34-C50)			105.1		%		80-120	18-DEC-19
WG3243893-1 MB								
F2 (C10-C16)			<10		ug/g		10	18-DEC-19
F3 (C16-C34)			<50		ug/g		50	18-DEC-19
F4 (C34-C50)			<50		ug/g		50	18-DEC-19
Surrogate: 2-Bromobenzotrifluoride			97.7		%		60-140	18-DEC-19
WG3243893-4 MS		**WG3243893-5**						
F2 (C10-C16)			N/A	MS-B	%		-	18-DEC-19
F3 (C16-C34)			N/A	MS-B	%		-	18-DEC-19
F4 (C34-C50)			112.0		%		60-140	18-DEC-19
Batch R4946334								
WG3243915-3 DUP		**WG3243915-5**						
F2 (C10-C16)		1700	1830		ug/g	7.3	30	18-DEC-19
F3 (C16-C34)		106	111		ug/g	4.5	30	18-DEC-19
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	18-DEC-19
COMMENTS: Surrogate recovery outside acceptable limits due to matrix interference.								
WG3243915-2 LCS								
F2 (C10-C16)			115.3		%		80-120	18-DEC-19
F3 (C16-C34)			116.2		%		80-120	18-DEC-19
F4 (C34-C50)			120.6	LCS-H	%		80-120	18-DEC-19
WG3243915-1 MB								
F2 (C10-C16)			<10		ug/g		10	18-DEC-19
F3 (C16-C34)			<50		ug/g		50	18-DEC-19
F4 (C34-C50)			<50		ug/g		50	18-DEC-19
Surrogate: 2-Bromobenzotrifluoride			85.8		%		60-140	18-DEC-19
WG3243915-4 MS		**WG3243915-5**						
F2 (C10-C16)			N/A	MS-B	%		-	18-DEC-19
F3 (C16-C34)			108.6		%		60-140	18-DEC-19
F4 (C34-C50)			113.2		%		60-140	18-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-511-WT	**Soil**							
Batch R4946334								
WG3243915-4 MS		**WG3243915-5**						
COMMENTS: Surrogate recovery outside acceptable limits due to matrix interference.								
Batch R4949186								
WG3246844-3 DUP		**WG3246844-5**						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	20-DEC-19
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	20-DEC-19
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	20-DEC-19
WG3246844-2 LCS								
F2 (C10-C16)			103.1		%		80-120	20-DEC-19
F3 (C16-C34)			102.2		%		80-120	20-DEC-19
F4 (C34-C50)			107.3		%		80-120	20-DEC-19
WG3246844-1 MB								
F2 (C10-C16)			<10		ug/g		10	20-DEC-19
F3 (C16-C34)			<50		ug/g		50	20-DEC-19
F4 (C34-C50)			<50		ug/g		50	20-DEC-19
Surrogate: 2-Bromobenzotrifluoride			103.2		%		60-140	20-DEC-19
WG3246844-4 MS		**WG3246844-5**						
F2 (C10-C16)			101.3		%		60-140	20-DEC-19
F3 (C16-C34)			106.6		%		60-140	20-DEC-19
F4 (C34-C50)			108.7		%		60-140	20-DEC-19
F4G-ADD-511-WT	**Soil**							
Batch R4950066								
WG3247666-2 LCS								
F4G-SG (GHH-Silica)			77.3		%		60-140	19-DEC-19
WG3247666-1 MB								
F4G-SG (GHH-Silica)			<250		ug/g		250	19-DEC-19
MET-200.2-CCMS-WT	**Soil**							
Batch R4944645								
WG3243905-2 CRM		**WT-CANMET-TILL2**						
Antimony (Sb)			92.3		%		70-130	17-DEC-19
Arsenic (As)			92.5		%		70-130	17-DEC-19
Barium (Ba)			91.2		%		70-130	17-DEC-19
Beryllium (Be)			83.1		%		70-130	17-DEC-19
Boron (B)			2.7		mg/kg		0-8.6	17-DEC-19
Cadmium (Cd)			85.4		%		70-130	17-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R4944645								
WG3243905-2 CRM		**WT-CANMET-TILL2**						
Chromium (Cr)			89.9		%		70-130	17-DEC-19
Cobalt (Co)			91.7		%		70-130	17-DEC-19
Copper (Cu)			91.0		%		70-130	17-DEC-19
Lead (Pb)			93.1		%		70-130	17-DEC-19
Molybdenum (Mo)			92.3		%		70-130	17-DEC-19
Nickel (Ni)			91.3		%		70-130	17-DEC-19
Selenium (Se)			0.34		mg/kg		0.15-0.55	17-DEC-19
Silver (Ag)			0.24		mg/kg		0.16-0.36	17-DEC-19
Thallium (Tl)			90.0		%		70-130	17-DEC-19
Uranium (U)			86.3		%		70-130	17-DEC-19
Vanadium (V)			90.5		%		70-130	17-DEC-19
Zinc (Zn)			88.9		%		70-130	17-DEC-19
WG3243905-4 DUP		**L2396546-2**						
Antimony (Sb)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	17-DEC-19
Arsenic (As)		1.8	1.8		ug/g	1.4	30	17-DEC-19
Barium (Ba)		105	133		ug/g	24	40	17-DEC-19
Beryllium (Be)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	17-DEC-19
Boron (B)		6.2	6.4		ug/g	2.6	30	17-DEC-19
Cadmium (Cd)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	17-DEC-19
Chromium (Cr)		51.1	51.8		ug/g	1.3	30	17-DEC-19
Cobalt (Co)		9.7	9.8		ug/g	1.2	30	17-DEC-19
Copper (Cu)		21.9	22.5		ug/g	3.0	30	17-DEC-19
Lead (Pb)		4.3	4.6		ug/g	7.2	40	17-DEC-19
Molybdenum (Mo)		<1.0	<1.0	RPD-NA	ug/g	N/A	40	17-DEC-19
Nickel (Ni)		27.4	27.4		ug/g	0.3	30	17-DEC-19
Selenium (Se)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	17-DEC-19
Silver (Ag)		<0.20	<0.20	RPD-NA	ug/g	N/A	40	17-DEC-19
Thallium (Tl)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	17-DEC-19
Uranium (U)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	17-DEC-19
Vanadium (V)		45.0	45.6		ug/g	1.3	30	17-DEC-19
Zinc (Zn)		44.5	46.4		ug/g	4.2	30	17-DEC-19
WG3243905-3 LCS								
Antimony (Sb)			106.1		%		80-120	17-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R4944645								
WG3243905-3 LCS								
Arsenic (As)			95.4		%		80-120	17-DEC-19
Barium (Ba)			96.8		%		80-120	17-DEC-19
Beryllium (Be)			88.4		%		80-120	17-DEC-19
Boron (B)			89.1		%		80-120	17-DEC-19
Cadmium (Cd)			94.9		%		80-120	17-DEC-19
Chromium (Cr)			95.6		%		80-120	17-DEC-19
Cobalt (Co)			94.9		%		80-120	17-DEC-19
Copper (Cu)			92.0		%		80-120	17-DEC-19
Lead (Pb)			96.6		%		80-120	17-DEC-19
Molybdenum (Mo)			97.0		%		80-120	17-DEC-19
Nickel (Ni)			93.8		%		80-120	17-DEC-19
Selenium (Se)			95.8		%		80-120	17-DEC-19
Silver (Ag)			95.4		%		80-120	17-DEC-19
Thallium (Tl)			101.6		%		80-120	17-DEC-19
Uranium (U)			95.4		%		80-120	17-DEC-19
Vanadium (V)			97.9		%		80-120	17-DEC-19
Zinc (Zn)			91.3		%		80-120	17-DEC-19
WG3243905-1 MB								
Antimony (Sb)			<0.10		mg/kg		0.1	17-DEC-19
Arsenic (As)			<0.10		mg/kg		0.1	17-DEC-19
Barium (Ba)			<0.50		mg/kg		0.5	17-DEC-19
Beryllium (Be)			<0.10		mg/kg		0.1	17-DEC-19
Boron (B)			<5.0		mg/kg		5	17-DEC-19
Cadmium (Cd)			<0.020		mg/kg		0.02	17-DEC-19
Chromium (Cr)			<0.50		mg/kg		0.5	17-DEC-19
Cobalt (Co)			<0.10		mg/kg		0.1	17-DEC-19
Copper (Cu)			<0.50		mg/kg		0.5	17-DEC-19
Lead (Pb)			<0.50		mg/kg		0.5	17-DEC-19
Molybdenum (Mo)			<0.10		mg/kg		0.1	17-DEC-19
Nickel (Ni)			<0.50		mg/kg		0.5	17-DEC-19
Selenium (Se)			<0.20		mg/kg		0.2	17-DEC-19
Silver (Ag)			<0.10		mg/kg		0.1	17-DEC-19
Thallium (Tl)			<0.050		mg/kg		0.05	17-DEC-19
Uranium (U)			<0.050		mg/kg		0.05	17-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R4944645								
WG3243905-1 MB								
Vanadium (V)			<0.20		mg/kg		0.2	17-DEC-19
Zinc (Zn)			<2.0		mg/kg		2	17-DEC-19
Batch R4946069								
WG3244916-2 CRM		**WT-CANMET-TILL2**						
Antimony (Sb)			97.7		%		70-130	18-DEC-19
Arsenic (As)			103.1		%		70-130	18-DEC-19
Barium (Ba)			106.7		%		70-130	18-DEC-19
Beryllium (Be)			95.7		%		70-130	18-DEC-19
Boron (B)			3.5		mg/kg		0-8.6	18-DEC-19
Cadmium (Cd)			95.0		%		70-130	18-DEC-19
Chromium (Cr)			102.0		%		70-130	18-DEC-19
Cobalt (Co)			98.7		%		70-130	18-DEC-19
Copper (Cu)			104.6		%		70-130	18-DEC-19
Lead (Pb)			97.4		%		70-130	18-DEC-19
Molybdenum (Mo)			100.6		%		70-130	18-DEC-19
Nickel (Ni)			102.5		%		70-130	18-DEC-19
Selenium (Se)			0.35		mg/kg		0.15-0.55	18-DEC-19
Silver (Ag)			0.25		mg/kg		0.16-0.36	18-DEC-19
Thallium (Tl)			92.3		%		70-130	18-DEC-19
Uranium (U)			92.1		%		70-130	18-DEC-19
Vanadium (V)			101.2		%		70-130	18-DEC-19
Zinc (Zn)			98.9		%		70-130	18-DEC-19
WG3244916-9 DUP		**WG3244916-8**						
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	18-DEC-19
Arsenic (As)		3.48	3.63		ug/g	4.2	30	18-DEC-19
Barium (Ba)		80.3	82.2		ug/g	2.2	40	18-DEC-19
Beryllium (Be)		0.63	0.62		ug/g	1.1	30	18-DEC-19
Boron (B)		9.0	8.0		ug/g	11	30	18-DEC-19
Cadmium (Cd)		0.096	0.100		ug/g	4.3	30	18-DEC-19
Chromium (Cr)		22.3	23.1		ug/g	3.5	30	18-DEC-19
Cobalt (Co)		9.18	9.62		ug/g	4.7	30	18-DEC-19
Copper (Cu)		20.7	22.3		ug/g	7.4	30	18-DEC-19
Lead (Pb)		8.98	9.15		ug/g	1.8	40	18-DEC-19
Molybdenum (Mo)		0.21	0.21		ug/g			18-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R4946069								
WG3244916-9 DUP		**WG3244916-8**						
Molybdenum (Mo)		0.21	0.21		ug/g	0.5	40	18-DEC-19
Nickel (Ni)		21.5	22.8		ug/g	5.9	30	18-DEC-19
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	18-DEC-19
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	18-DEC-19
Thallium (Tl)		0.145	0.146		ug/g	0.4	30	18-DEC-19
Uranium (U)		0.464	0.473		ug/g	1.8	30	18-DEC-19
Vanadium (V)		32.5	33.2		ug/g	2.0	30	18-DEC-19
Zinc (Zn)		45.1	47.2		ug/g	4.7	30	18-DEC-19
WG3244916-4 LCS								
Antimony (Sb)			105.3		%		80-120	18-DEC-19
Arsenic (As)			99.2		%		80-120	18-DEC-19
Barium (Ba)			98.5		%		80-120	18-DEC-19
Beryllium (Be)			94.1		%		80-120	18-DEC-19
Boron (B)			89.4		%		80-120	18-DEC-19
Cadmium (Cd)			96.6		%		80-120	18-DEC-19
Chromium (Cr)			98.9		%		80-120	18-DEC-19
Cobalt (Co)			98.1		%		80-120	18-DEC-19
Copper (Cu)			95.3		%		80-120	18-DEC-19
Lead (Pb)			97.2		%		80-120	18-DEC-19
Molybdenum (Mo)			101.7		%		80-120	18-DEC-19
Nickel (Ni)			96.8		%		80-120	18-DEC-19
Selenium (Se)			94.5		%		80-120	18-DEC-19
Silver (Ag)			93.6		%		80-120	18-DEC-19
Thallium (Tl)			97.1		%		80-120	18-DEC-19
Uranium (U)			88.7		%		80-120	18-DEC-19
Vanadium (V)			101.8		%		80-120	18-DEC-19
Zinc (Zn)			95.6		%		80-120	18-DEC-19
WG3244916-1 MB								
Antimony (Sb)			<0.10		mg/kg		0.1	18-DEC-19
Arsenic (As)			<0.10		mg/kg		0.1	18-DEC-19
Barium (Ba)			<0.50		mg/kg		0.5	18-DEC-19
Beryllium (Be)			<0.10		mg/kg		0.1	18-DEC-19
Boron (B)			<5.0		mg/kg		5	18-DEC-19
Cadmium (Cd)			<0.020		mg/kg		0.02	18-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R4946069								
WG3244916-1 MB								
Chromium (Cr)			<0.50		mg/kg		0.5	18-DEC-19
Cobalt (Co)			<0.10		mg/kg		0.1	18-DEC-19
Copper (Cu)			<0.50		mg/kg		0.5	18-DEC-19
Lead (Pb)			<0.50		mg/kg		0.5	18-DEC-19
Molybdenum (Mo)			<0.10		mg/kg		0.1	18-DEC-19
Nickel (Ni)			<0.50		mg/kg		0.5	18-DEC-19
Selenium (Se)			<0.20		mg/kg		0.2	18-DEC-19
Silver (Ag)			<0.10		mg/kg		0.1	18-DEC-19
Thallium (Tl)			<0.050		mg/kg		0.05	18-DEC-19
Uranium (U)			<0.050		mg/kg		0.05	18-DEC-19
Vanadium (V)			<0.20		mg/kg		0.2	18-DEC-19
Zinc (Zn)			<2.0		mg/kg		2	18-DEC-19
MOISTURE-WT	**Soil**							
Batch R4944392								
WG3243878-3 DUP		**L2396134-9**						
% Moisture		5.52	6.23		%	12	20	17-DEC-19
WG3243878-2 LCS								
% Moisture			100.2		%		90-110	17-DEC-19
WG3243878-1 MB								
% Moisture			<0.25		%		0.25	17-DEC-19
PAH-511-WT	**Soil**							
Batch R4946243								
WG3243067-3 DUP		**WG3243067-5**						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	19-DEC-19
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	19-DEC-19
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Acenaphthylene		0.428	0.437		ug/g	2.1	40	19-DEC-19
Anthracene		0.077	0.076		ug/g	1.5	40	19-DEC-19
Benzo(a)anthracene		1.10	1.14		ug/g	4.2	40	19-DEC-19
Benzo(a)pyrene		1.19	1.21		ug/g	2.1	40	19-DEC-19
Benzo(b)fluoranthene		1.55	1.62		ug/g	4.1	40	19-DEC-19
Benzo(g,h,i)perylene		1.01	1.04		ug/g	3.0	40	19-DEC-19
Benzo(k)fluoranthene		0.609	0.634		ug/g	4.0	40	19-DEC-19
Chrysene		1.37	1.37		ug/g	0.4	40	19-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R4946243								
WG3243067-3 DUP		**WG3243067-5**						
Dibenzo(ah)anthracene		0.181	0.188		ug/g	3.6	40	19-DEC-19
Fluoranthene		2.92	3.03		ug/g	3.9	40	19-DEC-19
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Indeno(1,2,3-cd)pyrene		0.780	0.780		ug/g	0.1	40	19-DEC-19
Naphthalene		0.014	0.015		ug/g	9.2	40	19-DEC-19
Phenanthrene		0.349	0.405		ug/g	15	40	19-DEC-19
Pyrene		2.50	2.59		ug/g	3.4	40	19-DEC-19
WG3243067-2 LCS								
1-Methylnaphthalene			96.3		%		50-140	19-DEC-19
2-Methylnaphthalene			91.2		%		50-140	19-DEC-19
Acenaphthene			100.1		%		50-140	19-DEC-19
Acenaphthylene			98.0		%		50-140	19-DEC-19
Anthracene			100.3		%		50-140	19-DEC-19
Benzo(a)anthracene			98.0		%		50-140	19-DEC-19
Benzo(a)pyrene			100.7		%		50-140	19-DEC-19
Benzo(b)fluoranthene			91.3		%		50-140	19-DEC-19
Benzo(g,h,i)perylene			103.3		%		50-140	19-DEC-19
Benzo(k)fluoranthene			112.4		%		50-140	19-DEC-19
Chrysene			114.7		%		50-140	19-DEC-19
Dibenzo(ah)anthracene			100.3		%		50-140	19-DEC-19
Fluoranthene			96.4		%		50-140	19-DEC-19
Fluorene			97.4		%		50-140	19-DEC-19
Indeno(1,2,3-cd)pyrene			86.0		%		50-140	19-DEC-19
Naphthalene			97.4		%		50-140	19-DEC-19
Phenanthrene			100.2		%		50-140	19-DEC-19
Pyrene			97.0		%		50-140	19-DEC-19
WG3243067-1 MB								
1-Methylnaphthalene			<0.030		ug/g		0.03	19-DEC-19
2-Methylnaphthalene			<0.030		ug/g		0.03	19-DEC-19
Acenaphthene			<0.050		ug/g		0.05	19-DEC-19
Acenaphthylene			<0.050		ug/g		0.05	19-DEC-19
Anthracene			<0.050		ug/g		0.05	19-DEC-19
Benzo(a)anthracene			<0.050		ug/g		0.05	19-DEC-19
Benzo(a)pyrene			<0.050		ug/g		0.05	19-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R4946243								
WG3243067-1 MB								
Benzo(b)fluoranthene			<0.050		ug/g		0.05	19-DEC-19
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	19-DEC-19
Benzo(k)fluoranthene			<0.050		ug/g		0.05	19-DEC-19
Chrysene			<0.050		ug/g		0.05	19-DEC-19
Dibenzo(ah)anthracene			<0.050		ug/g		0.05	19-DEC-19
Fluoranthene			<0.050		ug/g		0.05	19-DEC-19
Fluorene			<0.050		ug/g		0.05	19-DEC-19
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	19-DEC-19
Naphthalene			<0.013		ug/g		0.013	19-DEC-19
Phenanthrene			<0.046		ug/g		0.046	19-DEC-19
Pyrene			<0.050		ug/g		0.05	19-DEC-19
Surrogate: 2-Fluorobiphenyl			86.7		%		50-140	19-DEC-19
Surrogate: p-Terphenyl d14			76.8		%		50-140	19-DEC-19
WG3243067-4 MS		**WG3243067-5**						
1-Methylnaphthalene			88.5		%		50-140	19-DEC-19
2-Methylnaphthalene			85.1		%		50-140	19-DEC-19
Acenaphthene			94.4		%		50-140	19-DEC-19
Acenaphthylene			88.0		%		50-140	19-DEC-19
Anthracene			94.1		%		50-140	19-DEC-19
Benzo(a)anthracene			83.9		%		50-140	19-DEC-19
Benzo(a)pyrene			70.2		%		50-140	19-DEC-19
Benzo(b)fluoranthene			N/A	MS-B	%		-	19-DEC-19
Benzo(g,h,i)perylene			67.8		%		50-140	19-DEC-19
Benzo(k)fluoranthene			70.3		%		50-140	19-DEC-19
Chrysene			N/A	MS-B	%		-	19-DEC-19
Dibenzo(ah)anthracene			75.2		%		50-140	19-DEC-19
Fluoranthene			N/A	MS-B	%		-	19-DEC-19
Fluorene			94.4		%		50-140	19-DEC-19
Indeno(1,2,3-cd)pyrene			61.4		%		50-140	19-DEC-19
Naphthalene			87.8		%		50-140	19-DEC-19
Phenanthrene			88.1		%		50-140	19-DEC-19
Pyrene			N/A	MS-B	%		-	19-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R4946428								
WG3244054-3 DUP		**WG3244054-5**						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	19-DEC-19
2-Methylnaphthalene		0.033	<0.030	RPD-NA	ug/g	N/A	40	19-DEC-19
Acenaphthene		0.072	0.063		ug/g	14	40	19-DEC-19
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Anthracene		0.198	0.211		ug/g	6.2	40	19-DEC-19
Benzo(a)anthracene		2.22	2.25		ug/g	1.4	40	19-DEC-19
Benzo(a)pyrene		2.91	3.03		ug/g	3.8	40	19-DEC-19
Benzo(b)fluoranthene		4.82	5.13		ug/g	6.3	40	19-DEC-19
Benzo(g,h,i)perylene		2.80	2.91		ug/g	3.7	40	19-DEC-19
Benzo(k)fluoranthene		1.33	1.27		ug/g	5.0	40	19-DEC-19
Chrysene		3.56	3.69		ug/g	3.5	40	19-DEC-19
Dibenzo(ah)anthracene		0.586	0.608		ug/g	3.7	40	19-DEC-19
Fluoranthene		6.16	6.20		ug/g	0.6	40	19-DEC-19
Fluorene		0.074	0.067		ug/g	9.1	40	19-DEC-19
Indeno(1,2,3-cd)pyrene		2.53	2.64		ug/g	4.3	40	19-DEC-19
Naphthalene		0.027	<0.013	DUP-H	ug/g	N/A	40	19-DEC-19
Phenanthrene		2.08	2.01		ug/g	3.2	40	19-DEC-19
Pyrene		4.76	4.76		ug/g	0.1	40	19-DEC-19
WG3244054-2 LCS								
1-Methylnaphthalene			96.2		%		50-140	19-DEC-19
2-Methylnaphthalene			91.7		%		50-140	19-DEC-19
Acenaphthene			98.1		%		50-140	19-DEC-19
Acenaphthylene			98.7		%		50-140	19-DEC-19
Anthracene			97.9		%		50-140	19-DEC-19
Benzo(a)anthracene			97.4		%		50-140	19-DEC-19
Benzo(a)pyrene			94.1		%		50-140	19-DEC-19
Benzo(b)fluoranthene			103.2		%		50-140	19-DEC-19
Benzo(g,h,i)perylene			95.4		%		50-140	19-DEC-19
Benzo(k)fluoranthene			89.5		%		50-140	19-DEC-19
Chrysene			110.4		%		50-140	19-DEC-19
Dibenzo(ah)anthracene			96.1		%		50-140	19-DEC-19
Fluoranthene			95.4		%		50-140	19-DEC-19
Fluorene			96.7		%		50-140	19-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R4946428								
WG3244054-2 LCS								
Indeno(1,2,3-cd)pyrene			100.9		%		50-140	19-DEC-19
Naphthalene			94.4		%		50-140	19-DEC-19
Phenanthrene			98.1		%		50-140	19-DEC-19
Pyrene			95.7		%		50-140	19-DEC-19
WG3244054-1 MB								
1-Methylnaphthalene			<0.030		ug/g		0.03	19-DEC-19
2-Methylnaphthalene			<0.030		ug/g		0.03	19-DEC-19
Acenaphthene			<0.050		ug/g		0.05	19-DEC-19
Acenaphthylene			<0.050		ug/g		0.05	19-DEC-19
Anthracene			<0.050		ug/g		0.05	19-DEC-19
Benzo(a)anthracene			<0.050		ug/g		0.05	19-DEC-19
Benzo(a)pyrene			<0.050		ug/g		0.05	19-DEC-19
Benzo(b)fluoranthene			<0.050		ug/g		0.05	19-DEC-19
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	19-DEC-19
Benzo(k)fluoranthene			<0.050		ug/g		0.05	19-DEC-19
Chrysene			<0.050		ug/g		0.05	19-DEC-19
Dibenzo(ah)anthracene			<0.050		ug/g		0.05	19-DEC-19
Fluoranthene			<0.050		ug/g		0.05	19-DEC-19
Fluorene			<0.050		ug/g		0.05	19-DEC-19
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	19-DEC-19
Naphthalene			<0.013		ug/g		0.013	19-DEC-19
Phenanthrene			<0.046		ug/g		0.046	19-DEC-19
Pyrene			<0.050		ug/g		0.05	19-DEC-19
Surrogate: 2-Fluorobiphenyl			89.0		%		50-140	19-DEC-19
Surrogate: p-Terphenyl d14			77.7		%		50-140	19-DEC-19
WG3244054-4 MS		**WG3244054-5**						
1-Methylnaphthalene			99.5		%		50-140	19-DEC-19
2-Methylnaphthalene			93.5		%		50-140	19-DEC-19
Acenaphthene			108.7		%		50-140	19-DEC-19
Acenaphthylene			103.6		%		50-140	19-DEC-19
Anthracene			117.6		%		50-140	19-DEC-19
Benzo(a)anthracene			N/A	MS-B	%		-	19-DEC-19
Benzo(a)pyrene			N/A	MS-B	%		-	19-DEC-19
Benzo(b)fluoranthene			N/A	MS-B	%		-	19-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R4946428								
WG3244054-4 MS		**WG3244054-5**						
Benzo(g,h,i)perylene			N/A	MS-B	%		-	19-DEC-19
Benzo(k)fluoranthene			N/A	MS-B	%		-	19-DEC-19
Chrysene			N/A	MS-B	%		-	19-DEC-19
Dibenzo(ah)anthracene			124.5		%		50-140	19-DEC-19
Fluoranthene			N/A	MS-B	%		-	19-DEC-19
Fluorene			109.0		%		50-140	19-DEC-19
Indeno(1,2,3-cd)pyrene			N/A	MS-B	%		-	19-DEC-19
Naphthalene			95.1		%		50-140	19-DEC-19
Phenanthrene			N/A	MS-B	%		-	19-DEC-19
Pyrene			N/A	MS-B	%		-	19-DEC-19
VOC-511-HS-WT	**Soil**							
Batch R4945179								
WG3244565-4 DUP		**WG3244565-3**						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	18-DEC-19
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	18-DEC-19
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4945179								
WG3244565-4 DUP		**WG3244565-3**						
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	18-DEC-19
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	18-DEC-19
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	18-DEC-19
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	18-DEC-19
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	18-DEC-19
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-DEC-19
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	18-DEC-19
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	18-DEC-19
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	18-DEC-19
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	18-DEC-19
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-DEC-19
WG3244565-2 LCS								
1,1,1,2-Tetrachloroethane			87.3		%		60-130	18-DEC-19
1,1,2,2-Tetrachloroethane			96.9		%		60-130	18-DEC-19
1,1,1-Trichloroethane			86.6		%		60-130	18-DEC-19
1,1,2-Trichloroethane			86.0		%		60-130	18-DEC-19
1,1-Dichloroethane			85.8		%		60-130	18-DEC-19
1,1-Dichloroethylene			83.9		%		60-130	18-DEC-19
1,2-Dibromoethane			87.9		%		70-130	18-DEC-19
1,2-Dichlorobenzene			95.3		%		70-130	18-DEC-19
1,2-Dichloroethane			88.7		%		60-130	18-DEC-19
1,2-Dichloropropane			91.1		%		70-130	18-DEC-19
1,3-Dichlorobenzene			93.4		%		70-130	18-DEC-19
1,4-Dichlorobenzene			94.7		%		70-130	18-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4945179								
WG3244565-2 LCS								
Acetone			96.2		%		60-140	18-DEC-19
Benzene			100.1		%		70-130	18-DEC-19
Bromodichloromethane			89.2		%		50-140	18-DEC-19
Bromoform			99.8		%		70-130	18-DEC-19
Bromomethane			84.3		%		50-140	18-DEC-19
Carbon tetrachloride			94.6		%		70-130	18-DEC-19
Chlorobenzene			88.1		%		70-130	18-DEC-19
Chloroform			90.1		%		70-130	18-DEC-19
cis-1,2-Dichloroethylene			87.6		%		70-130	18-DEC-19
cis-1,3-Dichloropropene			93.6		%		70-130	18-DEC-19
Dibromochloromethane			94.5		%		60-130	18-DEC-19
