2455 Dugald Road
Winnipeg, Manitoba

Phase II Environmental Site Assessment

Provided To:
Armtec Inc.
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EXECUTIVE SUMMARY

HLC Consulting Ltd. (HLC) was retained on October 1, 2020 by Armtec Inc. ("Client") to conduct a Phase II Environmental Site Assessment (ESA) of the property located at 2455 Dugald Road located in Winnipeg, Manitoba (the "Site").

The purpose of this Phase II ESA was to address the following areas of potential environmental concern (APECs), as identified in a Phase I ESA conducted at the Site by HLC in September 2020:

- APEC 1: The location where the spot welder sump is discharged onto the ground surface and report that the sump would occasionally leak into the ground surrounding the sump.
- APEC 2: Various areas of staining on the ground throughout the production area of the Building.
- APEC 3: The leaking hoses noted at the hydraulic oil tank located in the shed west of the factory building.
- APEC 4: The historical environmental concerns identified in two previous Phase I ESA reports in 1999 and 2015, including the barrel storage area.

We further understand that the Client has requested this Phase II ESA to assess potential issues of environmental concern for the purpose of listing the property for sale.

The Phase II ESA was completed in accordance with the Canadian Standard Association (CSA) document entitled "*Phase II Environmental Site Assessment, CSA Standard Z769-00*" dated 2000 and reaffirmed in 2013. The Phase II ESA included a review of the advancement of four (4) test holes, installation of four (4) groundwater monitoring wells, and a soil and groundwater sampling program.

Soil and groundwater samples were collected for laboratory analysis of volatile organic compounds (VOCs); benzene, toluene, ethylbenzene, xylenes (BTEX); petroleum hydrocarbons (PHC F1 to F4); polycyclic aromatic hydrocarbons (PAHs); and metals. VOCs, BTEX, PHC F1 to F4, PAHs, and metals analysis was used to detect subsurface contamination related to the APECs identified in the September 2020 Phase I ESA conducted by HLC.

Soil Analytical Results

The soil results were compared to the values outlined in the most recent Canadian Council of the Ministers of the Environment (CCME) publications for industrial land use on fine-grained soils and the Ontario Ministry of Environment Conservation and Parks (MOECP) publications for industrial land use in a non-potable groundwater condition.

Soil samples submitted to the laboratory were analyzed for VOCs, BTEX, PHC F1 to F4, PAHs and/or metals. Soil laboratory analytical results are not indicative of environmental concerns on-site.

Groundwater Analytical Results

The groundwater results were compared to the values published by MOECP in a non-potable groundwater condition.

Groundwater samples submitted to the laboratory were analyzed for VOCs, BTEX, PHC F1 to F4, PAHs and/or metals. Groundwater laboratory analytical results are not indicative of environmental concerns on-site.

Based on the results of this Phase II ESA, HLC recommends the following:

- Upon receipt of a closure letter from Manitoba Conservation and Climate (MCC), that the monitoring wells be decommissioned and removed; in order to minimize the risk of contamination to the soil and groundwater from surface runoff.

As per *The Contaminated Sites Remediation Act*, these findings shall be reported to the Contaminated/Impacted Site Program of MCC.

TABLE OF CONTENTS

HLC CONSULTING LTD.

APPENDICES

1 INTRODUCTION

1.1 PROJECT BACKGROUND

HLC Consulting Ltd. (HLC) was retained on October 1, 2020 by Armtec Inc. ("Client") to conduct a Phase II Environmental Site Assessment (ESA) of the property located at 2455 Dugald Road located in Winnipeg, Manitoba (the "Site"). See Figure 1 in Appendix I for a depiction of the Site's location.

The Site consists of a single-storey (with partial mezzanines), light-industrial building (the "Building"). The remainder of the Site is complete with an asphalt/concrete surfaced parking area on the west, south, and east sides of the Building, a large gravel-surfaced multi-use area throughout the majority of the Site, and small amounts of soft landscaping (grass, trees, shrubs) in various places among the property. The eastern portion of the Site is undeveloped. At the time of this Phase II ESA, the Building was unoccupied.

The purpose of this Phase II ESA was to address the following areas of potential environmental concern (APECs), as identified in a Phase I ESA conducted at the Site by HLC in September 2020:

- APEC 1: The location where the spot welder sump is discharged onto the ground surface and report that the sump would occasionally leak into the ground surrounding the sump.
- APEC 2: Various areas of staining on the ground throughout the production area of the Building.
- APEC 3: The leaking hoses noted at the hydraulic oil tank located in the shed west of the factory building.
- APEC 4: The historical environmental concerns identified in two previous Phase I ESA reports in 1999 and 2015, including the barrel storage area.

The locations of these APECs are depicted on Figure 2 located in Appendix I.

Based on the findings from the Phase I ESA noted above, HLC recommended completion of this Phase II ESA to address the possible presence of subsurface contaminants.

We further understand that the Client has requested this Phase II ESA to assess potential issues of environmental concern for the purpose of listing the property for sale.

1.2 SCOPE OF WORK

The Phase II ESA was completed in accordance with the Canadian Standard Association (CSA) document entitled "*Phase II Environmental Site Assessment, CSA Standard Z769-00*" dated 2000 and reaffirmed in 2013. The original scope of work for the project included the following:

- Borehole drilling (up to 4 boreholes) to 6.0 metres below ground surface (mbgs), refusal with a solid-stem auger, or groundwater.
- Soil sampling program for benzene, toluene, ethylbenzene, xylenes (BTEX); petroleum hydrocarbons (PHC F1-F4); volatile organic compounds (VOCs); polycyclic aromatic hydrocarbons (PAHs); and metals.
- Field testing of the soil samples for volatile vapours and the collection of duplicate soil samples for laboratory testing, as required.
- Laboratory soil analysis for parameters described above.
- Installation of up to four (4) groundwater monitoring wells to allow collection of groundwater samples.
- Laboratory water testing for BTEX, PHC F1-F4, VOCs, PAHs, and metals.
- Collection of duplicate water samples and trip blanks for laboratory testing, as required.
- An evaluation of the analytical results by comparison to the applicable regulatory criteria.
- A report outlining the work conducted, findings and recommendations.

1.2.1 *Deviations from Scope of Work*

The following deviations from the original scope of work occurred over the course of the Phase II ESA:

- No groundwater was available for sampling from MW02. Therefore, laboratory analysis of groundwater samples from this monitoring well did not occur.