Dichlorodifluoromethane			77.7		%		50-140	18-DEC-19
Ethylbenzene			91.4		%		70-130	18-DEC-19
n-Hexane			88.3		%		70-130	18-DEC-19
Methylene Chloride			91.0		%		70-130	18-DEC-19
MTBE			91.3		%		70-130	18-DEC-19
m+p-Xylenes			94.2		%		70-130	18-DEC-19
Methyl Ethyl Ketone			102.3		%		60-140	18-DEC-19
Methyl Isobutyl Ketone			87.3		%		60-140	18-DEC-19
o-Xylene			89.6		%		70-130	18-DEC-19
Styrene			88.8		%		70-130	18-DEC-19
Tetrachloroethylene			97.4		%		60-130	18-DEC-19
Toluene			94.2		%		70-130	18-DEC-19
trans-1,2-Dichloroethylene			86.0		%		60-130	18-DEC-19
trans-1,3-Dichloropropene			88.4		%		70-130	18-DEC-19
Trichloroethylene			92.2		%		60-130	18-DEC-19
Trichlorofluoromethane			86.6		%		50-140	18-DEC-19
Vinyl chloride			97.1		%		60-140	18-DEC-19
WG3244565-1 MB								
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	18-DEC-19
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	18-DEC-19
1,1,1-Trichloroethane			<0.050		ug/g		0.05	18-DEC-19
1,1,2-Trichloroethane			<0.050		ug/g		0.05	18-DEC-19
1,1-Dichloroethane			<0.050		ug/g		0.05	18-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4945179								
WG3244565-1 MB								
1,1-Dichloroethylene			<0.050		ug/g		0.05	18-DEC-19
1,2-Dibromoethane			<0.050		ug/g		0.05	18-DEC-19
1,2-Dichlorobenzene			<0.050		ug/g		0.05	18-DEC-19
1,2-Dichloroethane			<0.050		ug/g		0.05	18-DEC-19
1,2-Dichloropropane			<0.050		ug/g		0.05	18-DEC-19
1,3-Dichlorobenzene			<0.050		ug/g		0.05	18-DEC-19
1,4-Dichlorobenzene			<0.050		ug/g		0.05	18-DEC-19
Acetone			<0.50		ug/g		0.5	18-DEC-19
Benzene			<0.0068		ug/g		0.0068	18-DEC-19
Bromodichloromethane			<0.050		ug/g		0.05	18-DEC-19
Bromoform			<0.050		ug/g		0.05	18-DEC-19
Bromomethane			<0.050		ug/g		0.05	18-DEC-19
Carbon tetrachloride			<0.050		ug/g		0.05	18-DEC-19
Chlorobenzene			<0.050		ug/g		0.05	18-DEC-19
Chloroform			<0.050		ug/g		0.05	18-DEC-19
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	18-DEC-19
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	18-DEC-19
Dibromochloromethane			<0.050		ug/g		0.05	18-DEC-19
Dichlorodifluoromethane			<0.050		ug/g		0.05	18-DEC-19
Ethylbenzene			<0.018		ug/g		0.018	18-DEC-19
n-Hexane			<0.050		ug/g		0.05	18-DEC-19
Methylene Chloride			<0.050		ug/g		0.05	18-DEC-19
MTBE			<0.050		ug/g		0.05	18-DEC-19
m+p-Xylenes			<0.030		ug/g		0.03	18-DEC-19
Methyl Ethyl Ketone			<0.50		ug/g		0.5	18-DEC-19
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	18-DEC-19
o-Xylene			<0.020		ug/g		0.02	18-DEC-19
Styrene			<0.050		ug/g		0.05	18-DEC-19
Tetrachloroethylene			<0.050		ug/g		0.05	18-DEC-19
Toluene			<0.080		ug/g		0.08	18-DEC-19
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	18-DEC-19
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	18-DEC-19
Trichloroethylene			<0.010		ug/g		0.01	18-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4945179								
WG3244565-1 MB								
Trichlorofluoromethane			<0.050		ug/g		0.05	18-DEC-19
Vinyl chloride			<0.020		ug/g		0.02	18-DEC-19
Surrogate: 1,4-Difluorobenzene			109.6		%		50-140	18-DEC-19
Surrogate: 4-Bromofluorobenzene			87.1		%		50-140	18-DEC-19
WG3244565-5 MS		**L2395723-1**						
1,1,1,2-Tetrachloroethane			87.5		%		50-140	18-DEC-19
1,1,2,2-Tetrachloroethane			83.6		%		50-140	18-DEC-19
1,1,1-Trichloroethane			92.1		%		50-140	18-DEC-19
1,1,2-Trichloroethane			77.5		%		50-140	18-DEC-19
1,1-Dichloroethane			85.2		%		50-140	18-DEC-19
1,1-Dichloroethylene			89.6		%		50-140	18-DEC-19
1,2-Dibromoethane			76.9		%		50-140	18-DEC-19
1,2-Dichlorobenzene			96.3		%		50-140	18-DEC-19
1,2-Dichloroethane			77.2		%		50-140	18-DEC-19
1,2-Dichloropropane			85.7		%		50-140	18-DEC-19
1,3-Dichlorobenzene			99.4		%		50-140	18-DEC-19
1,4-Dichlorobenzene			99.3		%		50-140	18-DEC-19
Acetone			74.2		%		50-140	18-DEC-19
Benzene			99.99		%		50-140	18-DEC-19
Bromodichloromethane			84.2		%		50-140	18-DEC-19
Bromoform			88.2		%		50-140	18-DEC-19
Bromomethane			86.8		%		50-140	18-DEC-19
Carbon tetrachloride			102.6		%		50-140	18-DEC-19
Chlorobenzene			89.3		%		50-140	18-DEC-19
Chloroform			88.9		%		50-140	18-DEC-19
cis-1,2-Dichloroethylene			85.8		%		50-140	18-DEC-19
cis-1,3-Dichloropropene			90.3		%		50-140	18-DEC-19
Dibromochloromethane			87.9		%		50-140	18-DEC-19
Dichlorodifluoromethane			81.2		%		50-140	18-DEC-19
Ethylbenzene			98.7		%		50-140	18-DEC-19
n-Hexane			97.2		%		50-140	18-DEC-19
Methylene Chloride			84.7		%		50-140	18-DEC-19
MTBE			92.6		%		50-140	18-DEC-19
m+p-Xylenes			101.4		%		50-140	18-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4945179								
WG3244565-5 MS		**L2395723-1**						
Methyl Ethyl Ketone			67.9		%		50-140	18-DEC-19
Methyl Isobutyl Ketone			65.8		%		50-140	18-DEC-19
o-Xylene			93.9		%		50-140	18-DEC-19
Styrene			89.0		%		50-140	18-DEC-19
Tetrachloroethylene			107.3		%		50-140	18-DEC-19
Toluene			99.4		%		50-140	18-DEC-19
trans-1,2-Dichloroethylene			88.5		%		50-140	18-DEC-19
trans-1,3-Dichloropropene			88.2		%		50-140	18-DEC-19
Trichloroethylene			96.4		%		50-140	18-DEC-19
Trichlorofluoromethane			94.7		%		50-140	18-DEC-19
Vinyl chloride			102.1		%		50-140	18-DEC-19
Batch R4946068								
WG3244604-4 DUP		**WG3244604-3**						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	19-DEC-19
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	19-DEC-19
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4946068								
WG3244604-4 DUP		**WG3244604-3**						
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	19-DEC-19
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Ethylbenzene		0.022	0.021		ug/g	4.7	40	19-DEC-19
n-Hexane		0.731	0.700		ug/g	4.4	40	19-DEC-19
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
m+p-Xylenes		0.255	0.245		ug/g	4.0	40	19-DEC-19
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	19-DEC-19
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	19-DEC-19
o-Xylene		0.070	0.067		ug/g	3.3	40	19-DEC-19
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Toluene		0.114	0.110		ug/g	3.6	40	19-DEC-19
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	19-DEC-19
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	19-DEC-19
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	19-DEC-19
WG3244604-2 LCS								
1,1,1,2-Tetrachloroethane			87.5		%		60-130	19-DEC-19
1,1,2,2-Tetrachloroethane			74.9		%		60-130	19-DEC-19
1,1,1-Trichloroethane			89.6		%		60-130	19-DEC-19
1,1,2-Trichloroethane			83.5		%		60-130	19-DEC-19
1,1-Dichloroethane			87.2		%		60-130	19-DEC-19
1,1-Dichloroethylene			92.8		%		60-130	19-DEC-19
1,2-Dibromoethane			81.3		%		70-130	19-DEC-19
1,2-Dichlorobenzene			89.4		%		70-130	19-DEC-19
1,2-Dichloroethane			80.7		%		60-130	19-DEC-19
1,2-Dichloropropane			87.4		%		70-130	19-DEC-19
1,3-Dichlorobenzene			100.1		%		70-130	19-DEC-19
1,4-Dichlorobenzene			98.3		%		70-130	19-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4946068								
WG3244604-2 LCS								
Acetone			83.3		%		60-140	19-DEC-19
Benzene			89.6		%		70-130	19-DEC-19
Bromodichloromethane			85.9		%		50-140	19-DEC-19
Bromoform			78.8		%		70-130	19-DEC-19
Bromomethane			79.4		%		50-140	19-DEC-19
Carbon tetrachloride			90.8		%		70-130	19-DEC-19
Chlorobenzene			88.5		%		70-130	19-DEC-19
Chloroform			89.1		%		70-130	19-DEC-19
cis-1,2-Dichloroethylene			85.6		%		70-130	19-DEC-19
cis-1,3-Dichloropropene			87.3		%		70-130	19-DEC-19
Dibromochloromethane			82.4		%		60-130	19-DEC-19
Dichlorodifluoromethane			64.1		%		50-140	19-DEC-19
Ethylbenzene			88.2		%		70-130	19-DEC-19
n-Hexane			88.8		%		70-130	19-DEC-19
Methylene Chloride			86.5		%		70-130	19-DEC-19
MTBE			87.9		%		70-130	19-DEC-19
m+p-Xylenes			95.7		%		70-130	19-DEC-19
Methyl Ethyl Ketone			74.9		%		60-140	19-DEC-19
Methyl Isobutyl Ketone			65.2		%		60-140	19-DEC-19
o-Xylene			86.2		%		70-130	19-DEC-19
Styrene			81.6		%		70-130	19-DEC-19
Tetrachloroethylene			100.3		%		60-130	19-DEC-19
Toluene			89.0		%		70-130	19-DEC-19
trans-1,2-Dichloroethylene			86.3		%		60-130	19-DEC-19
trans-1,3-Dichloropropene			80.0		%		70-130	19-DEC-19
Trichloroethylene			89.9		%		60-130	19-DEC-19
Trichlorofluoromethane			88.6		%		50-140	19-DEC-19
Vinyl chloride			96.3		%		60-140	19-DEC-19
WG3244604-1 MB								
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	19-DEC-19
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	19-DEC-19
1,1,1-Trichloroethane			<0.050		ug/g		0.05	19-DEC-19
1,1,2-Trichloroethane			<0.050		ug/g		0.05	19-DEC-19
1,1-Dichloroethane			<0.050		ug/g		0.05	19-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4946068								
WG3244604-1 MB								
1,1-Dichloroethylene			<0.050		ug/g		0.05	19-DEC-19
1,2-Dibromoethane			<0.050		ug/g		0.05	19-DEC-19
1,2-Dichlorobenzene			<0.050		ug/g		0.05	19-DEC-19
1,2-Dichloroethane			<0.050		ug/g		0.05	19-DEC-19
1,2-Dichloropropane			<0.050		ug/g		0.05	19-DEC-19
1,3-Dichlorobenzene			<0.050		ug/g		0.05	19-DEC-19
1,4-Dichlorobenzene			<0.050		ug/g		0.05	19-DEC-19
Acetone			<0.50		ug/g		0.5	19-DEC-19
Benzene			<0.0068		ug/g		0.0068	19-DEC-19
Bromodichloromethane			<0.050		ug/g		0.05	19-DEC-19
Bromoform			<0.050		ug/g		0.05	19-DEC-19
Bromomethane			<0.050		ug/g		0.05	19-DEC-19
Carbon tetrachloride			<0.050		ug/g		0.05	19-DEC-19
Chlorobenzene			<0.050		ug/g		0.05	19-DEC-19
Chloroform			<0.050		ug/g		0.05	19-DEC-19
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	19-DEC-19
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	19-DEC-19
Dibromochloromethane			<0.050		ug/g		0.05	19-DEC-19
Dichlorodifluoromethane			<0.050		ug/g		0.05	19-DEC-19
Ethylbenzene			<0.018		ug/g		0.018	19-DEC-19
n-Hexane			<0.050		ug/g		0.05	19-DEC-19
Methylene Chloride			<0.050		ug/g		0.05	19-DEC-19
MTBE			<0.050		ug/g		0.05	19-DEC-19
m+p-Xylenes			<0.030		ug/g		0.03	19-DEC-19
Methyl Ethyl Ketone			<0.50		ug/g		0.5	19-DEC-19
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	19-DEC-19
o-Xylene			<0.020		ug/g		0.02	19-DEC-19
Styrene			<0.050		ug/g		0.05	19-DEC-19
Tetrachloroethylene			<0.050		ug/g		0.05	19-DEC-19
Toluene			<0.080		ug/g		0.08	19-DEC-19
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	19-DEC-19
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	19-DEC-19
Trichloroethylene			<0.010		ug/g		0.01	19-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4946068								
WG3244604-1 MB								
Trichlorofluoromethane			<0.050		ug/g		0.05	19-DEC-19
Vinyl chloride			<0.020		ug/g		0.02	19-DEC-19
Surrogate: 1,4-Difluorobenzene			101.5		%		50-140	19-DEC-19
Surrogate: 4-Bromofluorobenzene			90.4		%		50-140	19-DEC-19
WG3244604-5 MS		**L2396546-8**						
1,1,1,2-Tetrachloroethane			93.9		%		50-140	20-DEC-19
1,1,2,2-Tetrachloroethane			93.6		%		50-140	20-DEC-19
1,1,1-Trichloroethane			95.8		%		50-140	20-DEC-19
1,1,2-Trichloroethane			91.2		%		50-140	20-DEC-19
1,1-Dichloroethane			87.0		%		50-140	20-DEC-19
1,1-Dichloroethylene			89.6		%		50-140	20-DEC-19
1,2-Dibromoethane			89.9		%		50-140	20-DEC-19
1,2-Dichlorobenzene			86.1		%		50-140	20-DEC-19
1,2-Dichloroethane			87.8		%		50-140	20-DEC-19
1,2-Dichloropropane			92.2		%		50-140	20-DEC-19
1,3-Dichlorobenzene			92.0		%		50-140	20-DEC-19
1,4-Dichlorobenzene			87.2		%		50-140	20-DEC-19
Acetone			88.9		%		50-140	20-DEC-19
Benzene			95.0		%		50-140	20-DEC-19
Bromodichloromethane			91.6		%		50-140	20-DEC-19
Bromoform			91.9		%		50-140	20-DEC-19
Bromomethane			85.3		%		50-140	20-DEC-19
Carbon tetrachloride			94.4		%		50-140	20-DEC-19
Chlorobenzene			93.5		%		50-140	20-DEC-19
Chloroform			93.7		%		50-140	20-DEC-19
cis-1,2-Dichloroethylene			88.0		%		50-140	20-DEC-19
cis-1,3-Dichloropropene			91.0		%		50-140	20-DEC-19
Dibromochloromethane			91.7		%		50-140	20-DEC-19
Dichlorodifluoromethane			62.8		%		50-140	20-DEC-19
Ethylbenzene			96.5		%		50-140	20-DEC-19
n-Hexane			122.8		%		50-140	20-DEC-19
Methylene Chloride			88.5		%		50-140	20-DEC-19
MTBE			92.8		%		50-140	20-DEC-19
m+p-Xylenes			100.9		%		50-140	20-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4946068								
WG3244604-5 MS		**L2396546-8**						
Methyl Ethyl Ketone			83.4		%		50-140	20-DEC-19
Methyl Isobutyl Ketone			83.4		%		50-140	20-DEC-19
o-Xylene			97.8		%		50-140	20-DEC-19
Styrene			94.0		%		50-140	20-DEC-19
Tetrachloroethylene			95.8		%		50-140	20-DEC-19
Toluene			102.6		%		50-140	20-DEC-19
trans-1,2-Dichloroethylene			83.5		%		50-140	20-DEC-19
trans-1,3-Dichloropropene			91.8		%		50-140	20-DEC-19
Trichloroethylene			93.2		%		50-140	20-DEC-19
Trichlorofluoromethane			91.2		%		50-140	20-DEC-19
Vinyl chloride			104.1		%		50-140	20-DEC-19
Batch R4946201								
WG3244883-4 DUP		**WG3244883-3**						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	19-DEC-19
Benzene		0.0558	0.0552		ug/g	1.1	40	19-DEC-19
Bromodichloromethane		<0.10	<0.10	RPD-NA	ug/g	N/A	40	19-DEC-19
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Chloroform		<0.10	<0.10	RPD-NA	ug/g	N/A	40	19-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4946201								
WG3244883-4 DUP		**WG3244883-3**						
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	19-DEC-19
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Ethylbenzene		0.190	0.193		ug/g	1.3	40	19-DEC-19
n-Hexane		0.061	0.062		ug/g	1.5	40	19-DEC-19
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
m+p-Xylenes		0.688	0.696		ug/g	1.2	40	19-DEC-19
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	19-DEC-19
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	19-DEC-19
o-Xylene		0.514	0.519		ug/g	1.0	40	19-DEC-19
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Toluene		0.539	0.539		ug/g	0.0	40	19-DEC-19
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	19-DEC-19
Trichloroethylene		0.596	0.597		ug/g	0.2	40	19-DEC-19
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-DEC-19
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	19-DEC-19
WG3244883-2 LCS								
1,1,1,2-Tetrachloroethane			83.4		%		60-130	19-DEC-19
1,1,2,2-Tetrachloroethane			88.2		%		60-130	19-DEC-19
1,1,1-Trichloroethane			83.5		%		60-130	19-DEC-19
1,1,2-Trichloroethane			80.7		%		60-130	19-DEC-19
1,1-Dichloroethane			81.8		%		60-130	19-DEC-19
1,1-Dichloroethylene			81.4		%		60-130	19-DEC-19
1,2-Dibromoethane			81.7		%		70-130	19-DEC-19
1,2-Dichlorobenzene			92.2		%		70-130	19-DEC-19
1,2-Dichloroethane			82.4		%		60-130	19-DEC-19
1,2-Dichloropropane			86.4		%		70-130	19-DEC-19
1,3-Dichlorobenzene			92.6		%		70-130	19-DEC-19
1,4-Dichlorobenzene			93.4		%		70-130	19-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4946201								
WG3244883-2 LCS								
Acetone			86.0		%		60-140	19-DEC-19
Benzene			96.1		%		70-130	19-DEC-19
Bromodichloromethane			84.3		%		50-140	19-DEC-19
Bromoform			93.2		%		70-130	19-DEC-19
Bromomethane			82.0		%		50-140	19-DEC-19
Carbon tetrachloride			91.5		%		70-130	19-DEC-19
Chlorobenzene			84.8		%		70-130	19-DEC-19
Chloroform			85.7		%		70-130	19-DEC-19
cis-1,2-Dichloroethylene			83.7		%		70-130	19-DEC-19
cis-1,3-Dichloropropene			91.0		%		70-130	19-DEC-19
Dibromochloromethane			88.8		%		60-130	19-DEC-19
Dichlorodifluoromethane			77.4		%		50-140	19-DEC-19
Ethylbenzene			89.1		%		70-130	19-DEC-19
n-Hexane			86.1		%		70-130	19-DEC-19
Methylene Chloride			86.3		%		70-130	19-DEC-19
MTBE			87.5		%		70-130	19-DEC-19
m+p-Xylenes			91.8		%		70-130	19-DEC-19
Methyl Ethyl Ketone			92.2		%		60-140	19-DEC-19
Methyl Isobutyl Ketone			77.5		%		60-140	19-DEC-19
o-Xylene			86.6		%		70-130	19-DEC-19
Styrene			85.5		%		70-130	19-DEC-19
Tetrachloroethylene			95.3		%		60-130	19-DEC-19
Toluene			91.1		%		70-130	19-DEC-19
trans-1,2-Dichloroethylene			83.5		%		60-130	19-DEC-19
trans-1,3-Dichloropropene			85.8		%		70-130	19-DEC-19
Trichloroethylene			89.2		%		60-130	19-DEC-19
Trichlorofluoromethane			83.9		%		50-140	19-DEC-19
Vinyl chloride			95.3		%		60-140	19-DEC-19
WG3244883-1 MB								
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	19-DEC-19
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	19-DEC-19
1,1,1-Trichloroethane			<0.050		ug/g		0.05	19-DEC-19
1,1,2-Trichloroethane			<0.050		ug/g		0.05	19-DEC-19
1,1-Dichloroethane			<0.050		ug/g		0.05	19-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4946201								
WG3244883-1 MB								
1,1-Dichloroethylene			<0.050		ug/g		0.05	19-DEC-19
1,2-Dibromoethane			<0.050		ug/g		0.05	19-DEC-19
1,2-Dichlorobenzene			<0.050		ug/g		0.05	19-DEC-19
1,2-Dichloroethane			<0.050		ug/g		0.05	19-DEC-19
1,2-Dichloropropane			<0.050		ug/g		0.05	19-DEC-19
1,3-Dichlorobenzene			<0.050		ug/g		0.05	19-DEC-19
1,4-Dichlorobenzene			<0.050		ug/g		0.05	19-DEC-19
Acetone			<0.50		ug/g		0.5	19-DEC-19
Benzene			<0.0068		ug/g		0.0068	19-DEC-19
Bromodichloromethane			<0.050		ug/g		0.05	19-DEC-19
Bromoform			<0.050		ug/g		0.05	19-DEC-19
Bromomethane			<0.050		ug/g		0.05	19-DEC-19
Carbon tetrachloride			<0.050		ug/g		0.05	19-DEC-19
Chlorobenzene			<0.050		ug/g		0.05	19-DEC-19
Chloroform			<0.050		ug/g		0.05	19-DEC-19
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	19-DEC-19
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	19-DEC-19
Dibromochloromethane			<0.050		ug/g		0.05	19-DEC-19
Dichlorodifluoromethane			<0.050		ug/g		0.05	19-DEC-19
Ethylbenzene			<0.018		ug/g		0.018	19-DEC-19
n-Hexane			<0.050		ug/g		0.05	19-DEC-19
Methylene Chloride			<0.050		ug/g		0.05	19-DEC-19
MTBE			<0.050		ug/g		0.05	19-DEC-19
m+p-Xylenes			<0.030		ug/g		0.03	19-DEC-19
Methyl Ethyl Ketone			<0.50		ug/g		0.5	19-DEC-19
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	19-DEC-19
o-Xylene			<0.020		ug/g		0.02	19-DEC-19
Styrene			<0.050		ug/g		0.05	19-DEC-19
Tetrachloroethylene			<0.050		ug/g		0.05	19-DEC-19
Toluene			<0.080		ug/g		0.08	19-DEC-19
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	19-DEC-19
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	19-DEC-19
Trichloroethylene			<0.010		ug/g		0.01	19-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4946201								
WG3244883-1 MB								
Trichlorofluoromethane			<0.050		ug/g		0.05	19-DEC-19
Vinyl chloride			<0.020		ug/g		0.02	19-DEC-19
Surrogate: 1,4-Difluorobenzene			108.5		%		50-140	19-DEC-19
Surrogate: 4-Bromofluorobenzene			85.7		%		50-140	19-DEC-19
WG3244883-5 MS		**L2396319-1**						
1,1,1,2-Tetrachloroethane			86.8		%		50-140	19-DEC-19
1,1,2,2-Tetrachloroethane			95.2		%		50-140	19-DEC-19
1,1,1-Trichloroethane			86.8		%		50-140	19-DEC-19
1,1,2-Trichloroethane			84.9		%		50-140	19-DEC-19
1,1-Dichloroethane			84.1		%		50-140	19-DEC-19
1,1-Dichloroethylene			84.4		%		50-140	19-DEC-19
1,2-Dibromoethane			86.1		%		50-140	19-DEC-19
1,2-Dichlorobenzene			89.3		%		50-140	19-DEC-19
1,2-Dichloroethane			85.3		%		50-140	19-DEC-19
1,2-Dichloropropane			89.3		%		50-140	19-DEC-19
1,3-Dichlorobenzene			88.1		%		50-140	19-DEC-19
1,4-Dichlorobenzene			88.5		%		50-140	19-DEC-19
Acetone			90.8		%		50-140	19-DEC-19
Benzene			98.2		%		50-140	19-DEC-19
Bromodichloromethane			83.8		%		50-140	19-DEC-19
Bromoform			97.9		%		50-140	19-DEC-19
Bromomethane			85.4		%		50-140	19-DEC-19
Carbon tetrachloride			94.4		%		50-140	19-DEC-19
Chlorobenzene			87.3		%		50-140	19-DEC-19
Chloroform			87.2		%		50-140	19-DEC-19
cis-1,2-Dichloroethylene			87.0		%		50-140	19-DEC-19
cis-1,3-Dichloropropene			92.8		%		50-140	19-DEC-19
Dibromochloromethane			92.8		%		50-140	19-DEC-19
Dichlorodifluoromethane			85.2		%		50-140	19-DEC-19
Ethylbenzene			88.3		%		50-140	19-DEC-19
n-Hexane			89.2		%		50-140	19-DEC-19
Methylene Chloride			88.9		%		50-140	19-DEC-19
MTBE			89.7		%		50-140	19-DEC-19
m+p-Xylenes			89.3		%		50-140	19-DEC-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4946201								
WG3244883-5 MS		**L2396319-1**						
Methyl Ethyl Ketone			92.9		%		50-140	19-DEC-19
Methyl Isobutyl Ketone			82.5		%		50-140	19-DEC-19
o-Xylene			79.6		%		50-140	19-DEC-19
Styrene			87.2		%		50-140	19-DEC-19
Tetrachloroethylene			98.4		%		50-140	19-DEC-19
Toluene			86.1		%		50-140	19-DEC-19
trans-1,2-Dichloroethylene			85.4		%		50-140	19-DEC-19
trans-1,3-Dichloropropene			88.6		%		50-140	19-DEC-19
Trichloroethylene			96.0		%		50-140	19-DEC-19
Trichlorofluoromethane			88.4		%		50-140	19-DEC-19
Vinyl chloride			100.2		%		50-140	19-DEC-19

Quality Control Report

Workorder: L2396546 Report Date: 23-DEC-19

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Dr
Kanata 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
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
LCS-H	Lab Control Sample recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

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

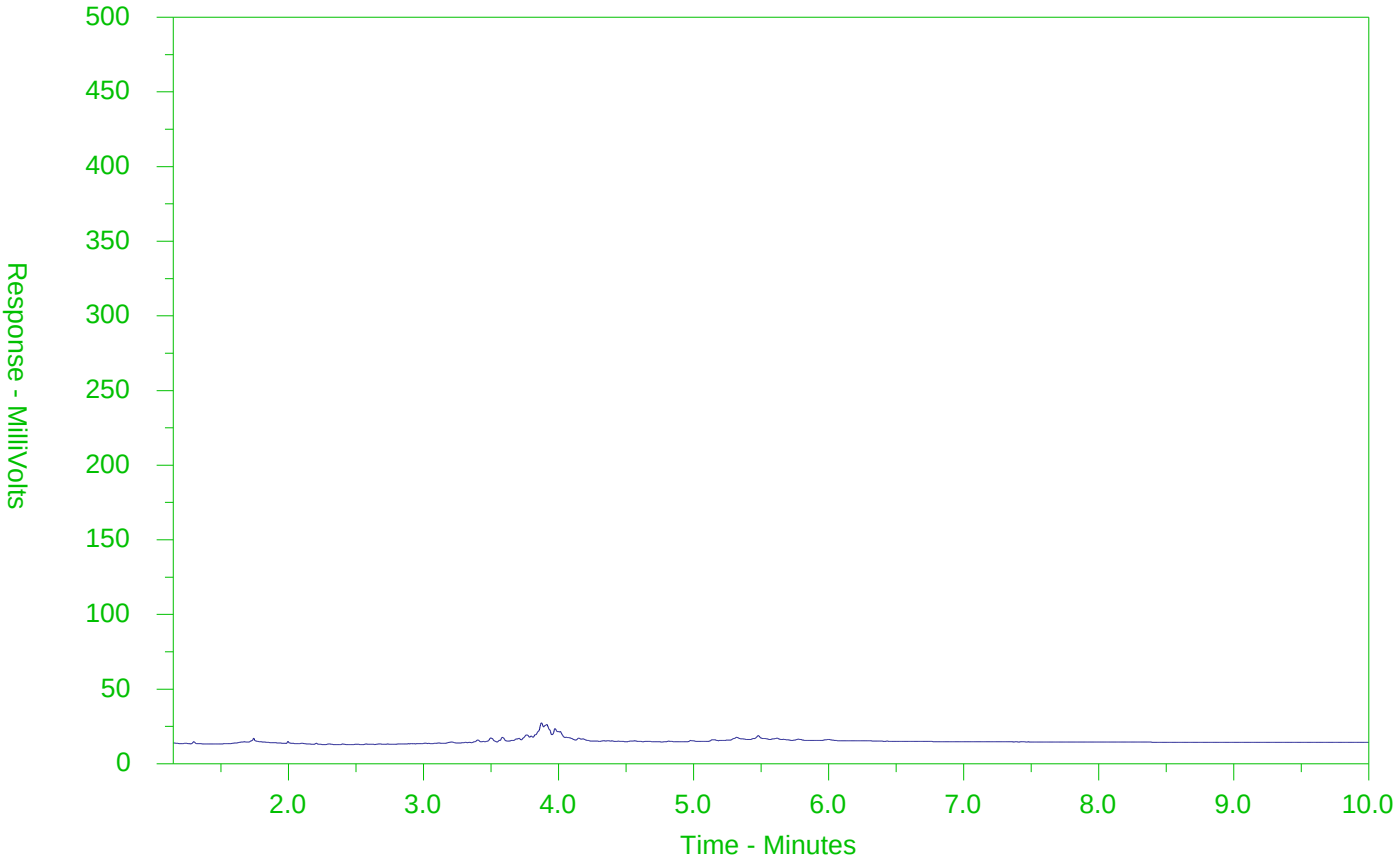
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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

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

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

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2396546-1
Client Sample ID: BH19-4 SA1



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

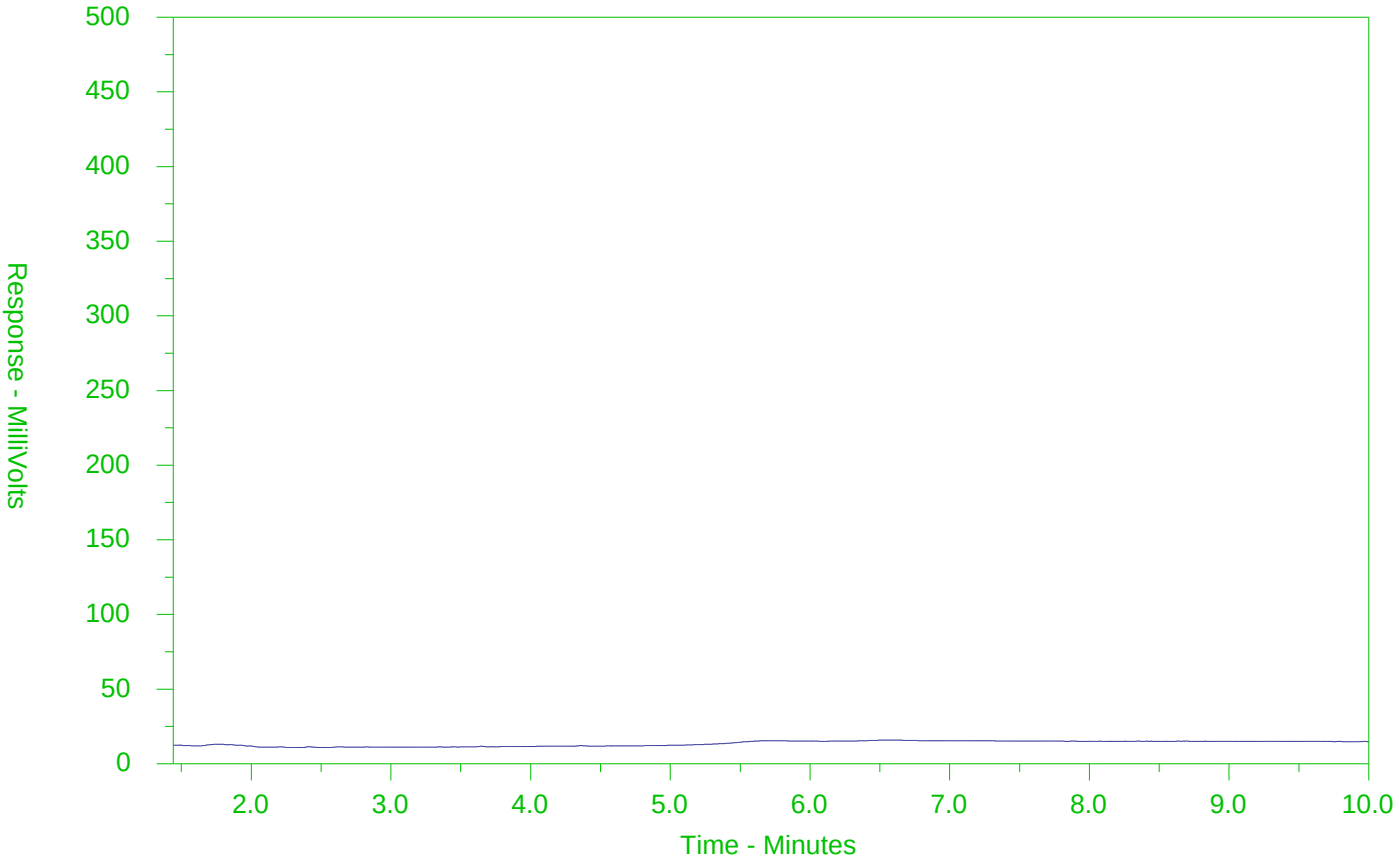
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2396546-2
Client Sample ID: BH19-4 SA5



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

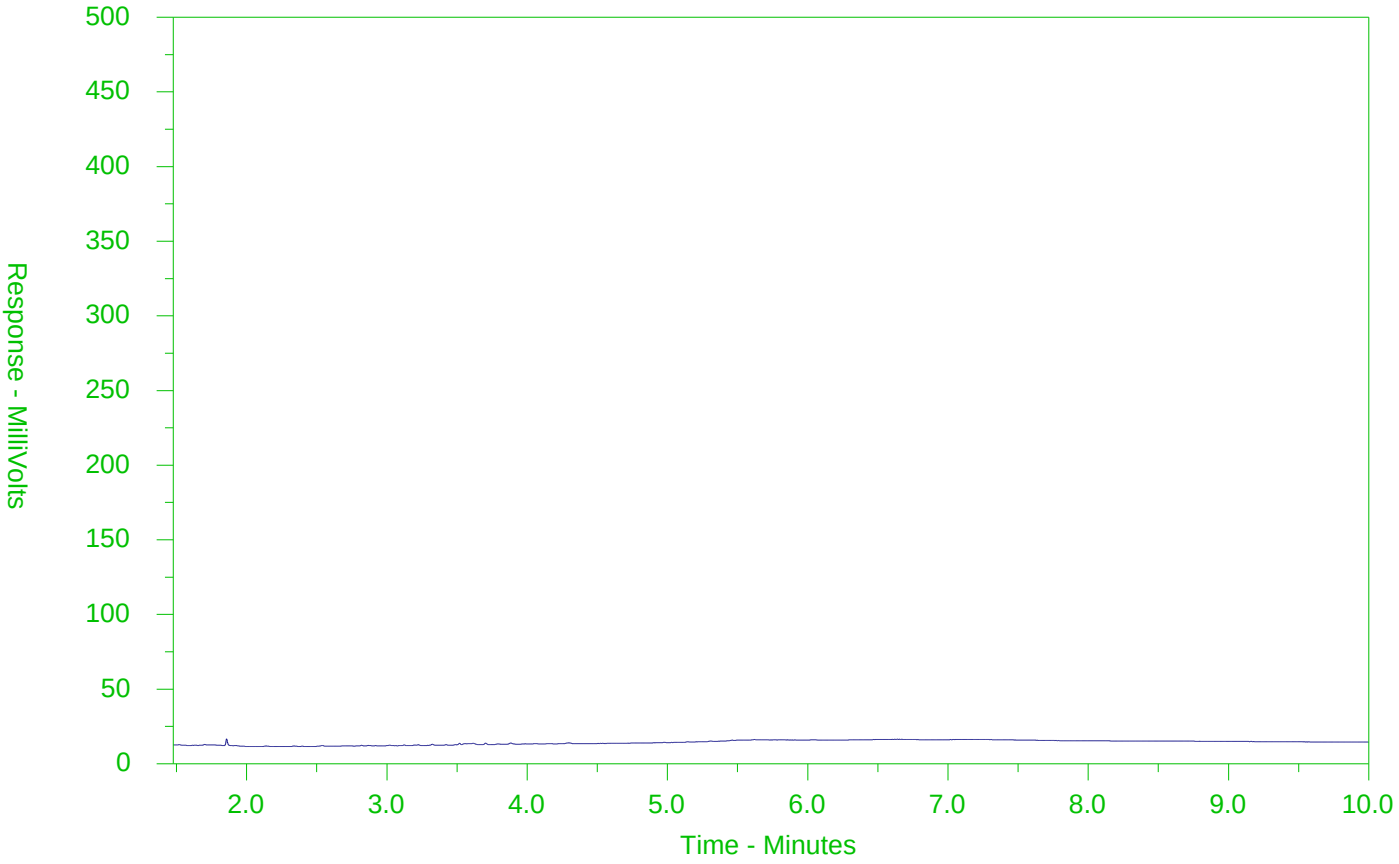
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2396546-3
Client Sample ID: BH19-5 SA2



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →	
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

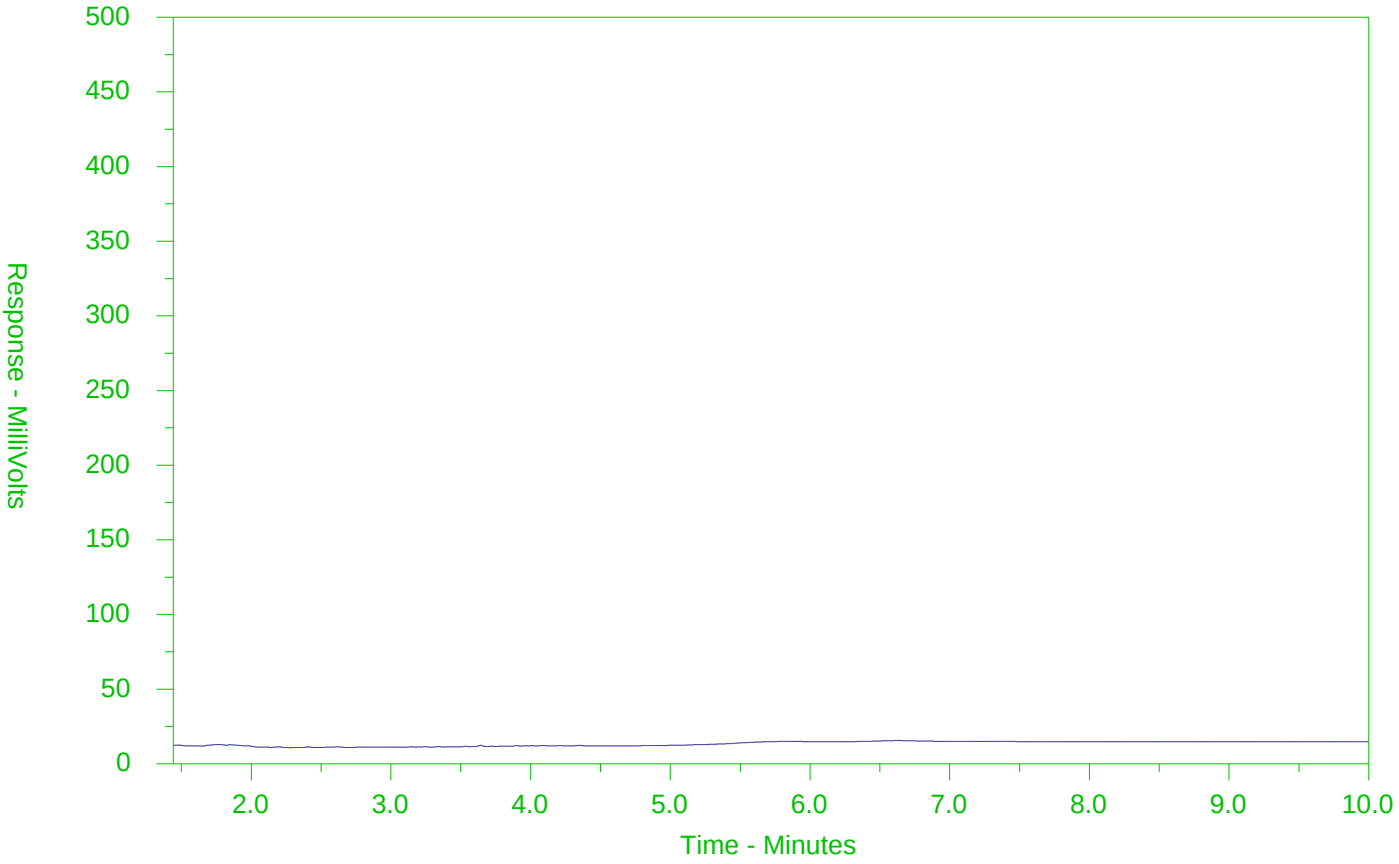
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2396546-4
Client Sample ID: BH19-5 SA5



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

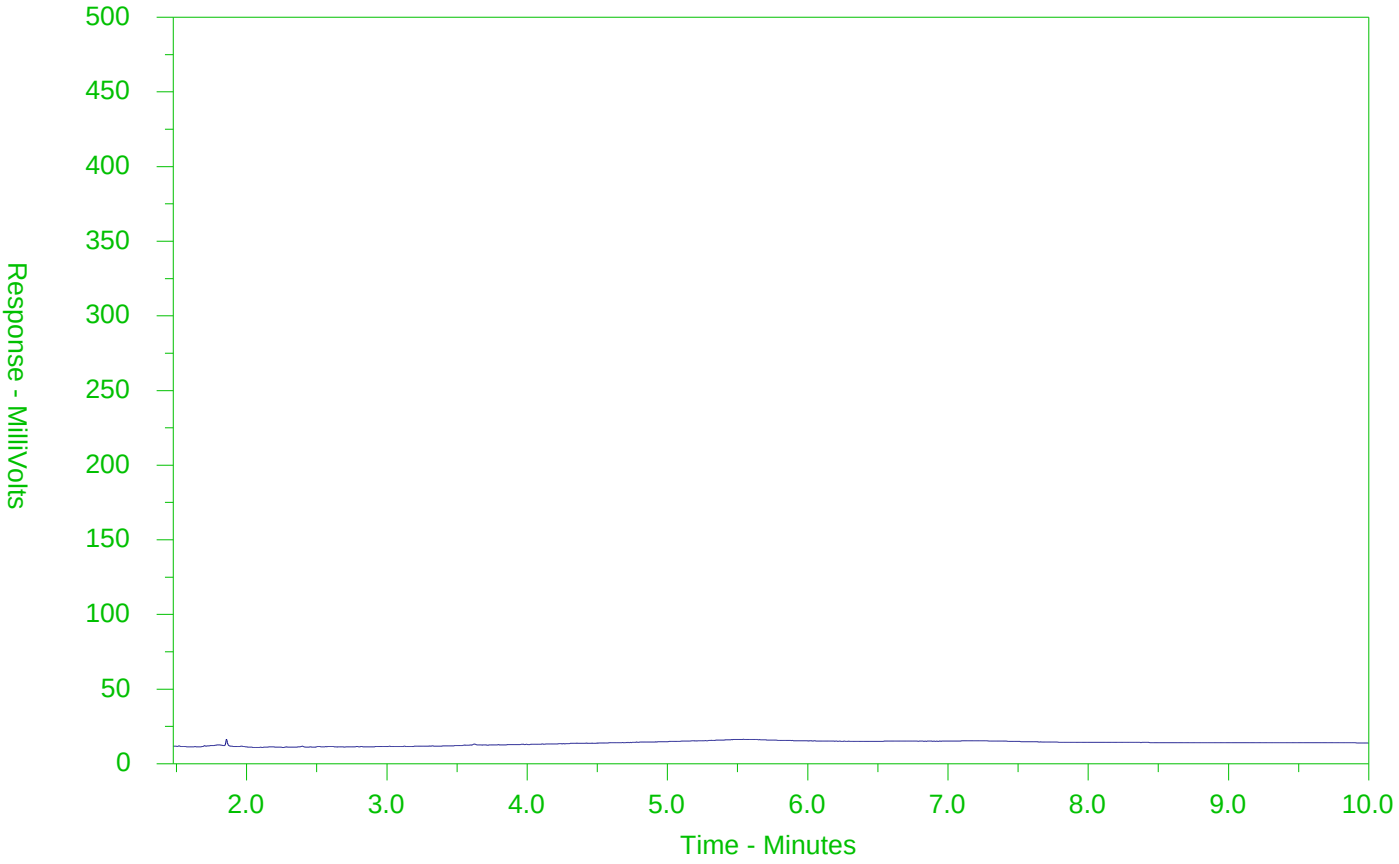
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2396546-5
Client Sample ID: BH19-9 SA2



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →	
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

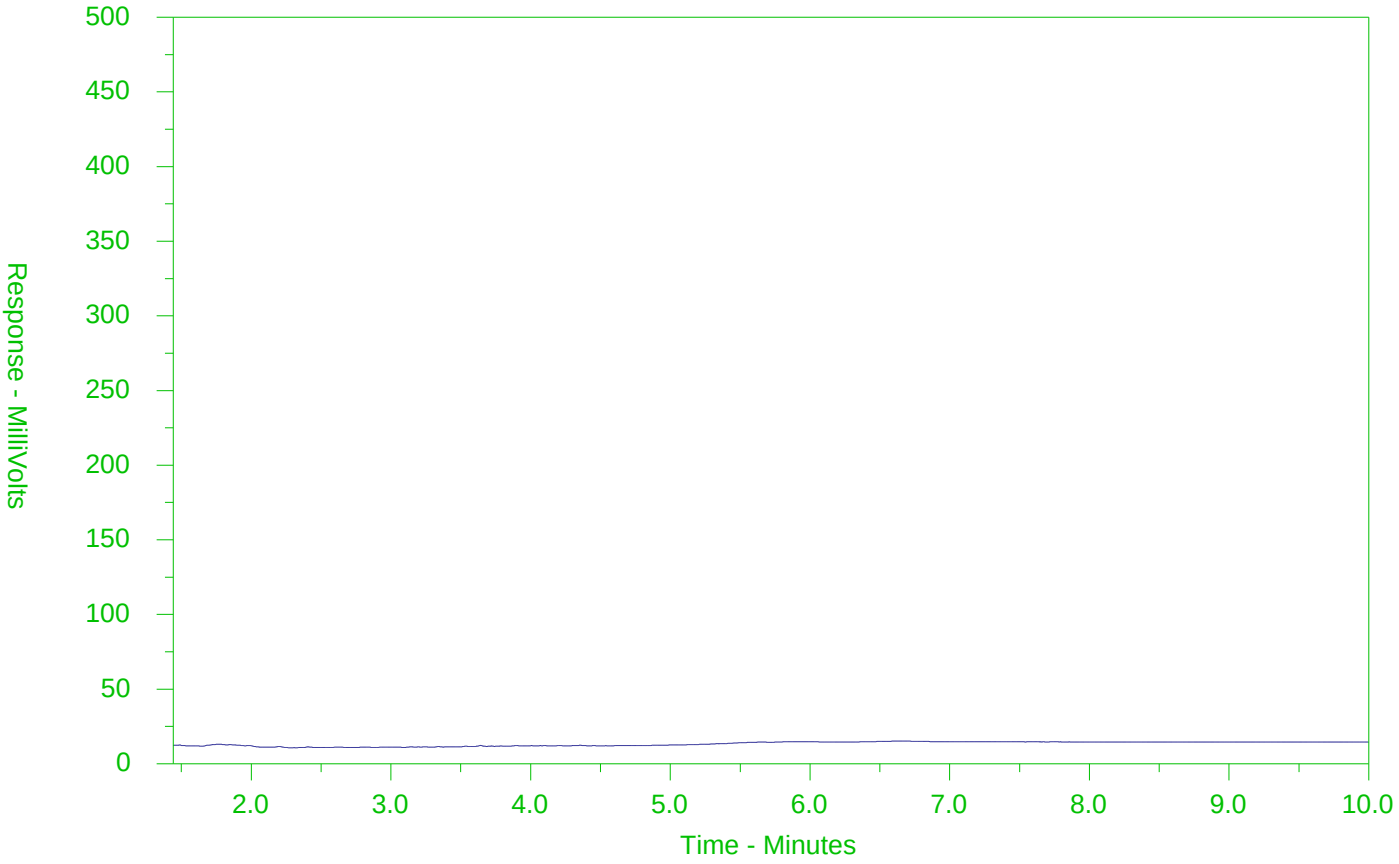
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2396546-6
Client Sample ID: BH19-9 SA4