2 SITE DESCRIPTION

As indicated on Figure 1 in Appendix I, the Site is located at 2455 Dugald Road, north of the intersection between Dugald Road and Bates Avenue, in Winnipeg, Manitoba. The Site is situated in an urban area that is predominantly developed with commercial and light-industrial land uses.

2.1 TOPOGRAPHIC, GEOLOGIC AND HYDROGEOLOGICAL SETTING

Topic	Findings
Topography of Site and Surrounding Area	The topography of the Site is generally flat and similar to that of the surrounding area.
Site Grade Relative to the Adjoining Properties	Adjacent buildings and roadways are at similar grade to the Site.
Subsurface Soils	Based on the 2020 Phase II ESA conducted by HLC, the general soil stratigraphy at the Site consists of a layer sandy gravel fill from approximately 0 to 0.457 mbgs, underlain by silty clay to approximately 2.134 mbgs, underlain by silt to approximately

Topic	Findings
	2.591 mbgs, underlain by clay to 6.10 mbgs. Detailed soil stratigraphy may be found in the borehole logs (Appendix II).
Fill Materials	A layer of sandy gravel fill to approximately 0.457 mbgs, was noted in the gravel surfaced compound on the west portion of the Site. A layer of sandy gravel fill from approximately 0.152 to 0.457 mbgs, was noted under the concrete surfaced area west of the building.
Bedrock Type	Palaeozoic formations consisting of dolomite and dolomitic limestone.
Inferred Bedrock Depth	Approximately 15 to 25 mbgs.
Groundwater Depth	Based on the 2020 Phase II ESA conducted by HLC, groundwater was encountered between 1.772 to 5.745 mbgs. Groundwater was not encounter in MW02. A groundwater elevation survey was not performed as part of this investigation.
Nearest Open Water Body	Red River Floodway to the east of the Site (approx. 4.3 km).
Inferred Groundwater Flow Direction	Groundwater flow would likely be to the west, towards the Red River.

3 METHODOLOGY

3.1 BOREHOLE DRILLING

On October 15, 2020, HLC supervised the drilling of a total of four boreholes at the Site, following the clearance of underground services in the vicinity of the work area by public utility locators and a private utility locator retained by HLC. Figure 3 in Appendix I depicts borehole (monitoring well) locations. Effort was made to place the boreholes (monitoring wells) to address the APECs identified in HLC's Phase I ESA report (September 2020). In accordance with the findings provided in HLC's Phase I ESA report (September 2020), MW01 and MW02 were placed west (downgradient) of the building to address APECs 1 and 2, MW03 was placed near the shed to address APEC 3, and MW04 was located in the suspected barrel storage area to address APEC 4. The boreholes were drilled to a depth of 6.10 mbgs, using a truck-mounted drill rig (ACKER MP8) equipped with a 152-mm diameter solid stem continuous flight auger, owned and operated by Paddock Drilling Ltd.

HLC logged subsurface soil conditions at the time of drilling (Appendix II). Soil samples were examined for olfactory and visual evidence of impacts.

3.2 SOIL SAMPLING PROGRAM

Soil samples were collected from the boreholes at 0.76 m regular depths intervals and at stratigraphic changes. Soil samples were visually classified using the United Soil Classification System (USCS). All the soil samples collected were subjected to field screening (an Ambient

Temperature Headspace (ATH) vapour test) using a RAE Systems MiniRAE 3000 photoionization detector (PID) calibrated to isobutylene (Appendix II). The procedures used for ATH vapour testing were as follows:

- Collect a soil sample from the auger flights and remove perimeter edges. Cut the samples into small pieces and place them into a plastic sealable bag.
- Induce air into the bag such that the bag is taught and seal the bag.
- Allow the vapours emanating from the soil to accumulate in the headspace of the bag at an ambient temperature for approximately 15 minutes.
- Measure the vapour concentration in the headspace of the bag by placing the PID probe into the bag.

Soil samples from selected sampling intervals (mostly intervals with high ATH values from the fielding screening result) were submitted for laboratory analysis of VOCs, BTEX, PHC F1 to F4, PAHs, and metals.

The soil samples for the laboratory analysis of VOCs, BTEX, and PHC F1 were collected based on the Terra Core® Soil Sampling Instructions, recommended by the Environmental Protection Agency (EPA) method 5035A for the collection of soil and sediment samples requiring analysis for volatile organic compounds (VOCs). This method utilizes pre-weighted, pre-preserved 40 mL vials. The analytical method requires a 2:1 methanol: soil extraction ratio. Sample collection was as follows:

- With the plunger of the Terra Core® seated in the handle, the Terra Core® plunger was pushed into the representative soil sample. The Terra Core® is designed to deliver approximately 5 g of soil.
- The plunger was rotated 90 degrees and was placed at the mouth of the sampler into the 40 mL glass vial. The plunger was pushed down to release the soil plug and remove the sample. This process was repeated with a second vial for the same sampling set.

Soil samples for PHC fractions F2 to F4, PAHs, and metals were collected by placing selected soil samples into clean laboratory supplied glass jars immediately after vapour screening was complete. Jars were packed to the top with soil, leaving zero headspace. A new dedicated pair of nitrile gloves was worn for every sample. The samples were then stored in a cooler chest with ice packs until delivered to the laboratory. Upon completion of the field work, the soil samples were transported to ALS Laboratory Group (ALS) in Winnipeg, Manitoba for analytical testing. The laboratory certificates of analysis are included as Appendix V.

3.3 Monitoring Well Installation

Figure 3 in Appendix I depicts monitoring well locations. Monitoring wells were installed in all four boreholes to allow collection and laboratory analysis of groundwater samples. Monitoring wells

were constructed of 5.1 cm diameter Schedule 40 polyvinyl chloride (PVC) risers, followed by a length of 5.1 cm diameter No. 10 slot PVC well screen that was installed in order to intersect the suspected static groundwater level.

Each monitoring well was sealed at the top and bottom, using threaded PVC caps. Silica sand was installed around and above the well screen in order to act as a filter pack. Bentonite was installed from above the silica sand layer to the ground surface. Monitoring wells were protected with metal flush-mount covers installed at ground surface and cemented in place.

3.4 Groundwater Monitoring And Sampling Program

On October 19 and 20, 2020, HLC returned to the Site to measure the well headspace concentrations using a PID calibrated to isobutylene, to measure the depth to groundwater and to collect water samples for laboratory analysis from the four monitoring wells. An assessment for the presence/absence of non-aqueous phase liquids (NAPLs) was also performed using an interface probe.