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

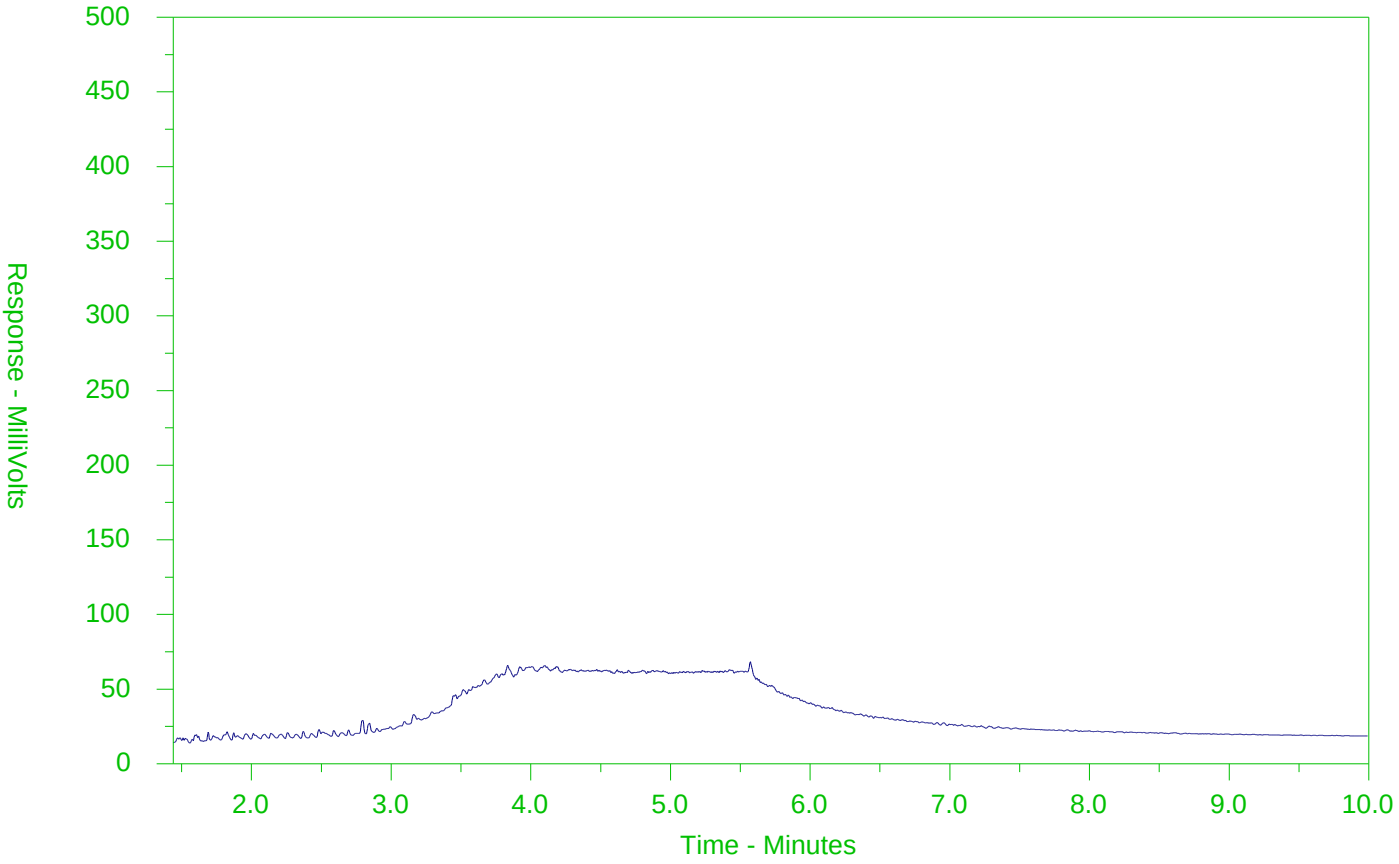
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2396546-7
Client Sample ID: BH19-18 SA1



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →	
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

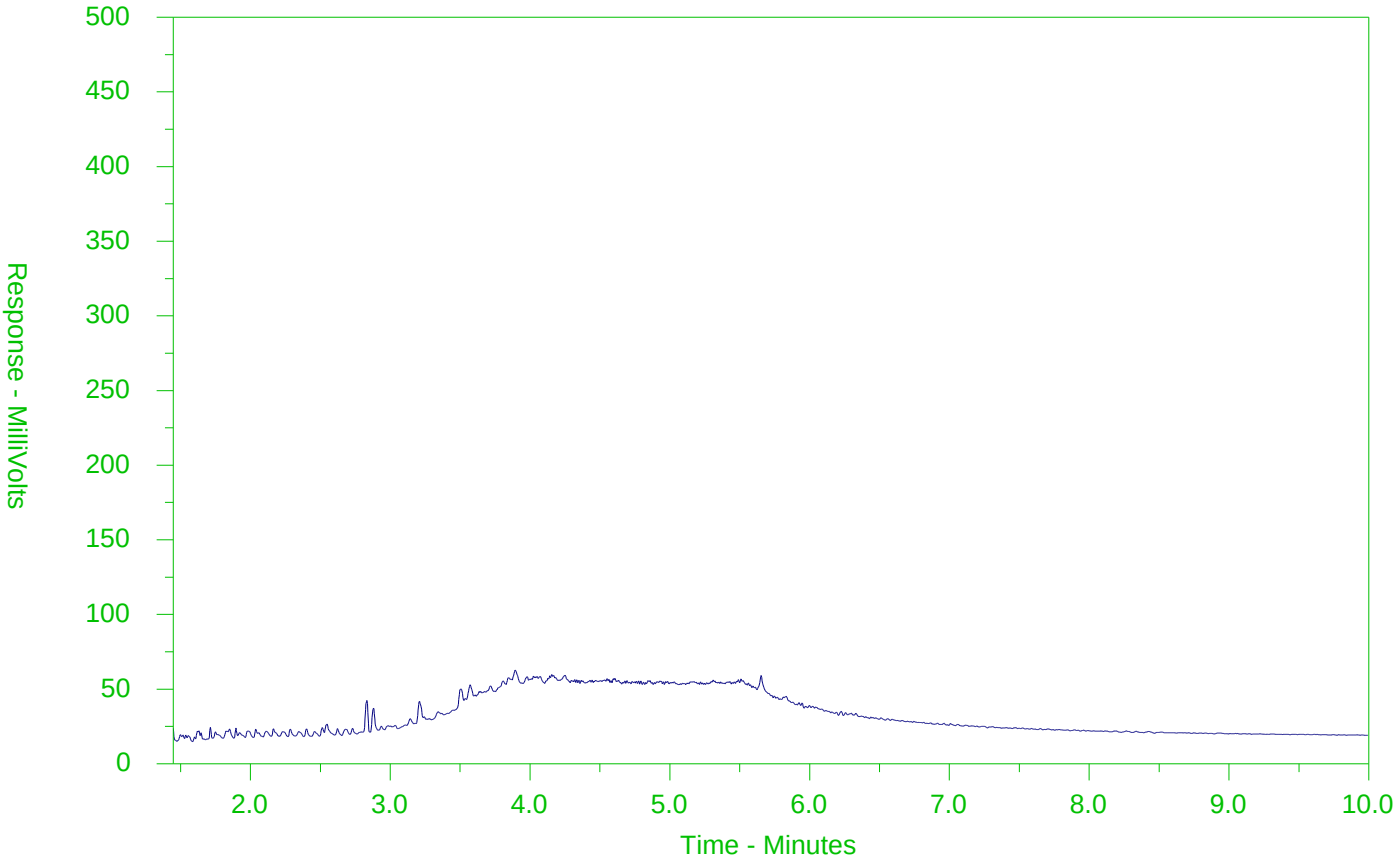
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2396546-8
Client Sample ID: BH19-18 SA101



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →	
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

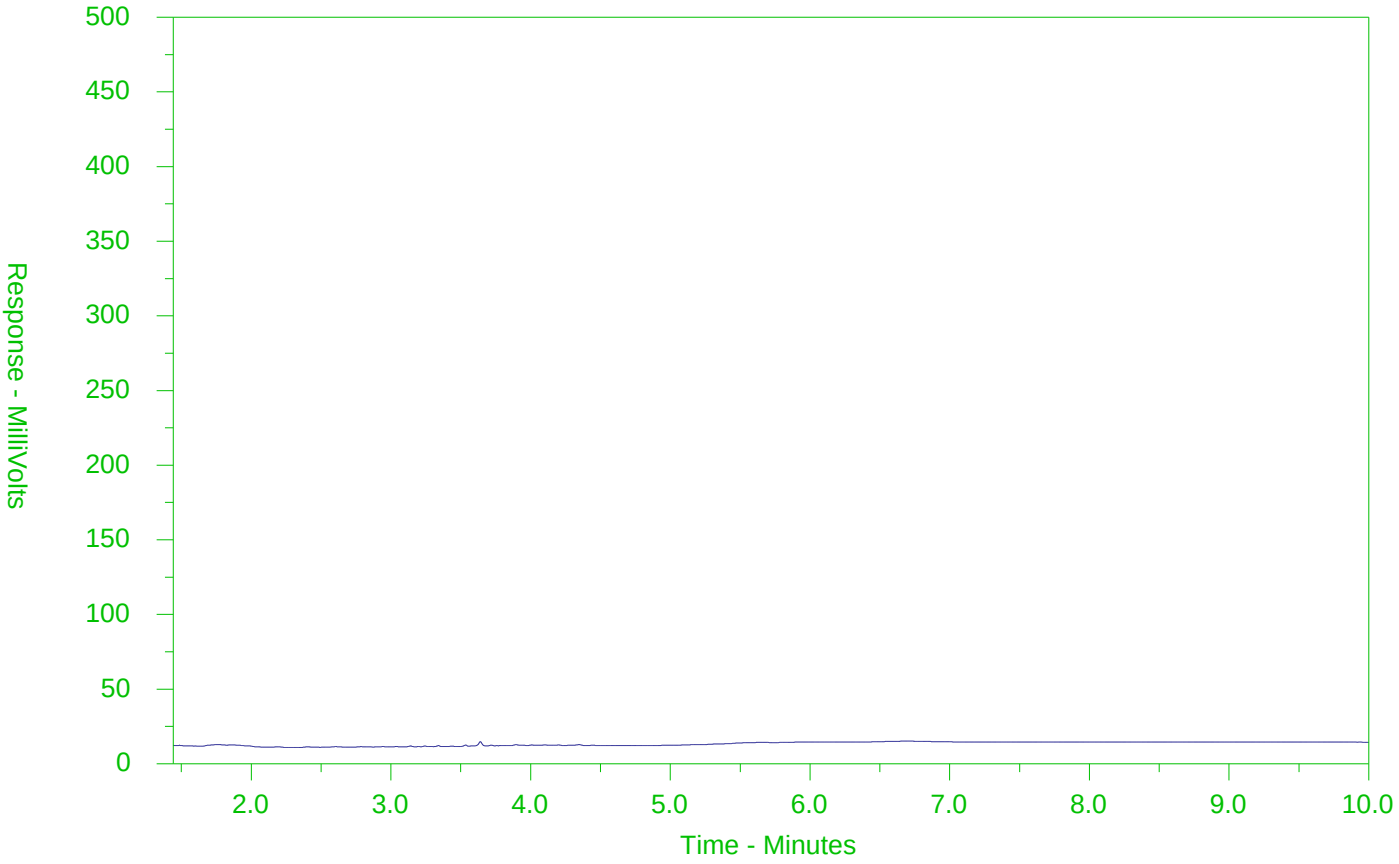
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2396546-9
Client Sample ID: BH19-18 SA4



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

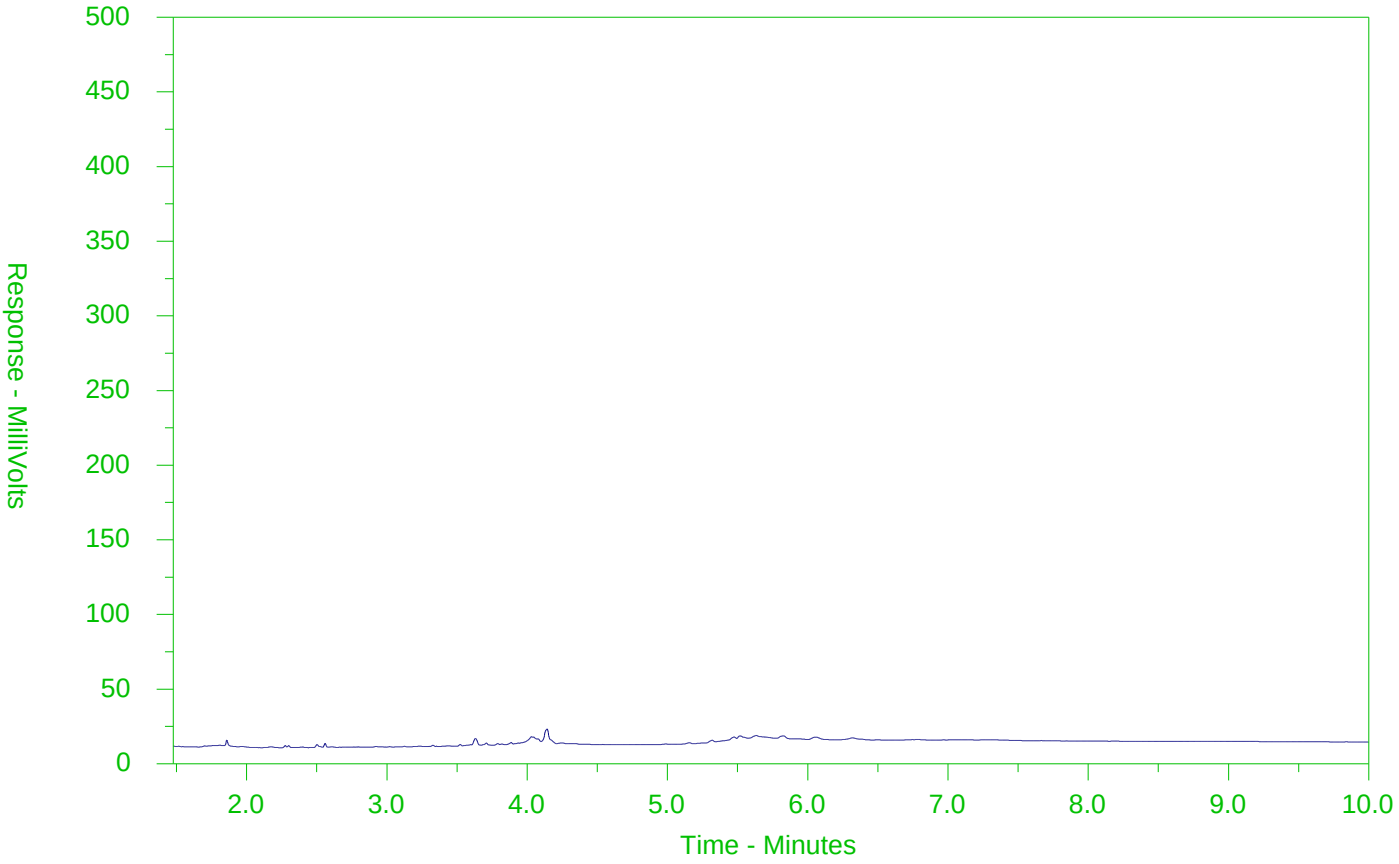
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2396546-10
Client Sample ID: BH19-20 SA1



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →	
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

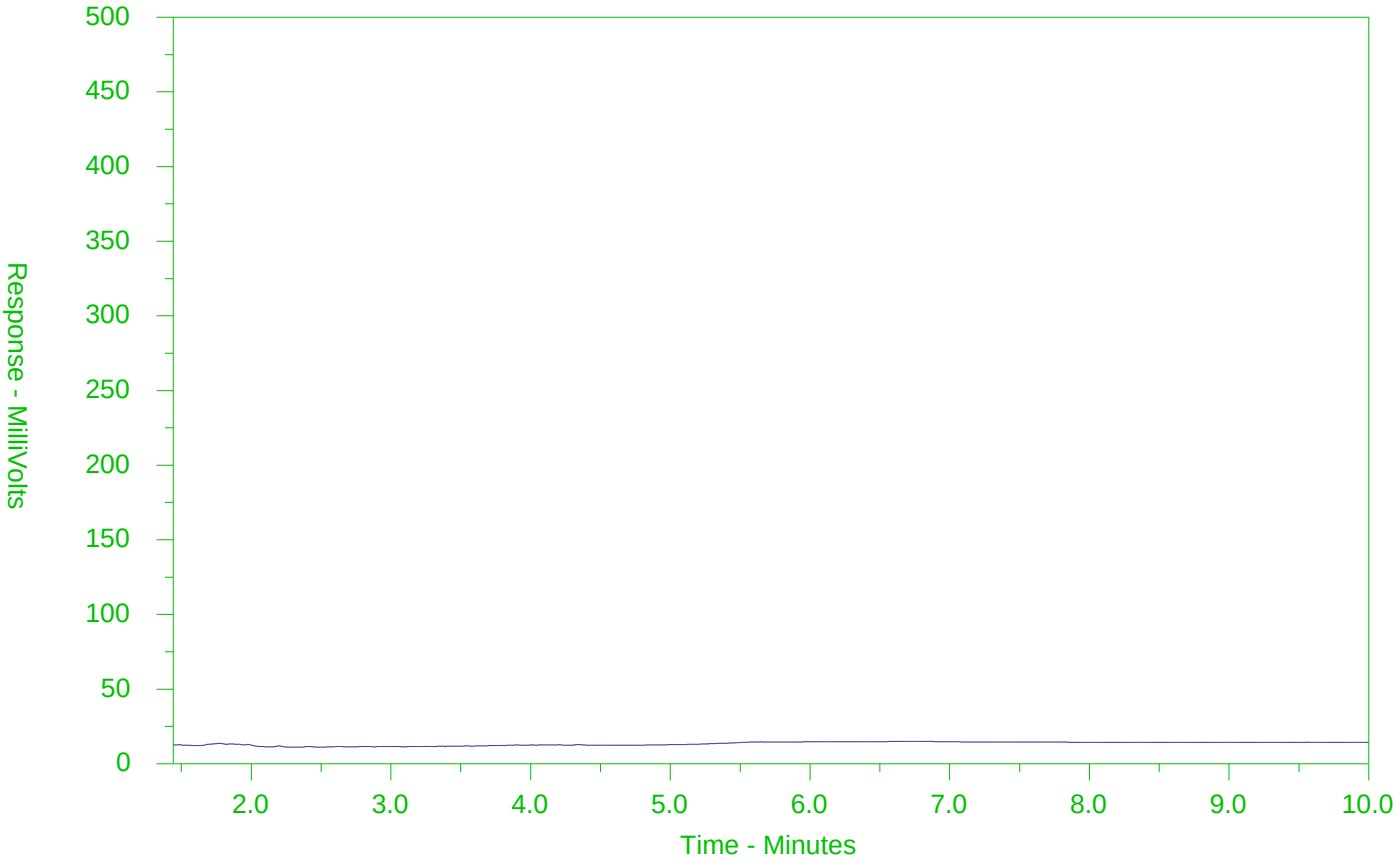
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2396546-11
Client Sample ID: BH19-20 SA5



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →	
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2396546-COFC

OC Number: 17 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Gemtec Consulting Engineers and Scientists Ltd
Contact:	~~Kathryn Maton~~ Nicole Soucy
Phone:	~~613-229-5865~~, FAX 613-836-9731 613-836-1422
	Company address below will appear on the final report
Street:	32 Steacie Drive
City/Province:	Ottawa, 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 ~~kathryn.maton@gemtec.ca~~

Email 2 nicole.soucy@gemtec.ca

Email 3

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax kathryn.maton@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 #:	Q76872
Job #:	~~60942.05~~ 61774.48
PO / AFE:	~~Reconstruction of Bank Street~~ Boundary Rd
LSD:	~~Riverside Drive (North) to Ledbury Avenue~~

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): L2396546 OEC 14A

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	VOC (includes BTEX)	BTEX	F1-F4 (PHCs)	SVOC-R511-GP-WT (incl. ABN+CP+PAH)	PAH	PCB	Metals [redacted]	ABN (includes PAH)	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
1	BH19-4 SA1	Dec 11/19		Soil			X	X		X		X			
2	BH19-4 SA5	"		Soil		X		X				X			
3	BH19-5 SA2	Dec 12/19		Soil			X	X		X		X			
4	BH19-5 SA5	"		Soil		X		X				X			
5	BH19-9 SA2	Dec 11/19		Soil		X		X		X		X			
6	BH19-9 SA4			Soil			X	X				X			
7	BH19-18 SA1			Soil		X		X				X			
8	BH19-18 SA101			Soil		X		X				X			
9	BH19-[redacted] SA4			Soil			X	X				X	X		
10	BH19-20 SA1			Soil		X		X		[redacted]		X	X		
11	BH19-20 SA5			Soil			X	X				X			
				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)

If recovery is not sufficient in BH19-5 SA2, prioritize PAH, PHC, BTEX & move metals to BH19-5 SA3.

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			
5.1				5.8			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
Nicole Soucy	Dec 13/19	9AM

INITIAL SHIPMENT RECEPTION (lab use only)

Received by:	Date:	Time:
COSTAS FARASSOGLOU	12/13/19	11:00

FINAL SHIPMENT RECEPTION (lab use only)

Received by:	Date:	Time:
~~Received by:~~	Dec 14/19	1030

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**.