Neither water nor NAPLs were found to be present in MW02. Therefore, laboratory analysis of groundwater samples was not performed for MW02.

Prior to sampling, the remaining monitoring wells were developed by purging one to three well casing volumes or until the well was purged dry. After sufficient recovery, groundwater samples were collected and placed in laboratory supplied vials and bottles provided by ALS for analytical testing of VOCs, BTEX PHC F1-F4, PAHs, and metals.

3.5 Analytical Laboratory

Soil and groundwater sampled as part of this Phase II ESA was delivered to ALS in Winnipeg, Manitoba. ALS is accredited by the Canadian Association for Laboratory Accreditation (CALA). Chain of custody records were completed for all sample submissions.

3.6 QA/QC Protocols

The following quality assurance/quality control (QA/QC) protocols were followed to ensure that representative samples were submitted for analysis and representative data is reported in this Phase II ESA:

- Soil samples that were in direct contact with either the drilling equipment or the edge of the borehole were omitted from sample submission;
- All samples were submitted in laboratory-supplied containers;

- The monitoring wells were developed by purging any stagnant water prior to sample collection; ensuring representative samples were obtained;
- All samples were placed in a cooler with ice packs immediately upon collection. Appropriate temperatures were maintained for all samples prior to sample submission;
- Nitrile gloves were used during sample handling. Nitrile gloves were changed between the handling of samples to minimize cross-contamination;
- Equipment used for sampling was cleaned prior to the initial sampling event and between every subsequent event to minimize cross-contamination; and,
- Blind field duplicate samples were submitted for laboratory analysis in order to calculate relative percent difference (RPD), an indicator of variation within samples obtained from the same sampling location.

3.7 APPLICABLE REGULATORY CRITERIA

Manitoba Conservation and Climate (MCC) has adopted the guidelines published by the Canadian Council of Ministers of the Environment (CCME) for assessment of sites in Manitoba. For the assessment of potable water quality, MCC requires the use of guidelines published by Health Canada. When the aforementioned guidelines do not provide adequate information or guidance for assessment, MCC allows for the use of the published guidance documents from other jurisdictions; specifically, the provinces of Ontario and Alberta.

The following regulatory guidelines were found to be applicable to assess soil quality at the Site:

- Canadian Council of Ministers of the Environment (CCME). *Canadian Environmental Quality Guidelines.* Accessed online November 2020.
    - Soil Quality Guidelines for the Protection of Environment and Human Health. Industrial Land Use.
    - Soil Quality Guidelines for the Protection of Human Health. Industrial Land Use, 10^{-5} Incremental Risk, Fine grained surface soil (< 1.5m), Inhalation of indoor air check (Slab on-grade).
    - Soil Quality Guidelines for the Protection of Human Health. Industrial Land Use, 10^{-5} Incremental Risk, Fine grained subsoil (> 1.5m), Inhalation of indoor air check (Slab on-grade).
    - Soil Quality Guidelines for the Protection of Environmental Health. Industrial Land Use, Fine grained surface soil (< 1.5m), Soil Contact Guideline.
    - Soil Quality Guidelines for the Protection of Environmental Health. Industrial Land Use, Fine grained subsoil (> 1.5m), Soil Contact Guideline.
    - Soil Quality Guidelines for the Protection of Environmental Health. Polycyclic Aromatic Hydrocarbons. Industrial Land Use. Soil contact guideline.

    - Soil Quality Guidelines for the Protection of Environmental Health. Polycyclic Aromatic Hydrocarbons. Industrial Land Use. Provisional Soil Quality Guideline (1997).
    - Soil Quality Guidelines for the Protection of Environmental Health. Polycyclic Aromatic Hydrocarbons. Industrial Land Use. Interim Soil Quality Criteria (1991).
    - Soil Quality Guidelines for the Protection of Human Health. Polycyclic Aromatic Hydrocarbons. Industrial Land Use, Calculated 10^{-5} Incremental Risk.
- Canadian Council of Ministers of the Environment (CCME), 2008. *Canada-Wide Standards for Petroleum Hydrocarbons (PHC) in Soil - Technical Supplement.* Accessed online November 2020.
    - Tier 1 Levels (Table 2). Industrial Land Use, Fine grained surface soil, Eco Soil Contact.
    - Tier 1 Levels (Table 4). Industrial Land Use, Fine grained subsoil, Management Limit.
- Ontario Ministry of Environment Conservation and Parks (MOECP), 2011. *Soil, groundwater and sediment standards for use under Part XV.1 of the Environmental Protection Act.* Accessed online November 2020.
    - Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition. Industrial Land Use.
    - Table 5: Stratified Site Condition Standards in a Non-Potable Ground Water Condition. Fine Textured Surface Soil. Industrial Land Use.
    - Table 5: Stratified Site Condition Standards in a Non-Potable Ground Water Condition. Fine Textured Subsurface Soil. Industrial Land Use.

The following regulatory guidelines were found to be applicable to assess groundwater quality at the Site:

- Ontario Ministry of the Environment, Conservation and Parks (MOECP), 2011. *Soil, Ground Water and Sediment Standards for use under Part XV.1 of the Environmental Protection Act*. Accessed online November 2020.
    - Table 3 – Non-Potable Ground Water Conditions. All Types of Land Use.

Site specific details utilized in the evaluation of applicable exposure pathways are noted below:

- The Site is considered light-industrial in nature. Properties directly adjacent are considered industrial in nature. An institutional property is located south (transgradient) of the Site and separated by a roadway. It is HLC's opinion that the subsurface of this adjacent institutional property is unlikely to be influenced by the Site, as it is transgradient from the Site with respect to the inferred direction of groundwater flow. Therefore, industrial land use guidelines are applicable to the Site;
- Potable water for the Site and surrounding area is sourced from Shoal Lake with service provided by the City of Winnipeg. The groundwater in the subject area is considered non-potable;

- Groundwater in the subject area is not used to water livestock. Therefore, the livestock water exposure pathway is not applicable to the Site;
- The nearest surface water body is located approximately 4.3 km from the Site. Therefore, the freshwater aquatic life exposure pathway is not applicable to the Site;
- The Site is underlain by prominently fine-grained (clay and silt) native soils. Therefore, fine-grained guidelines are applicable to the Site;
- The boreholes were located adjacent to building foundations. Therefore, the human health vapour inhalation exposure pathway is applicable to the Site;
- The boreholes were located in an area where access to the soil is unlikely, due to concrete/asphalt paving of various areas of the Site. However, the entire Site was not concrete/asphalt paved, therefore, the environmental health soil contact and human health dermal contact exposure pathways are applicable to the Site; and
- The off-site migration check, management limit, and nutrient and energy cycling check are also applicable to the Site.