GEMTEC Consulting Engineers & Scientists Limited
ATTN: Nicole Soucy
32 Steacie Dr,
Kanata ON K2K 2A9

Date Received: 17-DEC-19
Report Date: 27-DEC-19 12:16 (MT)
Version: FINAL

Client Phone: 613-836-1422

Certificate of Analysis

Lab Work Order #: L2397655

Project P.O. #: NOT SUBMITTED
Job Reference: 61774.48
C of C Numbers:
Legal Site Desc:

Emily Smith
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2397655-1 MW19-04 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Physical Tests							
Conductivity	0.638		0.0030	mS/cm		19-DEC-19	R4948309
pH	7.87		0.10	pH units		19-DEC-19	R4948309
Anions and Nutrients							
Chloride (Cl)	34.2		0.50	mg/L		19-DEC-19	R4948668
Cyanides							
Cyanide, Weak Acid Diss	<2.0		2.0	ug/L		18-DEC-19	R4946280
Dissolved Metals							
Dissolved Mercury Filtration Location	FIELD					19-DEC-19	R4945982
Dissolved Metals Filtration Location	FIELD					18-DEC-19	R4945528
Antimony (Sb)-Dissolved	0.10		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Arsenic (As)-Dissolved	1.63		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Barium (Ba)-Dissolved	115		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Beryllium (Be)-Dissolved	<0.10		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Boron (B)-Dissolved	82		10	ug/L	18-DEC-19	19-DEC-19	R4945382
Cadmium (Cd)-Dissolved	0.013		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Chromium (Cr)-Dissolved	<0.50		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Cobalt (Co)-Dissolved	0.87		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Copper (Cu)-Dissolved	1.93		0.20	ug/L	18-DEC-19	19-DEC-19	R4945382
Lead (Pb)-Dissolved	<0.050		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Mercury (Hg)-Dissolved	<0.0050		0.0050	ug/L	19-DEC-19	19-DEC-19	R4946371
Molybdenum (Mo)-Dissolved	1.10		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Nickel (Ni)-Dissolved	1.16		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Selenium (Se)-Dissolved	0.107		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Silver (Ag)-Dissolved	<0.050		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Sodium (Na)-Dissolved	58200		500	ug/L	18-DEC-19	19-DEC-19	R4945382
Thallium (Tl)-Dissolved	<0.010		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Uranium (U)-Dissolved	1.70		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Vanadium (V)-Dissolved	0.59		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Zinc (Zn)-Dissolved	1.4		1.0	ug/L	18-DEC-19	19-DEC-19	R4945382
Speciated Metals							
Chromium, Hexavalent	<0.50		0.50	ug/L		19-DEC-19	R4948092
Volatile Organic Compounds							
Acetone	<30		30	ug/L		19-DEC-19	R4946299
Benzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Bromodichloromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
Bromoform	<5.0		5.0	ug/L		19-DEC-19	R4946299
Bromomethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Carbon tetrachloride	<0.20		0.20	ug/L		19-DEC-19	R4946299
Chlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Dibromochloromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
Chloroform	<1.0		1.0	ug/L		19-DEC-19	R4946299
1,2-Dibromoethane	<0.20		0.20	ug/L		19-DEC-19	R4946299

* 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
L2397655-1 MW19-04 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Volatile Organic Compounds							
1,2-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,3-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,4-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Dichlorodifluoromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
1,1-Dichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,2-Dichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Methylene Chloride	<5.0		5.0	ug/L		19-DEC-19	R4946299
1,2-Dichloropropane	<0.50		0.50	ug/L		19-DEC-19	R4946299
cis-1,3-Dichloropropene	<0.30		0.30	ug/L		19-DEC-19	R4946299
trans-1,3-Dichloropropene	<0.30		0.30	ug/L		19-DEC-19	R4946299
1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L		19-DEC-19	
Ethylbenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
n-Hexane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Methyl Ethyl Ketone	<20		20	ug/L		19-DEC-19	R4946299
Methyl Isobutyl Ketone	<20		20	ug/L		19-DEC-19	R4946299
MTBE	<2.0		2.0	ug/L		19-DEC-19	R4946299
Styrene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Tetrachloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Toluene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,1-Trichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,2-Trichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Trichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Trichlorofluoromethane	<5.0		5.0	ug/L		19-DEC-19	R4946299
Vinyl chloride	<0.50		0.50	ug/L		19-DEC-19	R4946299
o-Xylene	<0.30		0.30	ug/L		19-DEC-19	R4946299
m+p-Xylenes	<0.40		0.40	ug/L		19-DEC-19	R4946299
Xylenes (Total)	<0.50		0.50	ug/L		19-DEC-19	
Surrogate: 4-Bromofluorobenzene	83.7		70-130	%		19-DEC-19	R4946299
Surrogate: 1,4-Difluorobenzene	96.6		70-130	%		19-DEC-19	R4946299
Hydrocarbons							
F1 (C6-C10)	<25		25	ug/L		19-DEC-19	R4946299
F1-BTEX	<25		25	ug/L		20-DEC-19	
F2 (C10-C16)	<100		100	ug/L	18-DEC-19	19-DEC-19	R4947706
F2-Naphth	<100		100	ug/L		20-DEC-19	
F3 (C16-C34)	<250		250	ug/L	18-DEC-19	19-DEC-19	R4947706
F3-PAH	<250		250	ug/L		20-DEC-19	

* 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
L2397655-1 MW19-04 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Hydrocarbons							
F4 (C34-C50)	<250		250	ug/L	18-DEC-19	19-DEC-19	R4947706
Total Hydrocarbons (C6-C50)	<370		370	ug/L		20-DEC-19	
Chrom. to baseline at nC50	YES				18-DEC-19	19-DEC-19	R4947706
Surrogate: 2-Bromobenzotrifluoride	91.7		60-140	%	18-DEC-19	19-DEC-19	R4947706
Surrogate: 3,4-Dichlorotoluene	74.2		60-140	%		19-DEC-19	R4946299
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Acenaphthylene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Anthracene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(a)anthracene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(a)pyrene	<0.010		0.010	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(b)fluoranthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(g,h,i)perylene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(k)fluoranthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Chrysene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Dibenzo(ah)anthracene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Fluoranthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Fluorene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Indeno(1,2,3-cd)pyrene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
1+2-Methylnaphthalenes	<0.028		0.028	ug/L		20-DEC-19	
1-Methylnaphthalene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
2-Methylnaphthalene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Naphthalene	<0.050		0.050	ug/L	18-DEC-19	20-DEC-19	R4949329
Phenanthrene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Pyrene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Surrogate: d10-Acenaphthene	97.0		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d12-Chrysene	93.9		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d8-Naphthalene	96.2		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d10-Phenanthrene	104.1		60-140	%	18-DEC-19	20-DEC-19	R4949329
L2397655-2 MW19-05 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Physical Tests							
Conductivity	0.220		0.0030	mS/cm		19-DEC-19	R4948309
pH	8.09		0.10	pH units		19-DEC-19	R4948309
Anions and Nutrients							
Chloride (Cl)	6.96		0.50	mg/L		19-DEC-19	R4948668
Cyanides							
Cyanide, Weak Acid Diss	<2.0		2.0	ug/L		18-DEC-19	R4946280
Dissolved Metals							
Dissolved Mercury Filtration Location	FIELD					19-DEC-19	R4945982
Dissolved Metals Filtration Location	FIELD					18-DEC-19	R4945528

* 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
L2397655-2 MW19-05 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Dissolved Metals							
Antimony (Sb)-Dissolved	0.22		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Arsenic (As)-Dissolved	0.55		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Barium (Ba)-Dissolved	12.2		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Beryllium (Be)-Dissolved	<0.10		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Boron (B)-Dissolved	20		10	ug/L	18-DEC-19	19-DEC-19	R4945382
Cadmium (Cd)-Dissolved	<0.010		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Chromium (Cr)-Dissolved	<0.50		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Cobalt (Co)-Dissolved	0.10		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Copper (Cu)-Dissolved	1.81		0.20	ug/L	18-DEC-19	19-DEC-19	R4945382
Lead (Pb)-Dissolved	<0.050		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Mercury (Hg)-Dissolved	<0.0050		0.0050	ug/L	19-DEC-19	19-DEC-19	R4946371
Molybdenum (Mo)-Dissolved	5.02		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Nickel (Ni)-Dissolved	0.81		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Selenium (Se)-Dissolved	0.226		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Silver (Ag)-Dissolved	<0.050		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Sodium (Na)-Dissolved	15300		500	ug/L	18-DEC-19	19-DEC-19	R4945382
Thallium (Tl)-Dissolved	<0.010		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Uranium (U)-Dissolved	0.967		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Vanadium (V)-Dissolved	1.94		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Zinc (Zn)-Dissolved	<1.0		1.0	ug/L	18-DEC-19	19-DEC-19	R4945382
Speciated Metals							
Chromium, Hexavalent	<0.50		0.50	ug/L		19-DEC-19	R4948092
Volatile Organic Compounds							
Acetone	<30		30	ug/L		19-DEC-19	R4946299
Benzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Bromodichloromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
Bromoform	<5.0		5.0	ug/L		19-DEC-19	R4946299
Bromomethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Carbon tetrachloride	<0.20		0.20	ug/L		19-DEC-19	R4946299
Chlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Dibromochloromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
Chloroform	<1.0		1.0	ug/L		19-DEC-19	R4946299
1,2-Dibromoethane	<0.20		0.20	ug/L		19-DEC-19	R4946299
1,2-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,3-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,4-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Dichlorodifluoromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
1,1-Dichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,2-Dichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299

* 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
L2397655-2 MW19-05 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Volatile Organic Compounds							
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Methylene Chloride	<5.0		5.0	ug/L		19-DEC-19	R4946299
1,2-Dichloropropane	<0.50		0.50	ug/L		19-DEC-19	R4946299
cis-1,3-Dichloropropene	<0.30		0.30	ug/L		19-DEC-19	R4946299
trans-1,3-Dichloropropene	<0.30		0.30	ug/L		19-DEC-19	R4946299
1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L		19-DEC-19	
Ethylbenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
n-Hexane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Methyl Ethyl Ketone	<20		20	ug/L		19-DEC-19	R4946299
Methyl Isobutyl Ketone	<20		20	ug/L		19-DEC-19	R4946299
MTBE	<2.0		2.0	ug/L		19-DEC-19	R4946299
Styrene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Tetrachloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Toluene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,1-Trichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,2-Trichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Trichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Trichlorofluoromethane	<5.0		5.0	ug/L		19-DEC-19	R4946299
Vinyl chloride	<0.50		0.50	ug/L		19-DEC-19	R4946299
o-Xylene	<0.30		0.30	ug/L		19-DEC-19	R4946299
m+p-Xylenes	<0.40		0.40	ug/L		19-DEC-19	R4946299
Xylenes (Total)	<0.50		0.50	ug/L		19-DEC-19	
Surrogate: 4-Bromofluorobenzene	84.1		70-130	%		19-DEC-19	R4946299
Surrogate: 1,4-Difluorobenzene	96.1		70-130	%		19-DEC-19	R4946299
Hydrocarbons							
F1 (C6-C10)	<25		25	ug/L		19-DEC-19	R4946299
F1-BTEX	<25		25	ug/L		20-DEC-19	
F2 (C10-C16)	<100		100	ug/L	18-DEC-19	19-DEC-19	R4947706
F2-Naphth	<100		100	ug/L		20-DEC-19	
F3 (C16-C34)	<250		250	ug/L	18-DEC-19	19-DEC-19	R4947706
F3-PAH	<250		250	ug/L		20-DEC-19	
F4 (C34-C50)	<250		250	ug/L	18-DEC-19	19-DEC-19	R4947706
Total Hydrocarbons (C6-C50)	<370		370	ug/L		20-DEC-19	
Chrom. to baseline at nC50	YES				18-DEC-19	19-DEC-19	R4947706
Surrogate: 2-Bromobenzotrifluoride	89.1		60-140	%	18-DEC-19	19-DEC-19	R4947706
Surrogate: 3,4-Dichlorotoluene	86.3		60-140	%		19-DEC-19	R4946299
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.109		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Acenaphthylene	0.074	R	0.020	ug/L	18-DEC-19	20-DEC-19	R4949329

* 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
L2397655-2 MW19-05 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Polycyclic Aromatic Hydrocarbons							
Anthracene	0.033		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(a)anthracene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(a)pyrene	<0.010		0.010	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(b)fluoranthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(g,h,i)perylene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(k)fluoranthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Chrysene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Dibenzo(ah)anthracene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Fluoranthene	0.046		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Fluorene	0.119		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Indeno(1,2,3-cd)pyrene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
1+2-Methylnaphthalenes	0.337		0.028	ug/L		20-DEC-19	
1-Methylnaphthalene	0.181		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
2-Methylnaphthalene	0.157		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Naphthalene	1.05		0.050	ug/L	18-DEC-19	20-DEC-19	R4949329
Phenanthrene	0.184		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Pyrene	0.040		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Surrogate: d10-Acenaphthene	90.0		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d12-Chrysene	93.7		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d8-Naphthalene	89.1		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d10-Phenanthrene	97.3		60-140	%	18-DEC-19	20-DEC-19	R4949329
L2397655-3 MW19-09 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Physical Tests							
Conductivity	0.213		0.0030	mS/cm		19-DEC-19	R4948309
pH	8.20		0.10	pH units		19-DEC-19	R4948309
Anions and Nutrients							
Chloride (Cl)	10.1		0.50	mg/L		19-DEC-19	R4948668
Cyanides							
Cyanide, Weak Acid Diss	<2.0		2.0	ug/L		18-DEC-19	R4946280
Dissolved Metals							
Dissolved Mercury Filtration Location	FIELD					19-DEC-19	R4945982
Dissolved Metals Filtration Location	FIELD					18-DEC-19	R4945528
Antimony (Sb)-Dissolved	0.11		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Arsenic (As)-Dissolved	0.43		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Barium (Ba)-Dissolved	11.7		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Beryllium (Be)-Dissolved	<0.10		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Boron (B)-Dissolved	20		10	ug/L	18-DEC-19	19-DEC-19	R4945382
Cadmium (Cd)-Dissolved	0.010		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Chromium (Cr)-Dissolved	<0.50		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Cobalt (Co)-Dissolved	0.13		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382

* 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
L2397655-3 MW19-09 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Dissolved Metals							
Copper (Cu)-Dissolved	1.94		0.20	ug/L	18-DEC-19	19-DEC-19	R4945382
Lead (Pb)-Dissolved	0.059		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Mercury (Hg)-Dissolved	<0.0050		0.0050	ug/L	19-DEC-19	19-DEC-19	R4946371
Molybdenum (Mo)-Dissolved	6.71		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Nickel (Ni)-Dissolved	0.60		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Selenium (Se)-Dissolved	0.149		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Silver (Ag)-Dissolved	<0.050		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Sodium (Na)-Dissolved	19800		500	ug/L	18-DEC-19	19-DEC-19	R4945382
Thallium (Tl)-Dissolved	<0.010		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Uranium (U)-Dissolved	1.12		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Vanadium (V)-Dissolved	0.94		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Zinc (Zn)-Dissolved	1.1		1.0	ug/L	18-DEC-19	19-DEC-19	R4945382
Speciated Metals							
Chromium, Hexavalent	<0.50		0.50	ug/L		19-DEC-19	R4948092
Volatile Organic Compounds							
Acetone	<30		30	ug/L		19-DEC-19	R4946299
Benzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Bromodichloromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
Bromoform	<5.0		5.0	ug/L		19-DEC-19	R4946299
Bromomethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Carbon tetrachloride	<0.20		0.20	ug/L		19-DEC-19	R4946299
Chlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Dibromochloromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
Chloroform	<1.0		1.0	ug/L		19-DEC-19	R4946299
1,2-Dibromoethane	<0.20		0.20	ug/L		19-DEC-19	R4946299
1,2-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,3-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,4-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Dichlorodifluoromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
1,1-Dichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,2-Dichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Methylene Chloride	<5.0		5.0	ug/L		19-DEC-19	R4946299
1,2-Dichloropropane	<0.50		0.50	ug/L		19-DEC-19	R4946299
cis-1,3-Dichloropropene	<0.30		0.30	ug/L		19-DEC-19	R4946299
trans-1,3-Dichloropropene	<0.30		0.30	ug/L		19-DEC-19	R4946299
1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L		19-DEC-19	
Ethylbenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
n-Hexane	<0.50		0.50	ug/L		19-DEC-19	R4946299

* 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
L2397655-3 MW19-09 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Volatile Organic Compounds							
Methyl Ethyl Ketone	<20		20	ug/L		19-DEC-19	R4946299
Methyl Isobutyl Ketone	<20		20	ug/L		19-DEC-19	R4946299
MTBE	<2.0		2.0	ug/L		19-DEC-19	R4946299
Styrene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Tetrachloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Toluene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,1-Trichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,2-Trichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Trichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Trichlorofluoromethane	<5.0		5.0	ug/L		19-DEC-19	R4946299
Vinyl chloride	<0.50		0.50	ug/L		19-DEC-19	R4946299
o-Xylene	<0.30		0.30	ug/L		19-DEC-19	R4946299
m+p-Xylenes	<0.40		0.40	ug/L		19-DEC-19	R4946299
Xylenes (Total)	<0.50		0.50	ug/L		19-DEC-19	
Surrogate: 4-Bromofluorobenzene	84.0		70-130	%		19-DEC-19	R4946299
Surrogate: 1,4-Difluorobenzene	96.0		70-130	%		19-DEC-19	R4946299
Hydrocarbons							
F1 (C6-C10)	<25		25	ug/L		19-DEC-19	R4946299
F1-BTEX	<25		25	ug/L		20-DEC-19	
F2 (C10-C16)	<100		100	ug/L	18-DEC-19	19-DEC-19	R4947706
F2-Naphth	<100		100	ug/L		20-DEC-19	
F3 (C16-C34)	<250		250	ug/L	18-DEC-19	19-DEC-19	R4947706
F3-PAH	<250		250	ug/L		20-DEC-19	
F4 (C34-C50)	<250		250	ug/L	18-DEC-19	19-DEC-19	R4947706
Total Hydrocarbons (C6-C50)	<370		370	ug/L		20-DEC-19	
Chrom. to baseline at nC50	YES				18-DEC-19	19-DEC-19	R4947706
Surrogate: 2-Bromobenzotrifluoride	90.2		60-140	%	18-DEC-19	19-DEC-19	R4947706
Surrogate: 3,4-Dichlorotoluene	87.1		60-140	%		19-DEC-19	R4946299
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Acenaphthylene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Anthracene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(a)anthracene	0.030		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(a)pyrene	0.023		0.010	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(b)fluoranthene	0.042		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(g,h,i)perylene	0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(k)fluoranthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Chrysene	0.035		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Dibenzo(ah)anthracene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2397655-3 MW19-09 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Polycyclic Aromatic Hydrocarbons							
Fluoranthene	0.079		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Fluorene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Indeno(1,2,3-cd)pyrene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
1+2-Methylnaphthalenes	<0.028		0.028	ug/L		20-DEC-19	
1-Methylnaphthalene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
2-Methylnaphthalene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Naphthalene	<0.050		0.050	ug/L	18-DEC-19	20-DEC-19	R4949329
Phenanthrene	0.041		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Pyrene	0.079		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Surrogate: d10-Acenaphthene	97.8		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d12-Chrysene	98.5		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d8-Naphthalene	97.2		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d10-Phenanthrene	101.4		60-140	%	18-DEC-19	20-DEC-19	R4949329
L2397655-4 MW19-18 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Physical Tests							
Conductivity	1.89		0.0030	mS/cm		19-DEC-19	R4948309
pH	7.23		0.10	pH units		19-DEC-19	R4948309
Anions and Nutrients							
Chloride (Cl)	192	DLDS	1.0	mg/L		19-DEC-19	R4948668
Cyanides							
Cyanide, Weak Acid Diss	<2.0		2.0	ug/L		18-DEC-19	R4946280
Dissolved Metals							
Dissolved Mercury Filtration Location	FIELD					19-DEC-19	R4945982
Dissolved Metals Filtration Location	FIELD					18-DEC-19	R4945528
Antimony (Sb)-Dissolved	0.13		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Arsenic (As)-Dissolved	0.59		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Barium (Ba)-Dissolved	160		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Beryllium (Be)-Dissolved	<0.10		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Boron (B)-Dissolved	86		10	ug/L	18-DEC-19	19-DEC-19	R4945382
Cadmium (Cd)-Dissolved	0.075		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Chromium (Cr)-Dissolved	0.65		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Cobalt (Co)-Dissolved	6.46		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Copper (Cu)-Dissolved	1.59		0.20	ug/L	18-DEC-19	19-DEC-19	R4945382
Lead (Pb)-Dissolved	<0.050		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Mercury (Hg)-Dissolved	0.0098		0.0050	ug/L	19-DEC-19	19-DEC-19	R4946371
Molybdenum (Mo)-Dissolved	1.95		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Nickel (Ni)-Dissolved	8.82		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Selenium (Se)-Dissolved	0.224		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Silver (Ag)-Dissolved	<0.050		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Sodium (Na)-Dissolved	105000	DLHC	500	ug/L	18-DEC-19	18-DEC-19	R4945382

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2397655-4 MW19-18 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Dissolved Metals							
Thallium (Tl)-Dissolved	0.013		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Uranium (U)-Dissolved	2.77		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Vanadium (V)-Dissolved	1.36		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Zinc (Zn)-Dissolved	2.5		1.0	ug/L	18-DEC-19	19-DEC-19	R4945382
Speciated Metals							
Chromium, Hexavalent	<0.50		0.50	ug/L		19-DEC-19	R4948092
Volatile Organic Compounds							
Acetone	<30		30	ug/L		19-DEC-19	R4946299
Benzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Bromodichloromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
Bromoform	<5.0		5.0	ug/L		19-DEC-19	R4946299
Bromomethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Carbon tetrachloride	<0.20		0.20	ug/L		19-DEC-19	R4946299
Chlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Dibromochloromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
Chloroform	<1.0		1.0	ug/L		19-DEC-19	R4946299
1,2-Dibromoethane	<0.20		0.20	ug/L		19-DEC-19	R4946299
1,2-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,3-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,4-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Dichlorodifluoromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
1,1-Dichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,2-Dichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Methylene Chloride	<5.0		5.0	ug/L		19-DEC-19	R4946299
1,2-Dichloropropane	<0.50		0.50	ug/L		19-DEC-19	R4946299
cis-1,3-Dichloropropene	<0.30		0.30	ug/L		19-DEC-19	R4946299
trans-1,3-Dichloropropene	<0.30		0.30	ug/L		19-DEC-19	R4946299
1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L		19-DEC-19	
Ethylbenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
n-Hexane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Methyl Ethyl Ketone	<20		20	ug/L		19-DEC-19	R4946299
Methyl Isobutyl Ketone	<20		20	ug/L		19-DEC-19	R4946299
MTBE	<2.0		2.0	ug/L		19-DEC-19	R4946299
Styrene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Tetrachloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Toluene	<0.50		0.50	ug/L		19-DEC-19	R4946299

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2397655-4 MW19-18 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Volatile Organic Compounds							
1,1,1-Trichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,2-Trichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Trichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Trichlorofluoromethane	<5.0		5.0	ug/L		19-DEC-19	R4946299
Vinyl chloride	<0.50		0.50	ug/L		19-DEC-19	R4946299
o-Xylene	<0.30		0.30	ug/L		19-DEC-19	R4946299
m+p-Xylenes	<0.40		0.40	ug/L		19-DEC-19	R4946299
Xylenes (Total)	<0.50		0.50	ug/L		19-DEC-19	
Surrogate: 4-Bromofluorobenzene	83.7		70-130	%		19-DEC-19	R4946299
Surrogate: 1,4-Difluorobenzene	96.3		70-130	%		19-DEC-19	R4946299
Hydrocarbons							
F1 (C6-C10)	<25		25	ug/L		19-DEC-19	R4946299
F1-BTEX	<25		25	ug/L		23-DEC-19	
F2 (C10-C16)	<100		100	ug/L	18-DEC-19	19-DEC-19	R4947706
F2-Naphth	<100		100	ug/L		23-DEC-19	
F3 (C16-C34)	<250		250	ug/L	18-DEC-19	19-DEC-19	R4947706
F3-PAH	<250		250	ug/L		23-DEC-19	
F4 (C34-C50)	<250		250	ug/L	18-DEC-19	19-DEC-19	R4947706
Total Hydrocarbons (C6-C50)	<370		370	ug/L		23-DEC-19	
Chrom. to baseline at nC50	YES				18-DEC-19	19-DEC-19	R4947706
Surrogate: 2-Bromobenzotrifluoride	87.6		60-140	%	18-DEC-19	19-DEC-19	R4947706
Surrogate: 3,4-Dichlorotoluene	76.3		60-140	%		19-DEC-19	R4946299
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Acenaphthylene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Anthracene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(a)anthracene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(a)pyrene	<0.010		0.010	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(b)fluoranthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(g,h,i)perylene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(k)fluoranthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Chrysene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Dibenzo(ah)anthracene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Fluoranthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Fluorene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Indeno(1,2,3-cd)pyrene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
1+2-Methylnaphthalenes	<0.028		0.028	ug/L		23-DEC-19	
1-Methylnaphthalene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
2-Methylnaphthalene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Naphthalene	<0.050		0.050	ug/L	18-DEC-19	20-DEC-19	R4949329
Phenanthrene	0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329

* 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
L2397655-4 MW19-18 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Polycyclic Aromatic Hydrocarbons							
Pyrene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Surrogate: d10-Acenaphthene	92.5		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d12-Chrysene	93.2		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d8-Naphthalene	96.7		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d10-Phenanthrene	95.8		60-140	%	18-DEC-19	20-DEC-19	R4949329
Semi-Volatile Organics							
Biphenyl	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
4-Chloroaniline	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
Bis(2-chloroethyl)ether	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
Bis(2-chloroisopropyl)ether	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
2-Chlorophenol	<0.30		0.30	ug/L	19-DEC-19	23-DEC-19	R4952649
3,3'-Dichlorobenzidine	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
2,4-Dichlorophenol	<0.30		0.30	ug/L	19-DEC-19	23-DEC-19	R4952649
Diethylphthalate	<0.20		0.20	ug/L	19-DEC-19	23-DEC-19	R4952649
Dimethylphthalate	<0.20		0.20	ug/L	19-DEC-19	23-DEC-19	R4952649
2,4-Dimethylphenol	<0.50		0.50	ug/L	19-DEC-19	23-DEC-19	R4952649
2,4-Dinitrophenol	<1.0		1.0	ug/L	19-DEC-19	23-DEC-19	R4952649
2,4-Dinitrotoluene	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
2,6-Dinitrotoluene	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
2,4+2,6-Dinitrotoluene	<0.57		0.57	ug/L		23-DEC-19	
Bis(2-ethylhexyl)phthalate	<2.0		2.0	ug/L	19-DEC-19	23-DEC-19	R4952649
Pentachlorophenol	<0.50		0.50	ug/L	19-DEC-19	23-DEC-19	R4952649
Phenol	0.62	R	0.50	ug/L	19-DEC-19	23-DEC-19	R4952649
1,2,4-Trichlorobenzene	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
2,4,5-Trichlorophenol	<0.20		0.20	ug/L	19-DEC-19	23-DEC-19	R4952649
2,4,6-Trichlorophenol	<0.20		0.20	ug/L	19-DEC-19	23-DEC-19	R4952649
Surrogate: 2-Fluorobiphenyl	76.9		50-140	%	19-DEC-19	23-DEC-19	R4952649
Surrogate: Nitrobenzene d5	80.4		50-140	%	19-DEC-19	23-DEC-19	R4952649
Surrogate: p-Terphenyl d14	77.8		60-140	%	19-DEC-19	23-DEC-19	R4952649
Surrogate: 2,4,6-Tribromophenol	92.4		50-140	%	19-DEC-19	23-DEC-19	R4952649
L2397655-5 MW19-20 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Physical Tests							
Conductivity	0.789		0.0030	mS/cm		19-DEC-19	R4948309
pH	7.16		0.10	pH units		19-DEC-19	R4948309
Anions and Nutrients							
Chloride (Cl)	27.9		0.50	mg/L		19-DEC-19	R4948668
Cyanides							
Cyanide, Weak Acid Diss	<2.0		2.0	ug/L		18-DEC-19	R4946280
Dissolved Metals							
Dissolved Mercury Filtration Location	FIELD					19-DEC-19	R4945982