4 RESULTS

4.1 SOIL STRATIGRAPHY

All boreholes were logged in detail (Appendix II). No odours were noted during the drilling program. No staining was noted during the drilling program. The general stratigraphy of each borehole is noted below:

- MW01 consisted of a 0.152 m thick layer of CONCRETE, underlain by SANDY GRAVEL FILL (to 0.457 mbgs), underlain by SILTY CLAY (to 1.524 mbgs), underlain by CLAY (to 6.10 mbgs).
- MW02 consisted of a 0.152 m thick layer of CONCRETE, underlain by SANDY GRAVEL FILL (to 0.457 mbgs), underlain by SILTY CLAY (to 0.762 mbgs), underlain by SILT (to 1.067 mbgs) underlain by CLAY (to 6.10 mbgs).
- MW03 consisted of a 0.152 m thick layer of CONCRETE, underlain by SANDY GRAVEL FILL (to 0.457 mbgs), underlain by SILTY CLAY (to 1.524 mbgs), underlain by CLAY (to 2.134 mbgs), underlain by SILT (to 2.591 mbgs) underlain by CLAY (to 6.10 mbgs).
- MW04 consisted of a 0.457 m thick layer of SANDY GRAVEL FILL, underlain by SILTY CLAY (to 2.134 mbgs), underlain by SILT (to 2.439 mbgs) underlain by CLAY (to 6.10 mbgs).

4.2 ATH VAPOURS

The ATH vapour readings are shown on the borehole logs (Appendix II). The soil sample ATH vapour values on-site ranged from 0.1 to 1.5 parts per million (ppm), with maximum readings shown below.

	MW01	MW02	MW03	MW04
Maximum ATH reading (ppm)	1.5	0.9	1.0	0.9
Depth maximum noted (mbgs)	1.524 to 2.286	0.762 to 1.067	0.914 to 1.524	2.134 to 2.438

4.3 Monitoring Well Measurements

On October 19 and 20, 2020, HLC returned to the Site to measure the well headspace concentrations using a PID calibrated to isobutylene, to measure the depth to groundwater and to collect water samples for laboratory analysis from the four monitoring wells. An assessment for the presence/absence of NAPLs was also performed using an interface probe.

No NAPLs were found to be present in MW01, MW03, or MW04. Neither water nor NAPLs were found to be present in MW02. Field monitoring well measurements are noted below.

	MW01	MW02	MW03	MW04
Well Headspace (ppm)	1.0	0.5	2.3	0.2
Groundwater Recovery Level (mbgs)	5.745	Dry	1.772	4.062
NAPLs Present	No	No	No	No

4.4 Analytical Soil Results

Analytical results received from ALS were tabulated and compared to their respective applicable regulatory guidelines. The tables referenced below are found in Appendix III. Laboratory Certificates of Analysis are found in Appendix V.

4.4.1 VOCs

As indicated in Table 1, soil samples collected from MW01, MW02, MW03, and MW04 were submitted and analyzed for VOCs.

All soil samples submitted from these boreholes had concentrations of VOCs that either satisfied their respective guidelines or were non-detectable; with the exception of:

- MW01-SS04 (1.524 to 2.286 mbgs) had possible exceedances of acetone measured at <0.50 mg/kg; bromoform measured at <0.050 mg/kg; bromomethane measured at <0.050 mg/kg; chlorobenzene measured at <0.050 mg/kg; chloroform measured at

<0.050 mg/kg; dichlorodifluoromethane measured at <0.050 mg/kg; hexachlorobutadiene measured at <0.050 mg/kg; MEK measured at <0.50 mg/kg; MIBK measured at <0.50 mg/kg; MTBE measured at <0.20 mg/kg; 1,1,1,2-Tetrachloroethane measured at <0.50 mg/kg; 1,1,2,2-Tetrachloroethane measured at <0.50 mg/kg; and vinyl chloride measured at <0.050 mg/kg.

- MW02-SS03 (0.762 to 1.067 mbgs) had possible exceedances of acetone measured at <0.50 mg/kg; bromodichloromethane measured at <0.050 mg/kg; bromoform measured at <0.050 mg/kg; bromomethane measured at <0.050 mg/kg; chlorobenzene measured at <0.050 mg/kg; dibromochloromethane measured at <0.050 mg/kg; chloroform measured at <0.050 mg/kg; dichlorodifluoromethane measured at <0.050 mg/kg; hexachlorobutadiene measured at <0.050 mg/kg; MEK measured at <0.50 mg/kg; MIBK measured at <0.50 mg/kg; MTBE measured at <0.20 mg/kg; 1,1,1,2-Tetrachloroethane measured at <0.50 mg/kg; 1,1,2,2-Tetrachloroethane measured at <0.50 mg/kg; and vinyl chloride measured at <0.050 mg/kg.
- MW03-SS03 (0.914 to 1.524 mbgs) had possible exceedances of acetone measured at <0.50 mg/kg; bromodichloromethane measured at <0.050 mg/kg; bromoform measured at <0.050 mg/kg; bromomethane measured at <0.050 mg/kg; chlorobenzene measured at <0.050 mg/kg; dibromochloromethane measured at <0.050 mg/kg; chloroform measured at <0.050 mg/kg; dichlorodifluoromethane measured at <0.050 mg/kg; hexachlorobutadiene measured at <0.050 mg/kg; MEK measured at <0.50 mg/kg; MIBK measured at <0.50 mg/kg; MTBE measured at <0.20 mg/kg; 1,1,1,2-Tetrachloroethane measured at <0.50 mg/kg; 1,1,2,2-Tetrachloroethane measured at <0.50 mg/kg; and vinyl chloride measured at <0.050 mg/kg.
- MW04-SS05 (2.134 to 2.439) had possible exceedances of acetone measured at <0.50 mg/kg; bromoform measured at <0.050 mg/kg; bromomethane measured at <0.050 mg/kg; chlorobenzene measured at <0.050 mg/kg; chloroform measured at <0.050 mg/kg; dichlorodifluoromethane measured at <0.050 mg/kg; hexachlorobutadiene measured at <0.050 mg/kg; MEK measured at <0.50 mg/kg; MIBK measured at <0.50 mg/kg; MTBE measured at <0.20 mg/kg; 1,1,1,2-Tetrachloroethane measured at <0.50 mg/kg; 1,1,2,2-Tetrachloroethane measured at <0.50 mg/kg; and vinyl chloride measured at <0.050 mg/kg.