* 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
L2397655-5 MW19-20 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Dissolved Metals							
Dissolved Metals Filtration Location	FIELD					18-DEC-19	R4945528
Antimony (Sb)-Dissolved	0.13		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Arsenic (As)-Dissolved	0.52		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Barium (Ba)-Dissolved	82.2		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Beryllium (Be)-Dissolved	<0.10		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Boron (B)-Dissolved	25		10	ug/L	18-DEC-19	19-DEC-19	R4945382
Cadmium (Cd)-Dissolved	0.045		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Chromium (Cr)-Dissolved	<0.50		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Cobalt (Co)-Dissolved	1.34		0.10	ug/L	18-DEC-19	19-DEC-19	R4945382
Copper (Cu)-Dissolved	3.04		0.20	ug/L	18-DEC-19	19-DEC-19	R4945382
Lead (Pb)-Dissolved	0.051		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Mercury (Hg)-Dissolved	<0.0050		0.0050	ug/L	19-DEC-19	19-DEC-19	R4946371
Molybdenum (Mo)-Dissolved	1.05		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Nickel (Ni)-Dissolved	2.83		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Selenium (Se)-Dissolved	0.184		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Silver (Ag)-Dissolved	<0.050		0.050	ug/L	18-DEC-19	19-DEC-19	R4945382
Sodium (Na)-Dissolved	65300		500	ug/L	18-DEC-19	19-DEC-19	R4945382
Thallium (Tl)-Dissolved	<0.010		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Uranium (U)-Dissolved	2.23		0.010	ug/L	18-DEC-19	19-DEC-19	R4945382
Vanadium (V)-Dissolved	<0.50		0.50	ug/L	18-DEC-19	19-DEC-19	R4945382
Zinc (Zn)-Dissolved	2.4		1.0	ug/L	18-DEC-19	19-DEC-19	R4945382
Speciated Metals							
Chromium, Hexavalent	<0.50		0.50	ug/L		19-DEC-19	R4948092
Volatile Organic Compounds							
Acetone	<30		30	ug/L		19-DEC-19	R4946299
Benzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Bromodichloromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
Bromoform	<5.0		5.0	ug/L		19-DEC-19	R4946299
Bromomethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Carbon tetrachloride	<0.20		0.20	ug/L		19-DEC-19	R4946299
Chlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Dibromochloromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
Chloroform	<1.0		1.0	ug/L		19-DEC-19	R4946299
1,2-Dibromoethane	<0.20		0.20	ug/L		19-DEC-19	R4946299
1,2-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,3-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,4-Dichlorobenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Dichlorodifluoromethane	<2.0		2.0	ug/L		19-DEC-19	R4946299
1,1-Dichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,2-Dichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299

* 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
L2397655-5 MW19-20 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Volatile Organic Compounds							
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Methylene Chloride	<5.0		5.0	ug/L		19-DEC-19	R4946299
1,2-Dichloropropane	<0.50		0.50	ug/L		19-DEC-19	R4946299
cis-1,3-Dichloropropene	<0.30		0.30	ug/L		19-DEC-19	R4946299
trans-1,3-Dichloropropene	<0.30		0.30	ug/L		19-DEC-19	R4946299
1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L		19-DEC-19	
Ethylbenzene	<0.50		0.50	ug/L		19-DEC-19	R4946299
n-Hexane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Methyl Ethyl Ketone	<20		20	ug/L		19-DEC-19	R4946299
Methyl Isobutyl Ketone	<20		20	ug/L		19-DEC-19	R4946299
MTBE	<2.0		2.0	ug/L		19-DEC-19	R4946299
Styrene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Tetrachloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Toluene	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,1-Trichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
1,1,2-Trichloroethane	<0.50		0.50	ug/L		19-DEC-19	R4946299
Trichloroethylene	<0.50		0.50	ug/L		19-DEC-19	R4946299
Trichlorofluoromethane	<5.0		5.0	ug/L		19-DEC-19	R4946299
Vinyl chloride	<0.50		0.50	ug/L		19-DEC-19	R4946299
o-Xylene	<0.30		0.30	ug/L		19-DEC-19	R4946299
m+p-Xylenes	<0.40		0.40	ug/L		19-DEC-19	R4946299
Xylenes (Total)	<0.50		0.50	ug/L		19-DEC-19	
Surrogate: 4-Bromofluorobenzene	83.1		70-130	%		19-DEC-19	R4946299
Surrogate: 1,4-Difluorobenzene	96.0		70-130	%		19-DEC-19	R4946299
Hydrocarbons							
F1 (C6-C10)	<25		25	ug/L		19-DEC-19	R4946299
F1-BTEX	<25		25	ug/L		23-DEC-19	
F2 (C10-C16)	<100		100	ug/L	18-DEC-19	19-DEC-19	R4947706
F2-Naphth	<100		100	ug/L		23-DEC-19	
F3 (C16-C34)	<250		250	ug/L	18-DEC-19	19-DEC-19	R4947706
F3-PAH	<250		250	ug/L		23-DEC-19	
F4 (C34-C50)	<250		250	ug/L	18-DEC-19	19-DEC-19	R4947706
Total Hydrocarbons (C6-C50)	<370		370	ug/L		23-DEC-19	
Chrom. to baseline at nC50	YES				18-DEC-19	19-DEC-19	R4947706
Surrogate: 2-Bromobenzotrifluoride	88.3		60-140	%	18-DEC-19	19-DEC-19	R4947706
Surrogate: 3,4-Dichlorotoluene	79.7		60-140	%		19-DEC-19	R4946299
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329

* 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
L2397655-5 MW19-20 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Anthracene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(a)anthracene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(a)pyrene	<0.010		0.010	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(b)fluoranthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(g,h,i)perylene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Benzo(k)fluoranthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Chrysene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Dibenzo(ah)anthracene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Fluoranthene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Fluorene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Indeno(1,2,3-cd)pyrene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
1+2-Methylnaphthalenes	<0.028		0.028	ug/L		23-DEC-19	
1-Methylnaphthalene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
2-Methylnaphthalene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Naphthalene	<0.050		0.050	ug/L	18-DEC-19	20-DEC-19	R4949329
Phenanthrene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Pyrene	<0.020		0.020	ug/L	18-DEC-19	20-DEC-19	R4949329
Surrogate: d10-Acenaphthene	92.9		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d12-Chrysene	93.5		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d8-Naphthalene	93.0		60-140	%	18-DEC-19	20-DEC-19	R4949329
Surrogate: d10-Phenanthrene	98.2		60-140	%	18-DEC-19	20-DEC-19	R4949329
Semi-Volatile Organics							
Biphenyl	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
4-Chloroaniline	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
Bis(2-chloroethyl)ether	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
Bis(2-chloroisopropyl)ether	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
2-Chlorophenol	<0.30		0.30	ug/L	19-DEC-19	23-DEC-19	R4952649
3,3'-Dichlorobenzidine	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
2,4-Dichlorophenol	<0.30		0.30	ug/L	19-DEC-19	23-DEC-19	R4952649
Diethylphthalate	<0.20		0.20	ug/L	19-DEC-19	23-DEC-19	R4952649
Dimethylphthalate	<0.20		0.20	ug/L	19-DEC-19	23-DEC-19	R4952649
2,4-Dimethylphenol	<0.50		0.50	ug/L	19-DEC-19	23-DEC-19	R4952649
2,4-Dinitrophenol	<1.0		1.0	ug/L	19-DEC-19	23-DEC-19	R4952649
2,4-Dinitrotoluene	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
2,6-Dinitrotoluene	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649
2,4+2,6-Dinitrotoluene	<0.57		0.57	ug/L		23-DEC-19	
Bis(2-ethylhexyl)phthalate	<2.0		2.0	ug/L	19-DEC-19	23-DEC-19	R4952649
Pentachlorophenol	<0.50		0.50	ug/L	19-DEC-19	23-DEC-19	R4952649
Phenol	0.52		0.50	ug/L	19-DEC-19	23-DEC-19	R4952649
1,2,4-Trichlorobenzene	<0.40		0.40	ug/L	19-DEC-19	23-DEC-19	R4952649

* 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
L2397655-5 MW19-20 Sampled By: CLIENT on 16-DEC-19 Matrix: WATER							
Semi-Volatile Organics							
2,4,5-Trichlorophenol	<0.20		0.20	ug/L	19-DEC-19	23-DEC-19	R4952649
2,4,6-Trichlorophenol	<0.20		0.20	ug/L	19-DEC-19	23-DEC-19	R4952649
Surrogate: 2-Fluorobiphenyl	80.5		50-140	%	19-DEC-19	23-DEC-19	R4952649
Surrogate: Nitrobenzene d5	84.4		50-140	%	19-DEC-19	23-DEC-19	R4952649
Surrogate: p-Terphenyl d14	83.4		60-140	%	19-DEC-19	23-DEC-19	R4952649
Surrogate: 2,4,6-Tribromophenol	103.6		50-140	%	19-DEC-19	23-DEC-19	R4952649

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

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Laboratory Control Sample	4-Chloroaniline	MES	L2397655-4, -5

Sample Parameter Qualifier key listed:

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
R	The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
625-511-WT	Water	ABN,CP,PAH-O.Reg 153/04	SW846 8270 (511)

Ground water sample extraction is carried out at a pH <2 (acid extractables) and pH>11 (base neutral extractables). Extracts are dried, concentrated and exchanged into a solvent compatible with the cleanup. Analysis is by GC/MS. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

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).

CL-IC-N-WT	Water	Chloride by IC	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

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).

CN-WAD-R511-WT	Water	Cyanide (WAD)-O.Reg 153/04	APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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).

CR-CR6-IC-R511-WT	Water	Hex Chrom-O.Reg 153/04 (July 2011)	EPA 7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

DINITROTOL-CALC-WT	Water	ABN-Calculated Parameters	SW846 8270
EC-R511-WT	Water	Conductivity-O.Reg 153/04 (July 2011)	APHA 2510 B

Water samples can be measured directly by immersing the conductivity cell into 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).

EC-SCREEN-WT	Water	Conductivity Screen (Internal Use Only)	APHA 2510

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F1-F4-511-CALC-WT	Water	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-L

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.
In samples where BTEX and F1 were analyzed , F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene,

Reference Information

Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:
1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:
1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Water	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS

Fraction F1 is determined by analyzing by headspace-GC/FID.

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).

F2-F4-511-WT	Water	F2-F4-O.Reg 153/04 (July 2011)	EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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).

HG-D-UG/L-CVAA-WT	Water	Diss. Mercury in Water by CVAAS (ug/L)	EPA 1631E (mod)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

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).

MET-D-UG/L-MS-WT	Water	Diss. Metals in Water by ICPMS (ug/L)	EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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	Water	PAH-Calculated Parameters	SW846 8270
PAH-511-WT	Water	PAH-O. Reg 153/04 (July 2011)	SW846 3510/8270

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using 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).

PH-WT	Water	pH	APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH meter.

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). Holdtime for samples under this regulation is 28 days

VOC-1,3-DCP-CALC-WT	Water	Regulation 153 VOCs	SW8260B/SW8270C
VOC-511-HS-WT	Water	VOC by GCMS HS O.Reg 153/04 (July 2011)	SW846 8260

Liquid samples are analyzed by headspace GC/MSD.

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

Reference Information

must be reported).

XYLENES-SUM-CALC-WT	Water	Sum of Xylene Isomer Concentrations	CALCULATION

Total xylenes represents the sum of o-xylene and m&p-xylene.

** 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 Dr,
Kanata ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
625-511-WT	**Water**							
Batch R4952649								
WG3246014-2 LCS								
1,2,4-Trichlorobenzene			70.2		%		50-140	23-DEC-19
2-Chlorophenol			85.9		%		50-140	23-DEC-19
2,4-Dichlorophenol			99.1		%		50-140	23-DEC-19
2,4-Dimethylphenol			102.8		%		30-130	23-DEC-19
2,4-Dinitrophenol			122.1		%		50-140	23-DEC-19
2,4-Dinitrotoluene			96.5		%		50-140	23-DEC-19
2,4,5-Trichlorophenol			99.7		%		50-140	23-DEC-19
2,4,6-Trichlorophenol			105.4		%		50-140	23-DEC-19
2,6-Dinitrotoluene			103.6		%		50-140	23-DEC-19
3,3'-Dichlorobenzidine			64.2		%		30-130	23-DEC-19
4-Chloroaniline			22.1	MES	%		30-130	23-DEC-19
Biphenyl			94.4		%		50-140	23-DEC-19
Bis(2-chloroethyl)ether			98.2		%		50-140	23-DEC-19
Bis(2-chloroisopropyl)ether			94.1		%		50-140	23-DEC-19
Bis(2-ethylhexyl)phthalate			100.9		%		50-140	23-DEC-19
Diethylphthalate			99.0		%		50-140	23-DEC-19
Dimethylphthalate			101.2		%		50-140	23-DEC-19
Pentachlorophenol			100.9		%		50-140	23-DEC-19
Phenol			119.7		%		30-130	23-DEC-19
WG3246014-1 MB								
1,2,4-Trichlorobenzene			<0.40		ug/L		0.4	23-DEC-19
2-Chlorophenol			<0.30		ug/L		0.3	23-DEC-19
2,4-Dichlorophenol			<0.30		ug/L		0.3	23-DEC-19
2,4-Dimethylphenol			<0.50		ug/L		0.5	23-DEC-19
2,4-Dinitrophenol			<1.0		ug/L		1	23-DEC-19
2,4-Dinitrotoluene			<0.40		ug/L		0.4	23-DEC-19
2,4,5-Trichlorophenol			<0.20		ug/L		0.2	23-DEC-19
2,4,6-Trichlorophenol			<0.20		ug/L		0.2	23-DEC-19
2,6-Dinitrotoluene			<0.40		ug/L		0.4	23-DEC-19
3,3'-Dichlorobenzidine			<0.40		ug/L		0.4	23-DEC-19
4-Chloroaniline			<0.40		ug/L		0.4	23-DEC-19
Biphenyl			<0.40		ug/L		0.4	23-DEC-19
Bis(2-chloroethyl)ether			<0.40		ug/L		0.4	23-DEC-19
Bis(2-chloroisopropyl)ether			<0.40		ug/L		0.4	23-DEC-19

Quality Control Report

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Dr,
Kanata ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
625-511-WT	**Water**							
Batch R4952649								
WG3246014-1 MB								
Bis(2-ethylhexyl)phthalate			<2.0		ug/L		2	23-DEC-19
Diethylphthalate			<0.20		ug/L		0.2	23-DEC-19
Dimethylphthalate			<0.20		ug/L		0.2	23-DEC-19
Pentachlorophenol			<0.50		ug/L		0.5	23-DEC-19
Phenol			<0.50		ug/L		0.5	23-DEC-19
Surrogate: 2-Fluorobiphenyl			81.1		%		50-140	23-DEC-19
Surrogate: 2,4,6-Tribromophenol			83.8		%		50-140	23-DEC-19
Surrogate: Nitrobenzene d5			82.7		%		50-140	23-DEC-19
Surrogate: p-Terphenyl d14			88.8		%		60-140	23-DEC-19
CL-IC-N-WT	**Water**							
Batch R4948668								
WG3246535-4 DUP		**WG3246535-3**						
Chloride (Cl)		6.98	6.99		mg/L	0.2	20	19-DEC-19
WG3246535-2 LCS								
Chloride (Cl)			104.2		%		90-110	19-DEC-19
WG3246535-1 MB								
Chloride (Cl)			<0.50		mg/L		0.5	19-DEC-19
WG3246535-5 MS		**WG3246535-3**						
Chloride (Cl)			103.4		%		75-125	19-DEC-19
CN-WAD-R511-WT	**Water**							
Batch R4946280								
WG3245524-3 DUP		**L2397655-1**						
Cyanide, Weak Acid Diss		<2.0	<2.0	RPD-NA	ug/L	N/A	20	18-DEC-19
WG3245524-2 LCS								
Cyanide, Weak Acid Diss			102.7		%		80-120	18-DEC-19
WG3245524-1 MB								
Cyanide, Weak Acid Diss			<2.0		ug/L		2	18-DEC-19
WG3245524-4 MS		**L2397655-1**						
Cyanide, Weak Acid Diss			95.9		%		75-125	18-DEC-19
CR-CR6-IC-R511-WT	**Water**							
Batch R4948092								
WG3246367-4 DUP		**WG3246367-3**						
Chromium, Hexavalent		<0.50	<0.50	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3246367-2 LCS								
Chromium, Hexavalent			101.1		%		80-120	19-DEC-19
WG3246367-1 MB								

Quality Control Report

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32 Steacie Dr,
Kanata ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CR-CR6-IC-R511-WT	**Water**							
Batch R4948092								
WG3246367-1 MB								
Chromium, Hexavalent			<0.50		ug/L		0.5	19-DEC-19
WG3246367-5 MS		**WG3246367-3**						
Chromium, Hexavalent			96.2		%		70-130	19-DEC-19
EC-R511-WT	**Water**							
Batch R4948309								
WG3246108-4 DUP		**WG3246108-3**						
Conductivity		0.297	0.296		mS/cm	0.3	10	19-DEC-19
WG3246108-2 LCS								
Conductivity			102.3		%		90-110	19-DEC-19
WG3246108-1 MB								
Conductivity			<0.0030		mS/cm		0.003	19-DEC-19
F1-HS-511-WT	**Water**							
Batch R4946299								
WG3244525-4 DUP		**WG3244525-3**						
F1 (C6-C10)		<25	<25	RPD-NA	ug/L	N/A	30	19-DEC-19
WG3244525-1 LCS								
F1 (C6-C10)			93.0		%		80-120	19-DEC-19
WG3244525-2 MB								
F1 (C6-C10)			<25		ug/L		25	19-DEC-19
Surrogate: 3,4-Dichlorotoluene			83.1		%		60-140	19-DEC-19
WG3244525-5 MS		**WG3244525-3**						
F1 (C6-C10)			87.0		%		60-140	19-DEC-19
F2-F4-511-WT	**Water**							
Batch R4947706								
WG3245503-2 LCS								
F2 (C10-C16)			94.5		%		70-130	19-DEC-19
F3 (C16-C34)			97.2		%		70-130	19-DEC-19
F4 (C34-C50)			99.1		%		70-130	19-DEC-19
WG3245503-1 MB								
F2 (C10-C16)			<100		ug/L		100	19-DEC-19
F3 (C16-C34)			<250		ug/L		250	19-DEC-19
F4 (C34-C50)			<250		ug/L		250	19-DEC-19
Surrogate: 2-Bromobenzotrifluoride			86.2		%		60-140	19-DEC-19
HG-D-UG/L-CVAA-WT	**Water**							

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-D-UG/L-CVAA-WT	**Water**							
Batch R4946371								
WG3246069-4 DUP		**WG3246069-3**						
Mercury (Hg)-Dissolved		<0.0050	0.0064	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3246069-2 LCS								
Mercury (Hg)-Dissolved			94.4		%		80-120	19-DEC-19
WG3246069-1 MB								
Mercury (Hg)-Dissolved			<0.0050		ug/L		0.005	19-DEC-19
WG3246069-6 MS		**WG3246069-5**						
Mercury (Hg)-Dissolved			93.3		%		70-130	19-DEC-19
MET-D-UG/L-MS-WT	**Water**							
Batch R4945382								
WG3245467-4 DUP		**WG3245467-3**						
Antimony (Sb)-Dissolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	18-DEC-19
Arsenic (As)-Dissolved		0.17	0.17		ug/L	2.8	20	18-DEC-19
Barium (Ba)-Dissolved		13.0	13.1		ug/L	0.5	20	18-DEC-19
Beryllium (Be)-Dissolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	18-DEC-19
Boron (B)-Dissolved		<10	<10	RPD-NA	ug/L	N/A	20	18-DEC-19
Cadmium (Cd)-Dissolved		0.0129	0.0095	J	ug/L	0.0034	0.01	18-DEC-19
Chromium (Cr)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	18-DEC-19
Cobalt (Co)-Dissolved		0.32	0.35		ug/L	8.7	20	18-DEC-19
Copper (Cu)-Dissolved		6.32	6.44		ug/L	1.9	20	18-DEC-19
Lead (Pb)-Dissolved		0.125	0.124		ug/L	0.8	20	18-DEC-19
Molybdenum (Mo)-Dissolved		0.069	0.065		ug/L	5.5	20	18-DEC-19
Nickel (Ni)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	18-DEC-19
Selenium (Se)-Dissolved		0.050	0.066	J	ug/L	0.016	0.1	18-DEC-19
Silver (Ag)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	18-DEC-19
Sodium (Na)-Dissolved		1190	1220		ug/L	2.2	20	18-DEC-19
Thallium (Tl)-Dissolved		<0.010	<0.010	RPD-NA	ug/L	N/A	20	18-DEC-19
Uranium (U)-Dissolved		0.084	0.086		ug/L	2.8	20	18-DEC-19
Vanadium (V)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	18-DEC-19
Zinc (Zn)-Dissolved		4.2	4.1		ug/L	1.7	20	18-DEC-19
WG3245467-2 LCS								
Antimony (Sb)-Dissolved			98.9		%		80-120	18-DEC-19
Arsenic (As)-Dissolved			96.7		%		80-120	18-DEC-19
Barium (Ba)-Dissolved			102.7		%		80-120	18-DEC-19
Beryllium (Be)-Dissolved			94.4		%		80-120	18-DEC-19

Quality Control Report

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Kanata ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	**Water**							
Batch	**R4945382**							
WG3245467-2	**LCS**							
Boron (B)-Dissolved			94.7		%		80-120	18-DEC-19
Cadmium (Cd)-Dissolved			99.7		%		80-120	18-DEC-19
Chromium (Cr)-Dissolved			96.8		%		80-120	18-DEC-19
Cobalt (Co)-Dissolved			96.0		%		80-120	18-DEC-19
Copper (Cu)-Dissolved			95.4		%		80-120	18-DEC-19
Lead (Pb)-Dissolved			99.3		%		80-120	18-DEC-19
Molybdenum (Mo)-Dissolved			98.4		%		80-120	18-DEC-19
Nickel (Ni)-Dissolved			95.0		%		80-120	18-DEC-19
Selenium (Se)-Dissolved			98.2		%		80-120	18-DEC-19
Silver (Ag)-Dissolved			102.0		%		80-120	18-DEC-19
Sodium (Na)-Dissolved			97.3		%		80-120	18-DEC-19
Thallium (Tl)-Dissolved			100.1		%		80-120	18-DEC-19
Uranium (U)-Dissolved			99.6		%		80-120	18-DEC-19
Vanadium (V)-Dissolved			98.7		%		80-120	18-DEC-19
Zinc (Zn)-Dissolved			96.4		%		80-120	18-DEC-19
WG3245467-1	**MB**							
Antimony (Sb)-Dissolved			<0.10		ug/L		0.1	18-DEC-19
Arsenic (As)-Dissolved			<0.10		ug/L		0.1	18-DEC-19
Barium (Ba)-Dissolved			<0.10		ug/L		0.1	18-DEC-19
Beryllium (Be)-Dissolved			<0.10		ug/L		0.1	18-DEC-19
Boron (B)-Dissolved			<10		ug/L		10	18-DEC-19
Cadmium (Cd)-Dissolved			<0.0050		ug/L		0.005	18-DEC-19
Chromium (Cr)-Dissolved			<0.50		ug/L		0.5	18-DEC-19
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	18-DEC-19
Copper (Cu)-Dissolved			<0.20		ug/L		0.2	18-DEC-19
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	18-DEC-19
Molybdenum (Mo)-Dissolved			<0.050		ug/L		0.05	18-DEC-19
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	18-DEC-19
Selenium (Se)-Dissolved			<0.050		ug/L		0.05	18-DEC-19
Silver (Ag)-Dissolved			<0.050		ug/L		0.05	18-DEC-19
Sodium (Na)-Dissolved			<50		ug/L		50	18-DEC-19
Thallium (Tl)-Dissolved			<0.010		ug/L		0.01	18-DEC-19
Uranium (U)-Dissolved			<0.010		ug/L		0.01	18-DEC-19
Vanadium (V)-Dissolved			<0.50		ug/L		0.5	18-DEC-19

Quality Control Report

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Dr,
Kanata ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	**Water**							
Batch R4945382								
WG3245467-1 MB								
Zinc (Zn)-Dissolved			<1.0		ug/L		1	18-DEC-19
WG3245467-5 MS		**WG3245467-6**						
Antimony (Sb)-Dissolved			96.3		%		70-130	18-DEC-19
Arsenic (As)-Dissolved			102.2		%		70-130	18-DEC-19
Barium (Ba)-Dissolved			96.5		%		70-130	18-DEC-19
Beryllium (Be)-Dissolved			94.9		%		70-130	18-DEC-19
Boron (B)-Dissolved			89.7		%		70-130	18-DEC-19
Cadmium (Cd)-Dissolved			101.6		%		70-130	18-DEC-19
Chromium (Cr)-Dissolved			93.3		%		70-130	18-DEC-19
Cobalt (Co)-Dissolved			93.0		%		70-130	18-DEC-19
Copper (Cu)-Dissolved			90.0		%		70-130	18-DEC-19
Lead (Pb)-Dissolved			96.3		%		70-130	18-DEC-19
Molybdenum (Mo)-Dissolved			95.9		%		70-130	18-DEC-19
Nickel (Ni)-Dissolved			91.4		%		70-130	18-DEC-19
Selenium (Se)-Dissolved			115.0		%		70-130	18-DEC-19
Silver (Ag)-Dissolved			99.8		%		70-130	18-DEC-19
Sodium (Na)-Dissolved			89.1		%		70-130	18-DEC-19
Thallium (Tl)-Dissolved			95.1		%		70-130	18-DEC-19
Uranium (U)-Dissolved			93.5		%		70-130	18-DEC-19
Vanadium (V)-Dissolved			96.2		%		70-130	18-DEC-19
Zinc (Zn)-Dissolved			101.0		%		70-130	18-DEC-19
PAH-511-WT	**Water**							
Batch R4949329								
WG3245503-2 LCS								
1-Methylnaphthalene			83.8		%		50-140	20-DEC-19
2-Methylnaphthalene			76.1		%		50-140	20-DEC-19
Acenaphthene			92.3		%		50-140	20-DEC-19
Acenaphthylene			96.6		%		50-140	20-DEC-19
Anthracene			91.3		%		50-140	20-DEC-19
Benzo(a)anthracene			96.4		%		50-140	20-DEC-19
Benzo(a)pyrene			91.0		%		50-140	20-DEC-19
Benzo(b)fluoranthene			90.6		%		50-140	20-DEC-19
Benzo(g,h,i)perylene			97.8		%		50-140	20-DEC-19
Benzo(k)fluoranthene			97.6		%		50-140	20-DEC-19