Figure 4 in Appendix I depicts the possible exceedances observed in MW01, MW02, MW03, and MW04.

Due to laboratory detection limits, the lower detection limits of the above samples are greater than the applicable guidelines. Therefore, samples obtained from MW01, MW02, MW03, and MW04 are possibly in exceedance of the respective guidelines. However, it is HLC's opinion that as there are no groundwater exceedances present for VOCs (section 4.5.1 of this report) that it is unlikely that the aforementioned soil parameters are of concern to the Site.

RPD was not calculated for VOCs as results were not greater than five times the lower detection limit.

4.4.2 BTEX & PHC Fractions F1 to F4

As indicated in Table 2, soil samples collected from MW01, MW02, MW03, and MW04 were submitted and analyzed for BTEX and PHC F1 to F4.

All soil samples submitted from these boreholes had concentrations of BTEX and/or PHC F1 to F4 that were non-detectable.

RPD was not calculated for BTEX and PHC F1 to F4 as results were not greater than five times the lower detection limit.

4.4.3 PAHs

As indicated in Table 3, soil samples collected from MW01, MW02, MW03, and MW04 were submitted and analyzed for PAHs.

All soil samples submitted from these boreholes had concentrations of PAHs that were non-detectable.

However, due to laboratory detection limits, the lower detection limits of the following samples are greater than the applicable guidelines:

- MW02-SS03 (0.762 to 1.067 mbgs) had possible exceedances of benzo(g,h,i)perylene measured at <0.010 mg/kg and chrysene measured at <0.010 mg/kg.
- MW03-SS03 (0.914 to 1.524 mbgs) had possible exceedances of benzo(g,h,i)perylene measured at <0.010 mg/kg and chrysene measured at <0.010 mg/kg.

Figure 4 in Appendix I depicts the possible exceedances observed in MW02 and MW03.

It is HLC's opinion that as there are no groundwater exceedances present for PAHs (section 4.5.3 of this report) that it is unlikely that the aforementioned soil parameters are of concern to the Site.

RPD was not calculated for PAHs as results were not greater than five times the lower detection limit.

4.4.4 Metals

As indicated in Table 4, soil samples collected from MW01, MW02, MW03, and MW04 were submitted and analyzed for metals.

All soil samples submitted from these boreholes had concentrations of metals that either satisfied their respective guidelines or were non-detectable; with the exception of:

- MW01-SS04 (1.524 to 2.286 mbgs) had exceedances of boron measured at 13.8 mg/kg.
- MW02-SS03 (0.762 to 1.067 mbgs) had exceedances of boron measured at 16.2 mg/kg and possible exceedances of selenium measured at <0.20 mg/kg.
- MW03-SS03 (0.914 to 1.524 mbgs) had exceedances of boron measured at 18.7 mg/kg and possible exceedances of selenium measured at <0.20 mg/kg.
- MW04-SS05 (2.134 to 2.439 mbgs) had exceedances of boron measured at 15.1 mg/kg.

Figure 4 in Appendix I depicts the exceedances observed in MW01, MW02, MW03, and MW04.

It is important to note that the limits used by the MOECP may not accurately reflect the natural concentration of metals found in Manitoba soils. Given that the concentration of boron detected in all three samples were somewhat similar, it is suggestive that these levels are likely naturally occurring.

It is HLC's opinion that as there are no groundwater exceedances present for selenium (section 4.5.4 of this report) that it is unlikely that the aforementioned soil parameters are of concern to the Site.

RPD for metals was calculated between 0.0 and 24.64%, within the CCME RPD acceptance limits (30%); with the exception of three metal parameters with RPD values between 33.30 and 36.07%. It is HLC's opinion that these values are a function of the spatial heterogeneity of soils, rather than indicative of an underlying issue related to either sampling error or sample quality, and that laboratory analysis values are accurate. Therefore, it is HLC's opinion that the sample and duplicate obtained from MW02 meet the quality objectives of this investigation.

4.5 ANALYTICAL GROUNDWATER RESULTS

Analytical results received from ALS were tabulated and compared to their respective applicable regulatory guidelines. The tables referenced below are found in Appendix III. Laboratory Certificates of Analysis are found in Appendix V.

4.5.1 VOCs

As indicated in Table 5, groundwater samples collected from MW01, MW03, and MW04 were submitted and analyzed for VOCs.

All groundwater samples submitted from these monitoring wells had concentrations of VOCs that were non-detectable.

RPD was not calculated for VOCs as results were not greater than five times the lower detection limit.

4.5.2 BTEX & PHC Fractions F1 to F4

As indicated in Table 6, groundwater samples collected from MW01, MW03, and MW04 were submitted and analyzed for BTEX and PHC F1 to F4.

All groundwater samples submitted from these monitoring wells had concentrations of BTEX and/or PHC F1 to F4 that were non-detectable.

RPD was not calculated for BTEX and PHCs as results were not greater than five times the lower detection limit.

4.5.3 PAHs

As indicated in Table 7, groundwater samples collected from MW01, MW03, and MW04 were submitted and analyzed for PAHs.

All groundwater samples submitted from these monitoring wells had concentrations of PAHs that either satisfied their respective guidelines or were non-detectable.

RPD was not calculated for PAHs as results were not greater than five times the lower detection limit.

4.5.4 Metals

As indicated in Table 8, groundwater samples collected from MW01, MW03, and MW04 were submitted and analyzed for metals.

All groundwater samples submitted from these monitoring wells had concentrations of metals that either satisfied their respective guidelines or were non-detectable; with the exception of:

- MW04 had exceedances of lead measured at 0.0274 mg/L.

Figure 5 in Appendix I depicts the exceedances observed in MW04.

During the course of the groundwater sampling event, HLC noted that the sample collected from MW04 was slightly turbid, indicating that this sample contains sediment. Based on these findings and observations, it is HLC's opinion that the measured concentration of lead in the groundwater samples collected from MW04 is biased by sediment content and cannot be considered to accurately represent dissolved phase concentrations. It is HLC's opinion that concentrations of lead in the groundwater at MW04 will dilute over time and is unlikely to represent an area of concern at the Site.

RPD for metals was calculated between 0.0 and 12.40%, within the CCME RPD acceptance limits (20%); with the exception of tungsten whose RPD was calculated at 70.97%. It is HLC's opinion that this RPD exceedance is due to the levels being near the limit of reporting of 0.0001 mg/L, rather than indicative of an underlying issue related to either sampling error or sample quality, and that laboratory analysis values are accurate. Therefore, it is HLC's opinion that the sample and duplicate obtained from MW03 meet the quality objectives of this investigation.

5 CONCLUSIONS AND RECOMMENDATIONS

The following APECs were assessed in this Phase II ESA:

- APEC 1: The location where the spot welder sump is discharged onto the ground surface and report that the sump would occasionally leak into the ground surrounding the sump.
- APEC 2: Various areas of staining on the ground throughout the production area of the Building.
- APEC 3: The leaking hoses noted at the hydraulic oil tank located in the shed west of the factory building.
- APEC 4: The historical environmental concerns identified in two previous Phase I ESA reports in 1999 and 2015, including the barrel storage area.

This Phase II ESA included the advancement of four boreholes, which were developed into monitoring wells; and the laboratory analysis of soil and groundwater collected from the Site.

Soil samples submitted to the laboratory were analyzed for VOCs, BTEX, PHC F1 to F4, PAHs and/or metals. Soil laboratory analytical results are not indicative of environmental concerns on-site.

Groundwater samples submitted to the laboratory were analyzed for VOCs, BTEX, PHC F1 to F4, PAHs and/or metals. Groundwater laboratory analytical results are not indicative of environmental concerns on-site.

Based on the results of this Phase II ESA, HLC recommends the following:

- Upon receipt of a closure letter from MCC, that the monitoring wells be decommissioned and removed; in order to minimize the risk of contamination to the soil and groundwater from surface runoff.

As per *The Contaminated Sites Remediation Act*, these findings shall be reported to the Contaminated/Impacted Site Program of MCC.

6 STANDARD LIMITATIONS

This Phase II ESA was performed in order to identify environmental concerns associated with the Site located at 2455 Dugald Road, Winnipeg, Manitoba as identified in a September 2020 Phase I ESA report prepared by HLC. This Phase II ESA was completed in general compliance with currently acceptable practices for environmental site investigations, and specific Client requests, as applicable to this Site. This report was prepared for the exclusive use of the Client, subject to the conditions and limitations contained within the duly authorized work plan. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of the third parties. If additional parties require reliance on this report, written authorization from HLC will be required. Such reliance will only be provided by HLC following written authorization from the Client. HLC disclaims responsibility of consequential financial effects on transactions or property values, or requirements for follow-up actions and costs. No other warranties are implied or expressed.

HLC will not be responsible for any consequential or indirect damages. HLC will only be held liable to damages resulting from negligence of HLC. HLC will not be liable for any losses or damage if the Client has failed, within a period of two (2) years following the date upon which the claim is discovered within the meaning of the *Manitoba Limitation of Actions Act RSM 1987*, to commerce legal proceedings against HLC to recover such losses or damage.

The observations observed at the Site do not apply to areas which could not be observed. In addition, other materials or compounds not investigated or addressed or beyond the scope of work could be present at the Site. If this occurs, HLC must be notified to determine whether modification to any part of this repot should be conducted. HLC accepts no responsibility for any deficiency, misstatement or inaccuracy contained in this report as a result of omissions, misinterpretations or fraudulent acts or persons interviewed or contacted, or contained in reports that were reviewed.

HLC makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect

to regulatory compliance issues, regulatory statutes are subject to interpretation and their interpretations may change over time.

7 CLOSURE

The conclusions and recommendations represent the best judgement of the assessor based on the scope of work outlined for the purpose of the investigation and were prepared in accordance with accepted professional engineering/geo-science principles and practices. However, as with any environmental site assessment, the intent is to identify and address, not eliminate potential environmental concerns.

We trust that the information presented in this report meets your current requirements. Please do not hesitate to contact the undersigned if you have any questions or concerns.

Regards,

HLC Consulting Ltd.

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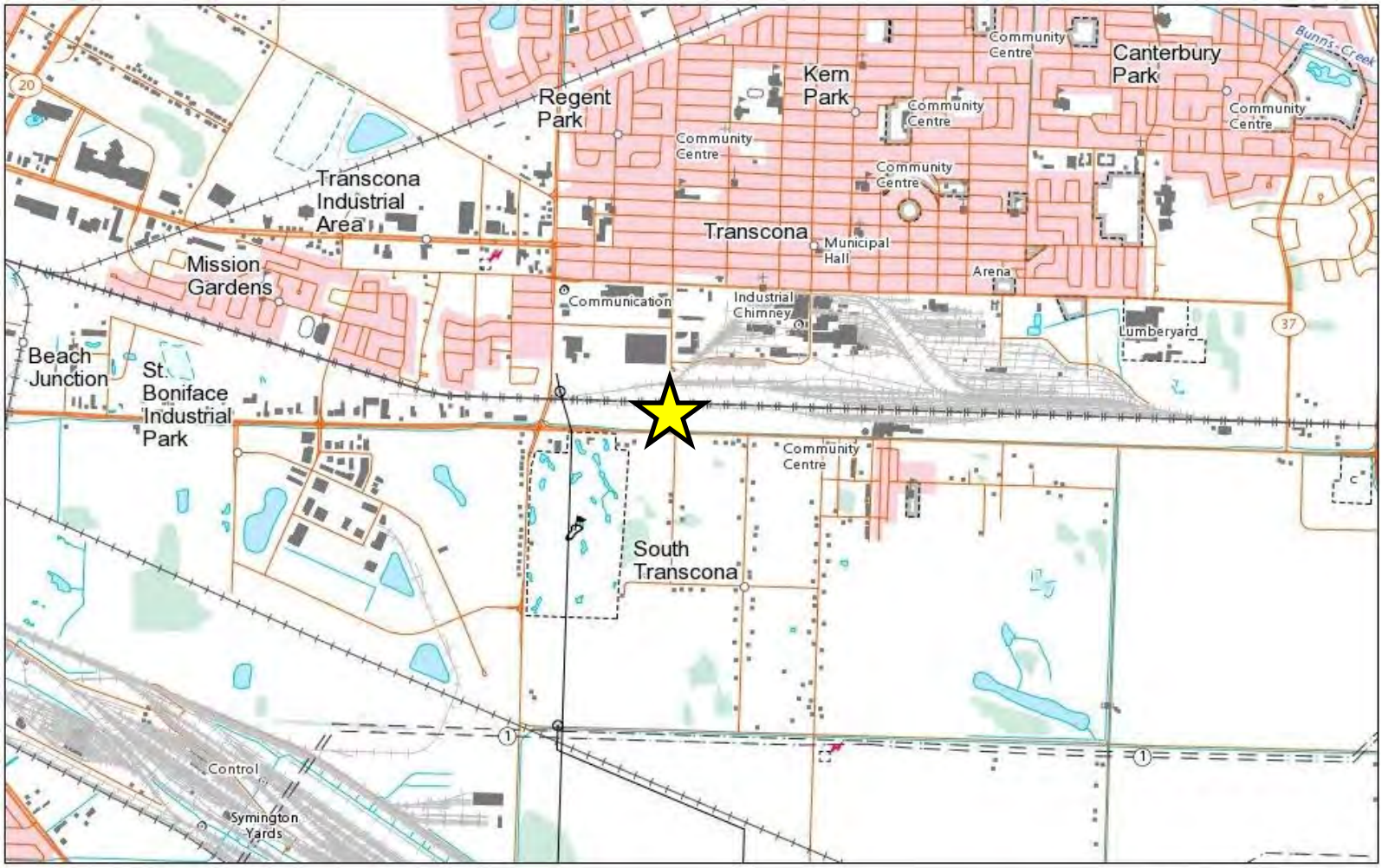
APPENDIX I