Quality Control Report

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32 Steacie Dr,
Kanata ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Water**							
Batch R4949329								
WG3245503-2 LCS								
Chrysene			96.9		%		50-140	20-DEC-19
Dibenzo(ah)anthracene			87.6		%		50-140	20-DEC-19
Fluoranthene			97.1		%		50-140	20-DEC-19
Fluorene			96.1		%		50-140	20-DEC-19
Indeno(1,2,3-cd)pyrene			99.2		%		50-140	20-DEC-19
Naphthalene			84.8		%		50-140	20-DEC-19
Phenanthrene			98.7		%		50-140	20-DEC-19
Pyrene			98.8		%		50-140	20-DEC-19
WG3245503-1 MB								
1-Methylnaphthalene			<0.020		ug/L		0.02	20-DEC-19
2-Methylnaphthalene			<0.020		ug/L		0.02	20-DEC-19
Acenaphthene			<0.020		ug/L		0.02	20-DEC-19
Acenaphthylene			<0.020		ug/L		0.02	20-DEC-19
Anthracene			<0.020		ug/L		0.02	20-DEC-19
Benzo(a)anthracene			<0.020		ug/L		0.02	20-DEC-19
Benzo(a)pyrene			<0.010		ug/L		0.01	20-DEC-19
Benzo(b)fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	20-DEC-19
Benzo(k)fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Chrysene			<0.020		ug/L		0.02	20-DEC-19
Dibenzo(ah)anthracene			<0.020		ug/L		0.02	20-DEC-19
Fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Fluorene			<0.020		ug/L		0.02	20-DEC-19
Indeno(1,2,3-cd)pyrene			<0.020		ug/L		0.02	20-DEC-19
Naphthalene			<0.050		ug/L		0.05	20-DEC-19
Phenanthrene			<0.020		ug/L		0.02	20-DEC-19
Pyrene			<0.020		ug/L		0.02	20-DEC-19
Surrogate: d8-Naphthalene			97.0		%		60-140	20-DEC-19
Surrogate: d10-Phenanthrene			104.5		%		60-140	20-DEC-19
Surrogate: d12-Chrysene			94.4		%		60-140	20-DEC-19
Surrogate: d10-Acenaphthene			97.1		%		60-140	20-DEC-19
PH-WT	**Water**							

Quality Control Report

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Dr,
Kanata ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-WT	**Water**							
Batch R4948309								
WG3246108-4 DUP		**WG3246108-3**						
pH		8.21	8.20	J	pH units	0.01	0.2	19-DEC-19
WG3246108-2 LCS								
pH			7.00		pH units		6.9-7.1	19-DEC-19
VOC-511-HS-WT	**Water**							
Batch R4946299								
WG3244525-4 DUP		**WG3244525-3**						
1,1,1,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
1,1,2,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	19-DEC-19
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	19-DEC-19
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	19-DEC-19
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	19-DEC-19
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	19-DEC-19
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	19-DEC-19
cis-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
cis-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	19-DEC-19
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	19-DEC-19
Dichlorodifluoromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	19-DEC-19
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	19-DEC-19

Quality Control Report

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Dr,
Kanata ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R4946299								
WG3244525-4 DUP		**WG3244525-3**						
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	19-DEC-19
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	19-DEC-19
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	19-DEC-19
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	19-DEC-19
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	19-DEC-19
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
trans-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
trans-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	19-DEC-19
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	19-DEC-19
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	19-DEC-19
WG3244525-1 LCS								
1,1,1,2-Tetrachloroethane			80.5		%		70-130	19-DEC-19
1,1,2,2-Tetrachloroethane			77.5		%		70-130	19-DEC-19
1,1,1-Trichloroethane			86.0		%		70-130	19-DEC-19
1,1,2-Trichloroethane			74.4		%		70-130	19-DEC-19
1,1-Dichloroethane			82.8		%		70-130	19-DEC-19
1,1-Dichloroethylene			86.3		%		70-130	19-DEC-19
1,2-Dibromoethane			74.2		%		70-130	19-DEC-19
1,2-Dichlorobenzene			88.1		%		70-130	19-DEC-19
1,2-Dichloroethane			77.1		%		70-130	19-DEC-19
1,2-Dichloropropane			83.9		%		70-130	19-DEC-19
1,3-Dichlorobenzene			90.3		%		70-130	19-DEC-19
1,4-Dichlorobenzene			90.1		%		70-130	19-DEC-19
Acetone			80.7		%		60-140	19-DEC-19
Benzene			96.4		%		70-130	19-DEC-19
Bromodichloromethane			80.7		%		70-130	19-DEC-19
Bromoform			82.9		%		70-130	19-DEC-19
Bromomethane			84.0		%		60-140	19-DEC-19
Carbon tetrachloride			95.3		%		70-130	19-DEC-19
Chlorobenzene			82.3		%		70-130	19-DEC-19

Quality Control Report

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Dr,
Kanata ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R4946299								
WG3244525-1 LCS								
Chloroform			85.1		%		70-130	19-DEC-19
cis-1,2-Dichloroethylene			82.4		%		70-130	19-DEC-19
cis-1,3-Dichloropropene			80.4		%		70-130	19-DEC-19
Dibromochloromethane			82.8		%		70-130	19-DEC-19
Dichlorodifluoromethane			119.0		%		50-140	19-DEC-19
Ethylbenzene			89.3		%		70-130	19-DEC-19
n-Hexane			95.6		%		70-130	19-DEC-19
m+p-Xylenes			91.8		%		70-130	19-DEC-19
Methyl Ethyl Ketone			79.3		%		60-140	19-DEC-19
Methyl Isobutyl Ketone			64.0		%		60-140	19-DEC-19
Methylene Chloride			84.9		%		70-130	19-DEC-19
MTBE			88.1		%		70-130	19-DEC-19
o-Xylene			85.4		%		70-130	19-DEC-19
Styrene			81.8		%		70-130	19-DEC-19
Tetrachloroethylene			96.2		%		70-130	19-DEC-19
Toluene			92.0		%		70-130	19-DEC-19
trans-1,2-Dichloroethylene			83.6		%		70-130	19-DEC-19
trans-1,3-Dichloropropene			73.7		%		70-130	19-DEC-19
Trichloroethylene			89.0		%		70-130	19-DEC-19
Trichlorofluoromethane			92.5		%		60-140	19-DEC-19
Vinyl chloride			107.5		%		60-140	19-DEC-19
WG3244525-2 MB								
1,1,1,2-Tetrachloroethane			<0.50		ug/L		0.5	19-DEC-19
1,1,2,2-Tetrachloroethane			<0.50		ug/L		0.5	19-DEC-19
1,1,1-Trichloroethane			<0.50		ug/L		0.5	19-DEC-19
1,1,2-Trichloroethane			<0.50		ug/L		0.5	19-DEC-19
1,1-Dichloroethane			<0.50		ug/L		0.5	19-DEC-19
1,1-Dichloroethylene			<0.50		ug/L		0.5	19-DEC-19
1,2-Dibromoethane			<0.20		ug/L		0.2	19-DEC-19
1,2-Dichlorobenzene			<0.50		ug/L		0.5	19-DEC-19
1,2-Dichloroethane			<0.50		ug/L		0.5	19-DEC-19
1,2-Dichloropropane			<0.50		ug/L		0.5	19-DEC-19
1,3-Dichlorobenzene			<0.50		ug/L		0.5	19-DEC-19
1,4-Dichlorobenzene			<0.50		ug/L		0.5	19-DEC-19

Quality Control Report

Workorder: L2397655 Report Date: 27-DEC-19

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Dr,
Kanata ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R4946299								
WG3244525-2 MB								
Acetone			<30		ug/L		30	19-DEC-19
Benzene			<0.50		ug/L		0.5	19-DEC-19
Bromodichloromethane			<2.0		ug/L		2	19-DEC-19
Bromoform			<5.0		ug/L		5	19-DEC-19
Bromomethane			<0.50		ug/L		0.5	19-DEC-19
Carbon tetrachloride			<0.20		ug/L		0.2	19-DEC-19
Chlorobenzene			<0.50		ug/L		0.5	19-DEC-19
Chloroform			<1.0		ug/L		1	19-DEC-19
cis-1,2-Dichloroethylene			<0.50		ug/L		0.5	19-DEC-19
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	19-DEC-19
Dibromochloromethane			<2.0		ug/L		2	19-DEC-19
Dichlorodifluoromethane			<2.0		ug/L		2	19-DEC-19
Ethylbenzene			<0.50		ug/L		0.5	19-DEC-19
n-Hexane			<0.50		ug/L		0.5	19-DEC-19
m+p-Xylenes			<0.40		ug/L		0.4	19-DEC-19
Methyl Ethyl Ketone			<20		ug/L		20	19-DEC-19
Methyl Isobutyl Ketone			<20		ug/L		20	19-DEC-19
Methylene Chloride			<5.0		ug/L		5	19-DEC-19
MTBE			<2.0		ug/L		2	19-DEC-19
o-Xylene			<0.30		ug/L		0.3	19-DEC-19
Styrene			<0.50		ug/L		0.5	19-DEC-19
Tetrachloroethylene			<0.50		ug/L		0.5	19-DEC-19
Toluene			<0.50		ug/L		0.5	19-DEC-19
trans-1,2-Dichloroethylene			<0.50		ug/L		0.5	19-DEC-19
trans-1,3-Dichloropropene			<0.30		ug/L		0.3	19-DEC-19
Trichloroethylene			<0.50		ug/L		0.5	19-DEC-19
Trichlorofluoromethane			<5.0		ug/L		5	19-DEC-19
Vinyl chloride			<0.50		ug/L		0.5	19-DEC-19
Surrogate: 1,4-Difluorobenzene			96.5		%		70-130	19-DEC-19
Surrogate: 4-Bromofluorobenzene			84.0		%		70-130	19-DEC-19
WG3244525-5 MS		**WG3244525-3**						
1,1,1,2-Tetrachloroethane			81.5		%		50-140	19-DEC-19
1,1,2,2-Tetrachloroethane			83.8		%		50-140	19-DEC-19
1,1,1-Trichloroethane			84.4		%		50-140	19-DEC-19

Quality Control Report

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Dr,
Kanata ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R4946299								
WG3244525-5 MS		**WG3244525-3**						
1,1,2-Trichloroethane			76.7		%		50-140	19-DEC-19
1,1-Dichloroethane			81.3		%		50-140	19-DEC-19
1,1-Dichloroethylene			81.1		%		50-140	19-DEC-19
1,2-Dibromoethane			76.7		%		50-140	19-DEC-19
1,2-Dichlorobenzene			88.0		%		50-140	19-DEC-19
1,2-Dichloroethane			79.5		%		50-140	19-DEC-19
1,2-Dichloropropane			85.8		%		50-140	19-DEC-19
1,3-Dichlorobenzene			87.7		%		50-140	19-DEC-19
1,4-Dichlorobenzene			87.9		%		50-140	19-DEC-19
Acetone			83.8		%		50-140	19-DEC-19
Benzene			96.1		%		50-140	19-DEC-19
Bromodichloromethane			83.2		%		50-140	19-DEC-19
Bromoform			87.2		%		50-140	19-DEC-19
Bromomethane			75.5		%		50-140	19-DEC-19
Carbon tetrachloride			92.7		%		50-140	19-DEC-19
Chlorobenzene			82.2		%		50-140	19-DEC-19
Chloroform			85.5		%		50-140	19-DEC-19
cis-1,2-Dichloroethylene			82.4		%		50-140	19-DEC-19
cis-1,3-Dichloropropene			82.0		%		50-140	19-DEC-19
Dibromochloromethane			85.0		%		50-140	19-DEC-19
Dichlorodifluoromethane			95.8		%		50-140	19-DEC-19
Ethylbenzene			87.7		%		50-140	19-DEC-19
n-Hexane			86.8		%		50-140	19-DEC-19
m+p-Xylenes			90.2		%		50-140	19-DEC-19
Methyl Ethyl Ketone			81.2		%		50-140	19-DEC-19
Methyl Isobutyl Ketone			72.3		%		50-140	19-DEC-19
Methylene Chloride			84.0		%		50-140	19-DEC-19
MTBE			88.0		%		50-140	19-DEC-19
o-Xylene			85.0		%		50-140	19-DEC-19
Styrene			82.3		%		50-140	19-DEC-19
Tetrachloroethylene			92.2		%		50-140	19-DEC-19
Toluene			89.9		%		50-140	19-DEC-19
trans-1,2-Dichloroethylene			80.3		%		50-140	19-DEC-19

Quality Control Report

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Dr,
Kanata ON K2K 2A9
Contact: Nicole Soucy

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R4946299								
WG3244525-5 MS		**WG3244525-3**						
trans-1,3-Dichloropropene			74.0		%		50-140	19-DEC-19
Trichloroethylene			88.0		%		50-140	19-DEC-19
Trichlorofluoromethane			84.5		%		50-140	19-DEC-19
Vinyl chloride			94.9		%		50-140	19-DEC-19

Quality Control Report

Workorder: L2397655 Report Date: 27-DEC-19

Client: GEMTEC Consulting Engineers & Scientists Limited
32 Steacie Dr,
Kanata 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
J	Duplicate results and limits are expressed in terms of absolute difference.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

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

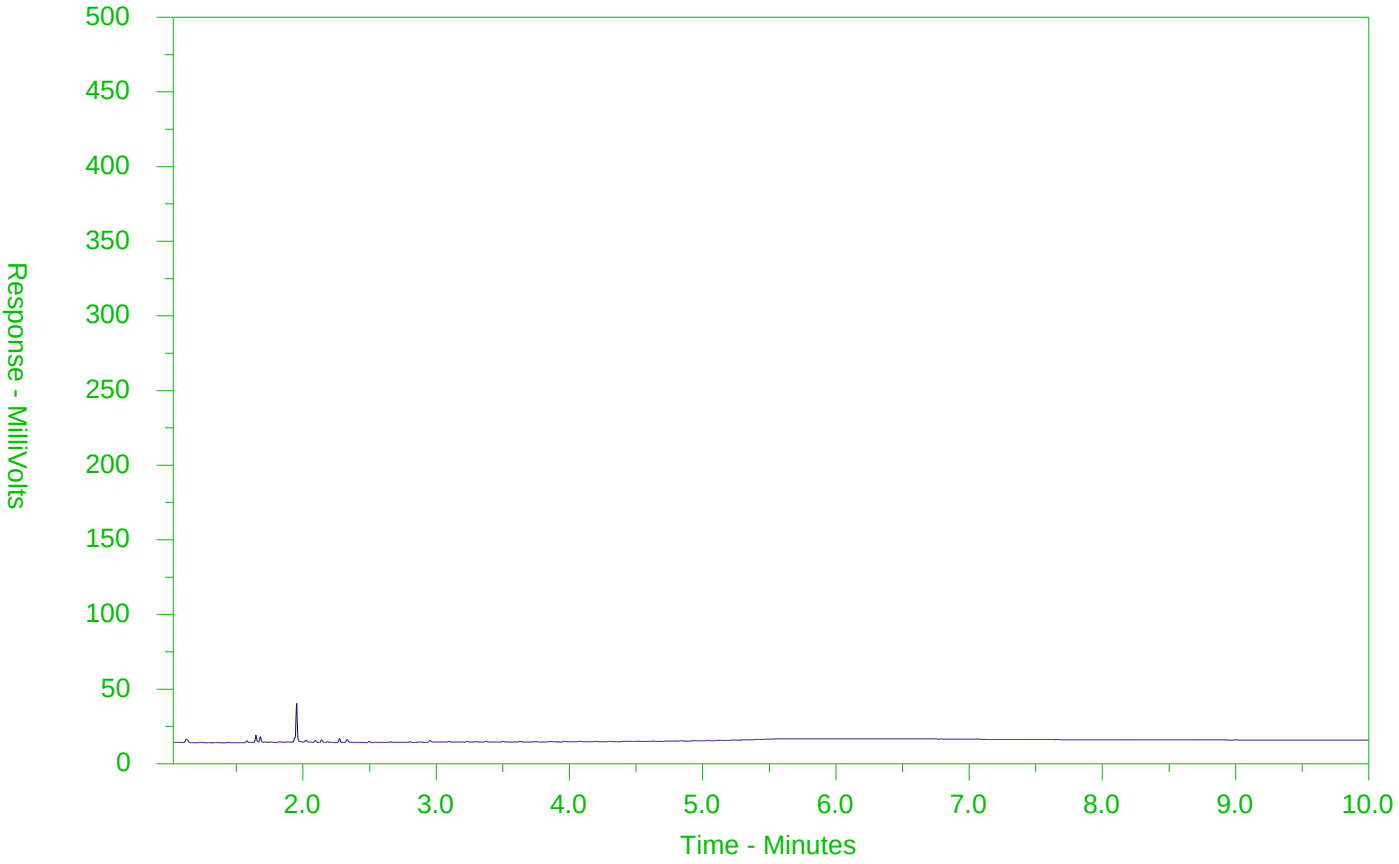
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2397655-1
Client Sample ID: MW19-04



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

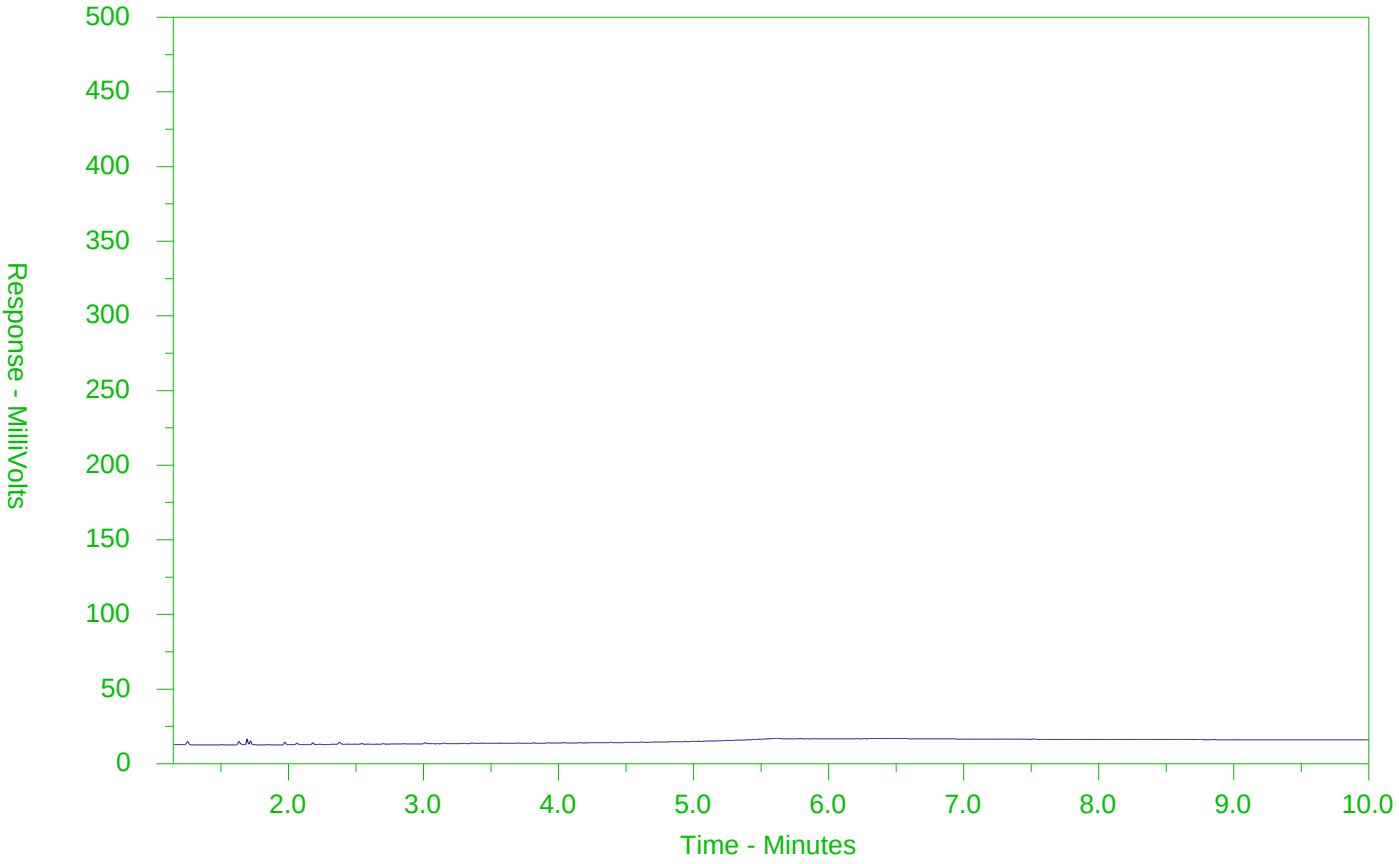
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2397655-2
Client Sample ID: MW19-05



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →	
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

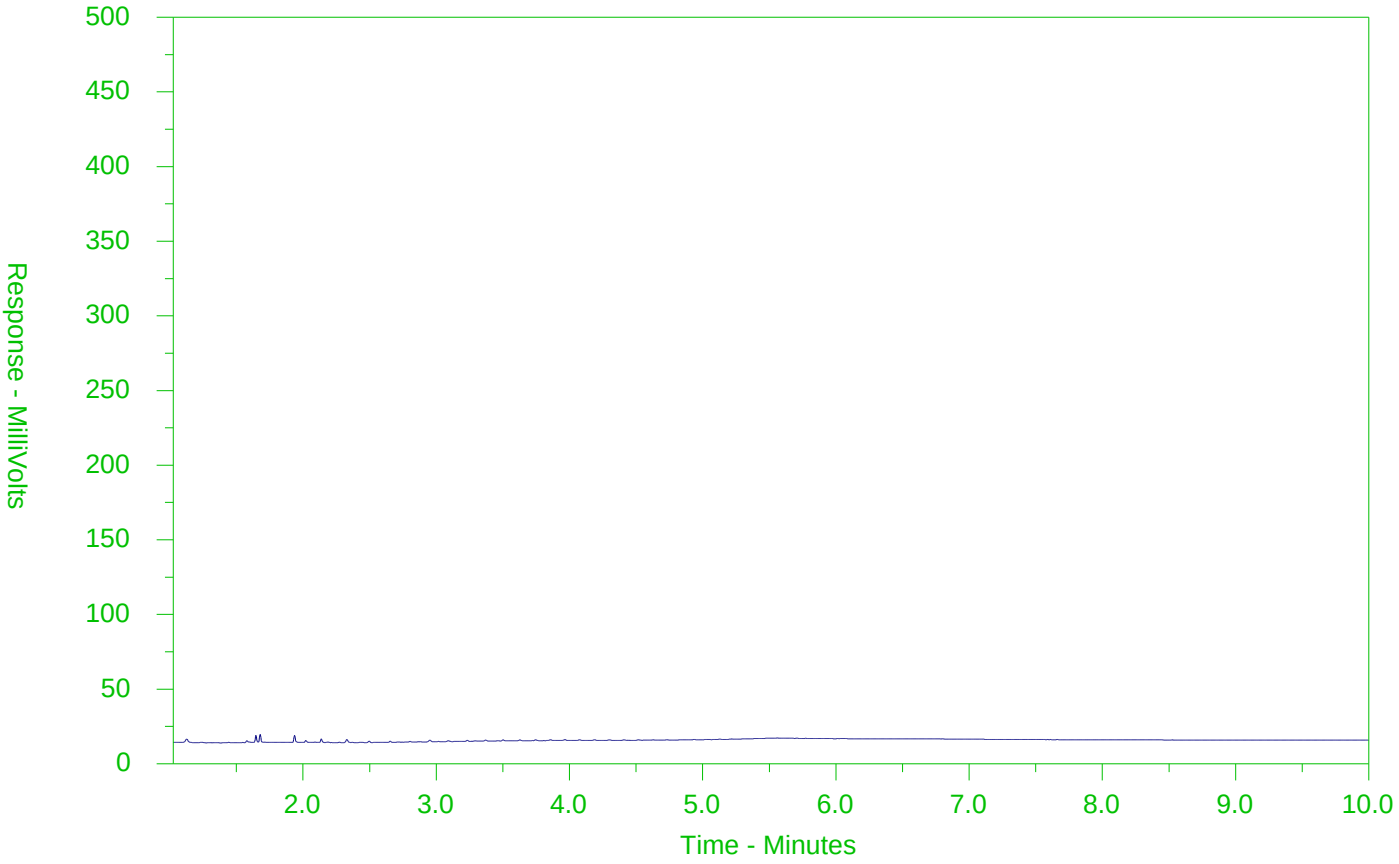
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2397655-3
Client Sample ID: MW19-09