SITE FIGURES

FIGURE 1: Site Location



PROJECT NAME:	Phase II Environmental Site Assessment
CLIENT NAME:	Armtec Inc.
SITE LOCATION:	2455 Dugald Road, Winnipeg, Manitoba
PROJECT NO.:	20200388
DATE:	November 2020

HLC CONSULTING LTD.

Reference:

Natural Resources Canada. The Atlas of Canada—Toporama.

FIGURE 2: Area of Potential Environmental Concern

PROJECT NAME:	Phase II Environmental Site Assessment
CLIENT NAME:	Armtec Inc.
SITE LOCATION:	2455 Dugald Road, Winnipeg, Manitoba
PROJECT NO.:	20200388
DATE:	November 2020

HLC CONSULTING LTD.

Reference:

Google. Google Earth Imagery.

FIGURE 3: Location of Investigation

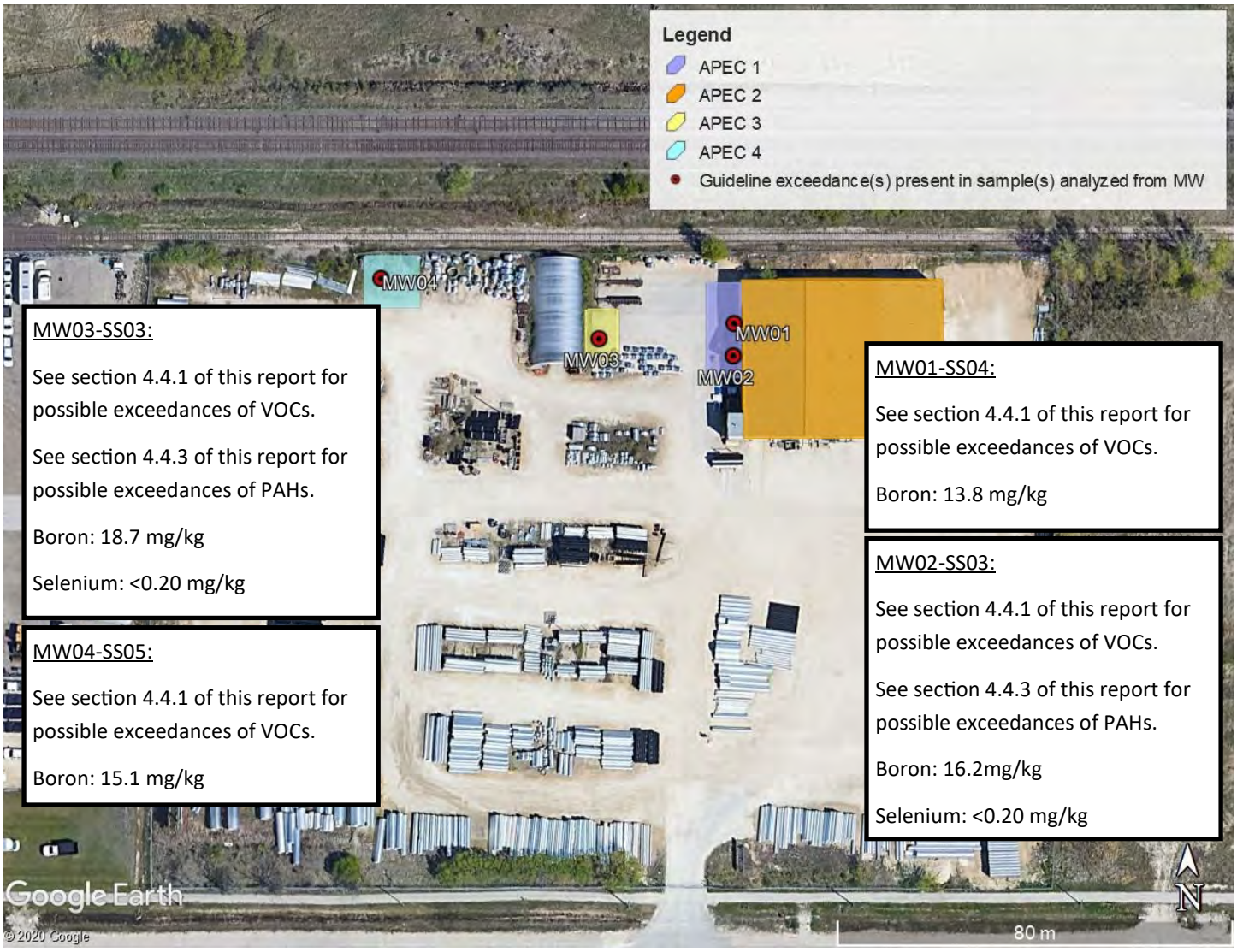
PROJECT NAME:	Phase II Environmental Site Assessment
CLIENT NAME:	Armtec Inc.
SITE LOCATION:	2455 Dugald Road, Winnipeg, Manitoba
PROJECT NO.:	20200388
DATE:	November 2020

HLC CONSULTING LTD.