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

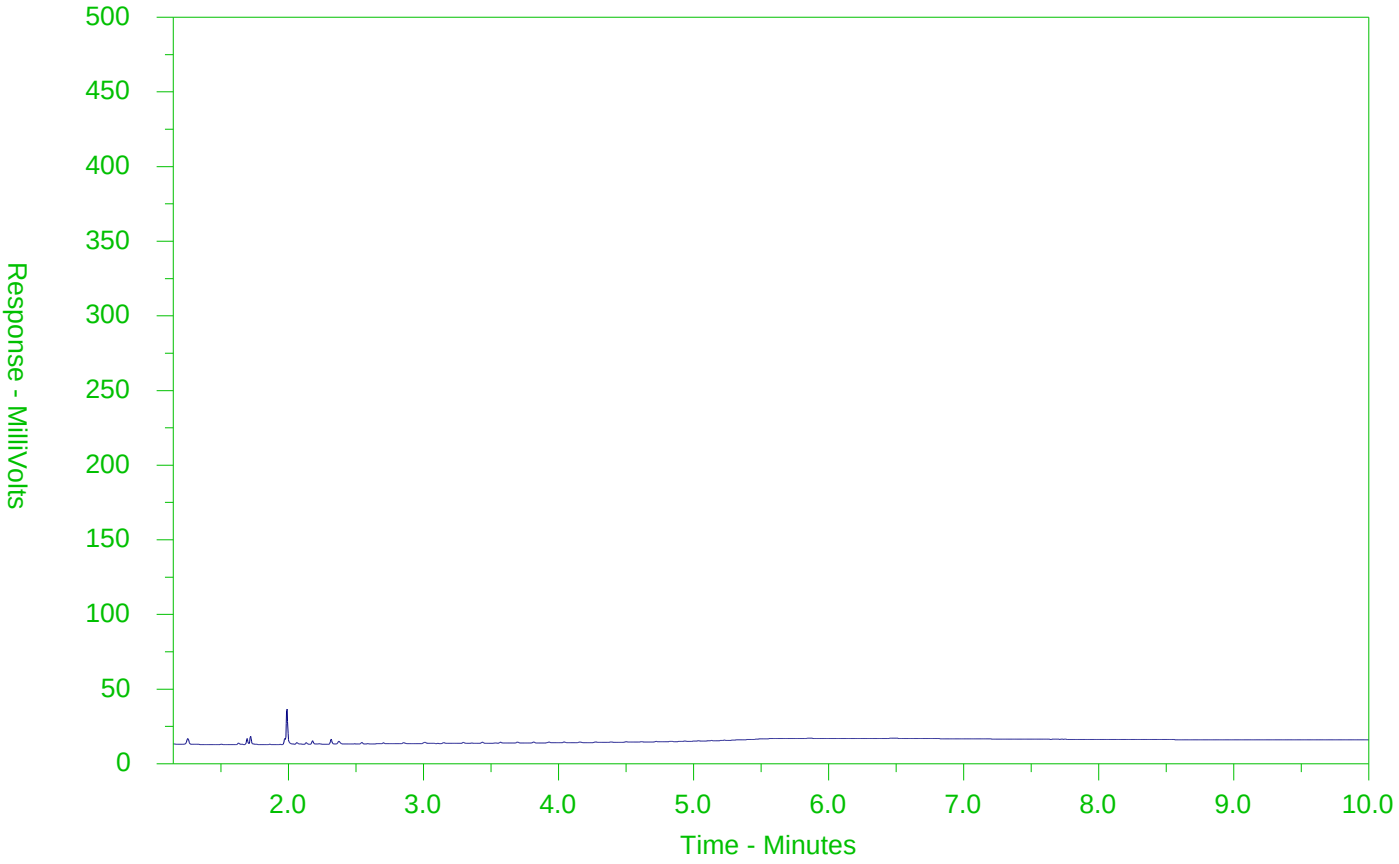
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2397655-4
Client Sample ID: MW19-18



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →	
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

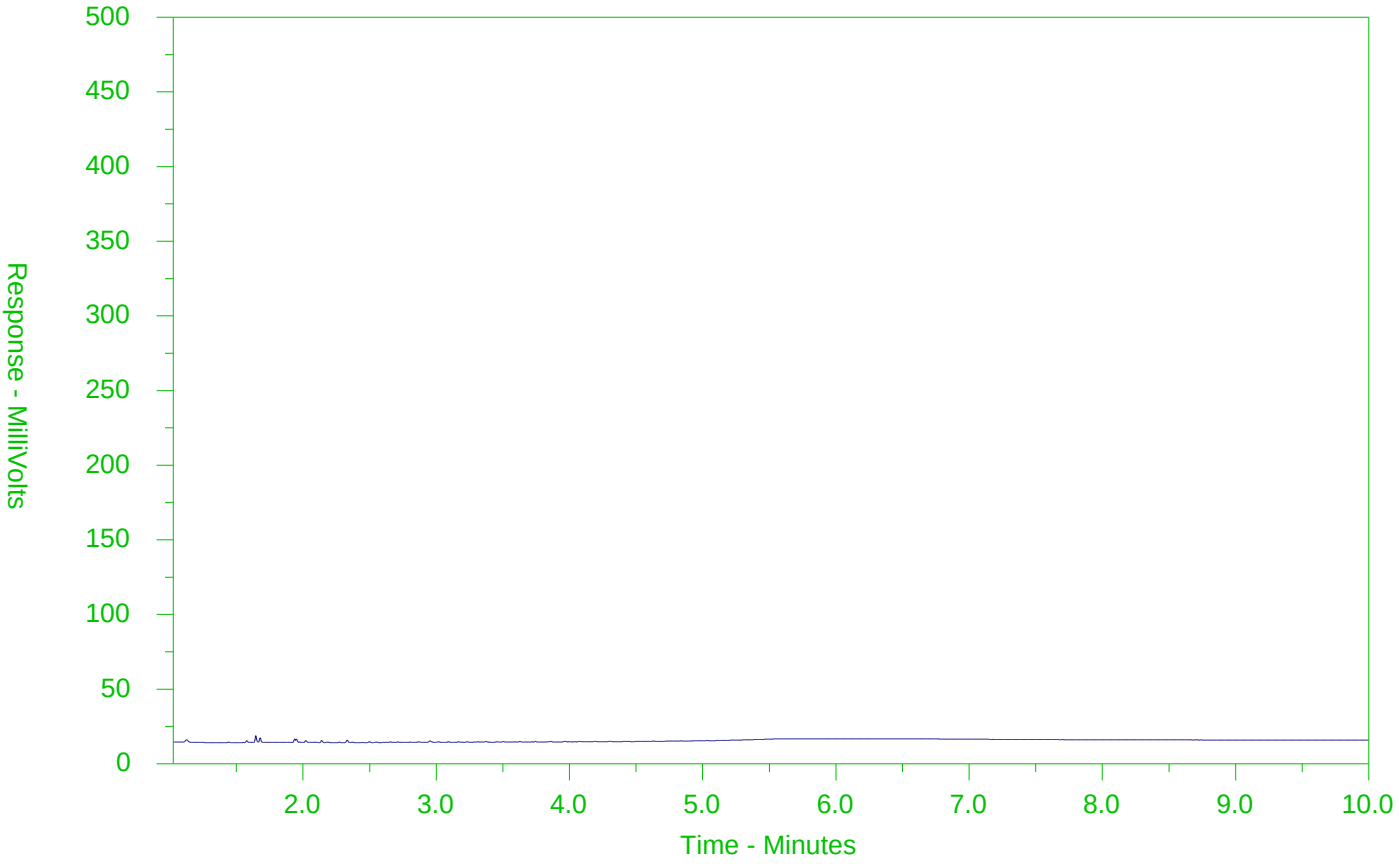
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2397655-5
Client Sample ID: MW19-20



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

Chain of Custody (COC) / Analytic Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2397655-COFC

COC Number: 17 -

Page of

Report To	Contact and company name below will appear on the final report
Company:	Gemtec Consulting Engineers and Scientists Ltd
Contact:	Nicole Soucy
Phone:	613-836-1422 x265; FAX 613-836-9731
	Company address below will appear on the final report
Street:	32 Steacie Drive
City/Province:	Ottawa, 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 #: Q77363
Job #: 61774.48
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): LJ2397655 RD

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	METALS (INCLUDING Hg, Cr6+)	INORGANICS	PHC F1-F4	VOC	SEMI-VOLATILES / ABN	PAHs	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	MW19-04	16-12-19		Groundwater		X	X	X	X		X		
	MW19-05	↓		↓		X	X	X	X		X		
	MW19-09					X	X	X	X		X		
	MW19-18					X	X	X	X	X			
	MW19-20					X	X	X	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			
1.9				5.8	6.1		

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:

INITIAL SHIPMENT RECEPTION (lab use only)

Received by:	Date:	Time:
CUSTAS FARASSOGLOU	12/17/19	11:15

FINAL SHIPMENT RECEPTION (lab use only)

Received by:	Date:	Time:
	DEC 18/19	930

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**.

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

Date Received: 07-MAY-20
Report Date: 22-MAY-20 14:57 (MT)
Version: FINAL REV. 3

Client Phone: 613-836-1422

Certificate of Analysis

Lab Work Order #: L2444534

Project P.O. #: 61774.48
Job Reference: 61774.48
C of C Numbers:
Legal Site Desc:

Comments: Report revised to include project number - E. Smith (15 May 2020)
Report revised to correct metals result; sample was field filtered, therefore dissolved metals should be reported. - E. Smith (22 May 2020)

Emily Smith
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2444534-1 MW19-9- RI Sampled By: CLIENT on 07-MAY-20 Matrix: WATER							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
Acenaphthylene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
Anthracene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
Benzo(a)anthracene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
Benzo(a)pyrene	<0.010		0.010	ug/L	11-MAY-20	12-MAY-20	R5081508
Benzo(b)fluoranthene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
Benzo(g,h,i)perylene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
Benzo(k)fluoranthene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
Chrysene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
Dibenzo(ah)anthracene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
Fluoranthene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
Fluorene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
Indeno(1,2,3-cd)pyrene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
1+2-Methylnaphthalenes	<0.028		0.028	ug/L		12-MAY-20	
1-Methylnaphthalene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
2-Methylnaphthalene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
Naphthalene	<0.050		0.050	ug/L	11-MAY-20	12-MAY-20	R5081508
Phenanthrene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
Pyrene	<0.020		0.020	ug/L	11-MAY-20	12-MAY-20	R5081508
Surrogate: d10-Acenaphthene	96.3		60-140	%	11-MAY-20	12-MAY-20	R5081508
Surrogate: d12-Chrysene	91.5		60-140	%	11-MAY-20	12-MAY-20	R5081508
Surrogate: d8-Naphthalene	95.8		60-140	%	11-MAY-20	12-MAY-20	R5081508
Surrogate: d10-Phenanthrene	98.3		60-140	%	11-MAY-20	12-MAY-20	R5081508
L2444534-2 MW19-18 RI Sampled By: CLIENT on 06-MAY-20 Matrix: WATER							
Dissolved Metals							
Dissolved Metals Filtration Location	FIELD					21-MAY-20	R5093960
Antimony (Sb)-Dissolved	0.23		0.10	ug/L	21-MAY-20	22-MAY-20	R5094021
Arsenic (As)-Dissolved	0.61		0.10	ug/L	21-MAY-20	22-MAY-20	R5094021
Barium (Ba)-Dissolved	92.0		0.10	ug/L	21-MAY-20	22-MAY-20	R5094021
Beryllium (Be)-Dissolved	<0.10		0.10	ug/L	21-MAY-20	22-MAY-20	R5094021
Boron (B)-Dissolved	61		10	ug/L	21-MAY-20	22-MAY-20	R5094021
Cadmium (Cd)-Dissolved	0.027		0.010	ug/L	21-MAY-20	22-MAY-20	R5094021
Chromium (Cr)-Dissolved	0.64		0.50	ug/L	21-MAY-20	22-MAY-20	R5094021
Cobalt (Co)-Dissolved	3.72		0.10	ug/L	21-MAY-20	22-MAY-20	R5094021
Copper (Cu)-Dissolved	2.90		0.20	ug/L	21-MAY-20	22-MAY-20	R5094021
Lead (Pb)-Dissolved	0.063		0.050	ug/L	21-MAY-20	22-MAY-20	R5094021
Molybdenum (Mo)-Dissolved	3.60		0.050	ug/L	21-MAY-20	22-MAY-20	R5094021
Nickel (Ni)-Dissolved	4.80		0.50	ug/L	21-MAY-20	22-MAY-20	R5094021
Selenium (Se)-Dissolved	0.204		0.050	ug/L	21-MAY-20	22-MAY-20	R5094021
Silver (Ag)-Dissolved	<0.050		0.050	ug/L	21-MAY-20	22-MAY-20	R5094021

* 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
L2444534-2 MW19-18 RI Sampled By: CLIENT on 06-MAY-20 Matrix: WATER							
Dissolved Metals							
Sodium (Na)-Dissolved	110000	DLHC	500	ug/L	21-MAY-20	22-MAY-20	R5094021
Thallium (Tl)-Dissolved	<0.010		0.010	ug/L	21-MAY-20	22-MAY-20	R5094021
Uranium (U)-Dissolved	2.23		0.010	ug/L	21-MAY-20	22-MAY-20	R5094021
Vanadium (V)-Dissolved	1.18		0.50	ug/L	21-MAY-20	22-MAY-20	R5094021
Zinc (Zn)-Dissolved	4.4		1.0	ug/L	21-MAY-20	22-MAY-20	R5094021

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

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L2444534-2
Matrix Spike	Boron (B)-Dissolved	MS-B	L2444534-2
Matrix Spike	Molybdenum (Mo)-Dissolved	MS-B	L2444534-2
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2444534-2
Matrix Spike	Uranium (U)-Dissolved	MS-B	L2444534-2
Matrix Spike	Zinc (Zn)-Dissolved	MS-B	L2444534-2

Qualifiers for Sample Submission Listed:

Qualifier	Description
CINT	Cooling initiated. Samples were received packed with ice or ice packs and were sampled the same day as received.

Sample Parameter Qualifier key listed:

Qualifier	Description
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
MET-D-UG/L-MS-WT	Water	Diss. Metals in Water by ICPMS (ug/L)	EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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).

MET-T-CCMS-WT	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020A (mod)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

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).

METHYLNAPS-CALC-WT	Water	PAH-Calculated Parameters	SW846 8270
PAH-511-WT	Water	PAH-O. Reg 153/04 (July 2011)	SW846 3510/8270

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using 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:

Reference Information

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid 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-D-UG/L-MS-WT	**Water**							
Batch R5094021								
WG3326577-4 DUP		**WG3326577-3**						
Antimony (Sb)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	22-MAY-20
Arsenic (As)-Dissolved		2.6	2.6		ug/L	0.1	20	22-MAY-20
Barium (Ba)-Dissolved		557	532		ug/L	4.5	20	22-MAY-20
Beryllium (Be)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	22-MAY-20
Boron (B)-Dissolved		220	240		ug/L	5.7	20	22-MAY-20
Cadmium (Cd)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	22-MAY-20
Chromium (Cr)-Dissolved		<5.0	<5.0	RPD-NA	ug/L	N/A	20	22-MAY-20
Cobalt (Co)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	22-MAY-20
Copper (Cu)-Dissolved		<2.0	<2.0	RPD-NA	ug/L	N/A	20	22-MAY-20
Lead (Pb)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	22-MAY-20
Molybdenum (Mo)-Dissolved		21.6	22.9		ug/L	5.8	20	22-MAY-20
Nickel (Ni)-Dissolved		<5.0	<5.0	RPD-NA	ug/L	N/A	20	22-MAY-20
Selenium (Se)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	22-MAY-20
Silver (Ag)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	22-MAY-20
Sodium (Na)-Dissolved		2170000	2200000		ug/L	1.6	20	22-MAY-20
Thallium (Tl)-Dissolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	22-MAY-20
Uranium (U)-Dissolved		1.19	1.22		ug/L	2.9	20	22-MAY-20
Vanadium (V)-Dissolved		<5.0	<5.0	RPD-NA	ug/L	N/A	20	22-MAY-20
Zinc (Zn)-Dissolved		25	25		ug/L	0.9	20	22-MAY-20
WG3326577-2 LCS								
Antimony (Sb)-Dissolved			98.2		%		80-120	22-MAY-20
Arsenic (As)-Dissolved			103.2		%		80-120	22-MAY-20
Barium (Ba)-Dissolved			100.9		%		80-120	22-MAY-20
Beryllium (Be)-Dissolved			97.1		%		80-120	22-MAY-20
Boron (B)-Dissolved			95.6		%		80-120	22-MAY-20
Cadmium (Cd)-Dissolved			108.7		%		80-120	22-MAY-20
Chromium (Cr)-Dissolved			100.4		%		80-120	22-MAY-20
Cobalt (Co)-Dissolved			99.5		%		80-120	22-MAY-20
Copper (Cu)-Dissolved			99.1		%		80-120	22-MAY-20
Lead (Pb)-Dissolved			100.9		%		80-120	22-MAY-20
Molybdenum (Mo)-Dissolved			98.7		%		80-120	22-MAY-20
Nickel (Ni)-Dissolved			99.2		%		80-120	22-MAY-20
Selenium (Se)-Dissolved			101.4		%		80-120	22-MAY-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
MET-D-UG/L-MS-WT	**Water**							
Batch R5094021								
WG3326577-2 LCS								
Silver (Ag)-Dissolved			100.0		%		80-120	22-MAY-20
Sodium (Na)-Dissolved			104.1		%		80-120	22-MAY-20
Thallium (Tl)-Dissolved			101.3		%		80-120	22-MAY-20
Uranium (U)-Dissolved			102.5		%		80-120	22-MAY-20
Vanadium (V)-Dissolved			102.5		%		80-120	22-MAY-20
Zinc (Zn)-Dissolved			100.8		%		80-120	22-MAY-20
WG3326577-1 MB								
Antimony (Sb)-Dissolved			<0.10		ug/L		0.1	22-MAY-20
Arsenic (As)-Dissolved			<0.10		ug/L		0.1	22-MAY-20
Barium (Ba)-Dissolved			<0.10		ug/L		0.1	22-MAY-20
Beryllium (Be)-Dissolved			<0.10		ug/L		0.1	22-MAY-20
Boron (B)-Dissolved			<10		ug/L		10	22-MAY-20
Cadmium (Cd)-Dissolved			<0.0050		ug/L		0.005	22-MAY-20
Chromium (Cr)-Dissolved			<0.50		ug/L		0.5	22-MAY-20
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	22-MAY-20
Copper (Cu)-Dissolved			<0.20		ug/L		0.2	22-MAY-20
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	22-MAY-20
Molybdenum (Mo)-Dissolved			<0.050		ug/L		0.05	22-MAY-20
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	22-MAY-20
Selenium (Se)-Dissolved			<0.050		ug/L		0.05	22-MAY-20
Silver (Ag)-Dissolved			<0.050		ug/L		0.05	22-MAY-20
Sodium (Na)-Dissolved			<50		ug/L		50	22-MAY-20
Thallium (Tl)-Dissolved			<0.010		ug/L		0.01	22-MAY-20
Uranium (U)-Dissolved			<0.010		ug/L		0.01	22-MAY-20
Vanadium (V)-Dissolved			<0.50		ug/L		0.5	22-MAY-20
Zinc (Zn)-Dissolved			<1.0		ug/L		1	22-MAY-20
WG3326577-5 MS		**WG3326577-3**						
Antimony (Sb)-Dissolved			95.1		%		70-130	22-MAY-20
Arsenic (As)-Dissolved			91.8		%		70-130	22-MAY-20
Barium (Ba)-Dissolved			N/A	MS-B	%		-	22-MAY-20
Beryllium (Be)-Dissolved			96.7		%		70-130	22-MAY-20
Boron (B)-Dissolved			N/A	MS-B	%		-	22-MAY-20
Cadmium (Cd)-Dissolved			98.7		%		70-130	22-MAY-20
Chromium (Cr)-Dissolved			92.1		%		70-130	22-MAY-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
MET-D-UG/L-MS-WT	**Water**							
Batch R5094021								
WG3326577-5 MS		**WG3326577-3**						
Cobalt (Co)-Dissolved			85.5		%		70-130	22-MAY-20
Copper (Cu)-Dissolved			83.9		%		70-130	22-MAY-20
Lead (Pb)-Dissolved			89.3		%		70-130	22-MAY-20
Molybdenum (Mo)-Dissolved			N/A	MS-B	%		-	22-MAY-20
Nickel (Ni)-Dissolved			76.7		%		70-130	22-MAY-20
Selenium (Se)-Dissolved			93.0		%		70-130	22-MAY-20
Silver (Ag)-Dissolved			90.5		%		70-130	22-MAY-20
Sodium (Na)-Dissolved			N/A	MS-B	%		-	22-MAY-20
Thallium (Tl)-Dissolved			87.4		%		70-130	22-MAY-20
Uranium (U)-Dissolved			N/A	MS-B	%		-	22-MAY-20
Vanadium (V)-Dissolved			89.7		%		70-130	22-MAY-20
Zinc (Zn)-Dissolved			N/A	MS-B	%		-	22-MAY-20
PAH-511-WT	**Water**							
Batch R5081508								
WG3320830-2 LCS								
1-Methylnaphthalene			91.6		%		50-140	12-MAY-20
2-Methylnaphthalene			90.3		%		50-140	12-MAY-20
Acenaphthene			98.7		%		50-140	12-MAY-20
Acenaphthylene			102.6		%		50-140	12-MAY-20
Anthracene			103.2		%		50-140	12-MAY-20
Benzo(a)anthracene			111.4		%		50-140	12-MAY-20
Benzo(a)pyrene			91.5		%		50-140	12-MAY-20
Benzo(b)fluoranthene			89.1		%		50-140	12-MAY-20
Benzo(g,h,i)perylene			100.7		%		50-140	12-MAY-20
Benzo(k)fluoranthene			94.2		%		50-140	12-MAY-20
Chrysene			97.8		%		50-140	12-MAY-20
Dibenzo(ah)anthracene			98.7		%		50-140	12-MAY-20
Fluoranthene			100.8		%		50-140	12-MAY-20
Fluorene			102.9		%		50-140	12-MAY-20
Indeno(1,2,3-cd)pyrene			120.9		%		50-140	12-MAY-20
Naphthalene			95.6		%		50-140	12-MAY-20
Phenanthrene			106.5		%		50-140	12-MAY-20
Pyrene			100.9		%		50-140	12-MAY-20
WG3320830-1 MB								

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	**Water**							
Batch R5081508								
WG3320830-1 MB								
1-Methylnaphthalene			<0.020		ug/L		0.02	12-MAY-20
2-Methylnaphthalene			<0.020		ug/L		0.02	12-MAY-20
Acenaphthene			<0.020		ug/L		0.02	12-MAY-20
Acenaphthylene			<0.020		ug/L		0.02	12-MAY-20
Anthracene			<0.020		ug/L		0.02	12-MAY-20
Benzo(a)anthracene			<0.020		ug/L		0.02	12-MAY-20
Benzo(a)pyrene			<0.010		ug/L		0.01	12-MAY-20
Benzo(b)fluoranthene			<0.020		ug/L		0.02	12-MAY-20
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	12-MAY-20
Benzo(k)fluoranthene			<0.020		ug/L		0.02	12-MAY-20
Chrysene			<0.020		ug/L		0.02	12-MAY-20
Dibenzo(ah)anthracene			<0.020		ug/L		0.02	12-MAY-20
Fluoranthene			<0.020		ug/L		0.02	12-MAY-20
Fluorene			<0.020		ug/L		0.02	12-MAY-20
Indeno(1,2,3-cd)pyrene			<0.020		ug/L		0.02	12-MAY-20
Naphthalene			<0.050		ug/L		0.05	12-MAY-20
Phenanthrene			<0.020		ug/L		0.02	12-MAY-20
Pyrene			<0.020		ug/L		0.02	12-MAY-20
Surrogate: d8-Naphthalene			98.5		%		60-140	12-MAY-20
Surrogate: d10-Phenanthrene			105.3		%		60-140	12-MAY-20
Surrogate: d12-Chrysene			96.8		%		60-140	12-MAY-20
Surrogate: d10-Acenaphthene			99.5		%		60-140	12-MAY-20

Quality Control Report

Workorder: L2444534 Report Date: 22-MAY-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
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

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

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

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

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

Chain of Custody (COC) / Analytical Request Form

ALS www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2444534-COFC

COC Number: 17 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Gemtec Consulting Engineers and Scientists Ltd
Contact:	Nicole Soucy
Phone:	613-836-1422 x265; FAX 613-836-9731
	Company address below will appear on the final report
Street:	32 Steacie Drive
City/Province:	Ottawa, 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

Contact your AM to confirm all E&P TATs (surcharges may apply)

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

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

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

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

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

Project Information

ALS Account # / Quote #:

Job #:

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): L2444534

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	PAH	METALS	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	MW19-9 R1	06-05-20		Groundwater		X			
	MW19-18 R1	06-05-20		"			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: 13.8

FINAL COOLER TEMPERATURES °C: 4.4

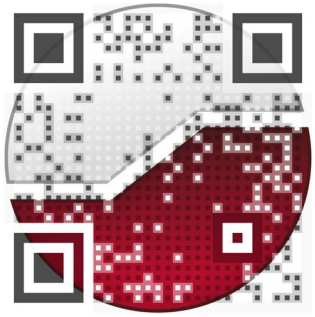
SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: N Soucy	Date: May 7/20	Time:	Received by: Gustas Farassglu	Date: 5/7/20	Time: 10:30	Received by:	Date: 5/8/20	Time: 9am

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

expérience • connaissance • intégrité