Reference:

Google. Google Earth Imagery.

FIGURE 4: Soil Exceedances



PROJECT NAME:	Phase II Environmental Site Assessment
CLIENT NAME:	Armtec Inc.
SITE LOCATION:	2455 Dugald Road, Winnipeg, Manitoba
PROJECT NO.:	20200388
DATE:	November 2020

HLC CONSULTING LTD.

Reference:

Google. Google Earth Imagery.

FIGURE 5: Groundwater Exceedances

PROJECT NAME:	Phase II Environmental Site Assessment
CLIENT NAME:	Armtec Inc.
SITE LOCATION:	2455 Dugald Road, Winnipeg, Manitoba
PROJECT NO.:	20200388
DATE:	November 2020

HLC CONSULTING LTD.

Reference:

Google. Google Earth Imagery.

APPENDIX II

STRATIGRAPHIC BOREHOLE LOGS

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MONITORING WELL LOG MW01

PROJECT NUMBER 20200388
PROJECT NAME Phase II ESA
CLIENT Armtec Inc.
ADDRESS 2455 Dugald Road, Winnipeg, MB
DRILLER Paddock Drilling

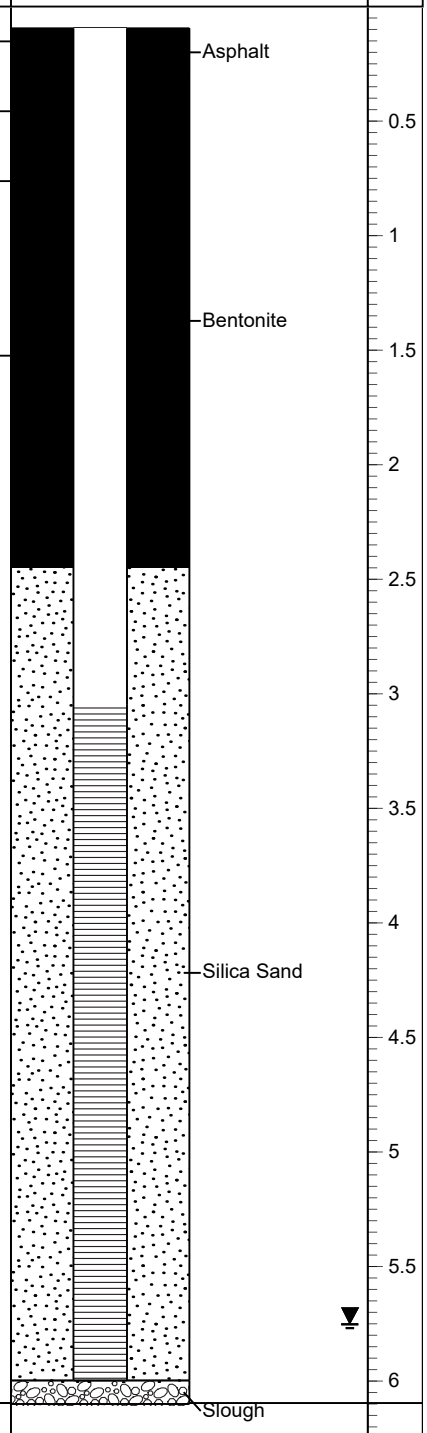
DRILLING DATE October 15, 2020
TOTAL DEPTH 6.10 mbgs
DIAMETER 152 mm
CASING 5.08 cm PVC
SCREEN 5.08 cm No. 10 slot PVC

ID MW01
COORDINATES 49.887132, -97.015419
COMPLETION October 15, 2020
SURFACE ELEVATION Not determined
WELL TOC 0.095 mbgs

COMMENTS Well was checked for water on October 19, 2020. Well recharged slowly, groundwater sampling occurred on October 19 and 20, 2020.

LOGGED BY Reegan Lawrence
CHECKED BY Carolyn Baldwin

PID (ppm)	Sample ID	Analyzed	Depth (mbgs)	Material Description
	Unrecovered		0	CONCRETE
0.4	SS01		0.5	FILL, sandy gravel, light brown, moist, no odour
0.8	SS02			Silty clay, blackish grey, moist, no odour
	SS03		1	Silty clay, brown, moist, no odour
1.0				
	SS04	SS04 - VOCs, BTEX, PHC F1-F4, PAHs, Metals	1.5	Clay, brown, moist, no odour
1.5			2	
	SS05		2.5	
0.9				
	SS06		3	
0.5			3.5	
	SS07		4	
0.6				
	SS08		4.5	
0.5			5	
	SS09		5.5	
0.3				
			6	END OF BOREHOLE



HLC CONSULTING LTD.

MONITORING WELL LOG MW02

PROJECT NUMBER 20200388
PROJECT NAME Phase II ESA
CLIENT Armtec Inc.
ADDRESS 2455 Dugald Road, Winnipeg, MB
DRILLER Paddock Drilling

DRILLING DATE October 15, 2020
TOTAL DEPTH 6.10 mbgs
DIAMETER 152 mm
CASING 5.08 cm PVC
SCREEN 5.08 cm No. 10 slot PVC

ID MW02
COORDINATES 49.887073, -97.015421
COMPLETION October 15, 2020
SURFACE ELEVATION Not determined
WELL TOC 0.1 mbgs

COMMENTS Well was checked for water on October 19, 2020, well was found to be dry.

LOGGED BY Reegan Lawrence
CHECKED BY Carolyn Baldwin

PID (ppm)	Sample ID	Analyzed	Depth (mbgs)	Graphic Log	Material Description	Well Diagram	Depth (mbgs)
	Unrecovered	SS03 - VOCs, BTEX, PHC F1-F4, PAHs, Metals; DUP02 - PAHs, Metals	0		CONCRETE	Asphalt	0
0.6	SS01				FILL, sandy gravel, light brown, moist, no odour		
0.8	SS02		0.5		Silty clay, black, moist, no odour		0.5
0.9	SS03				Silt, grey, moist, no odour		
			1				1
0.5	SS04				Clay, brown, moist, no odour	Bentonite	
	SS05		1.5				1.5
0.5			2				2
0.4	SS06		2.5				2.5
	SS07		3				3
0.3			3.5				3.5
	SS08		4			Silica Sand	4
0.3							
	SS09		4.5				4.5
0.2			5				5
	SS10		5.5				5.5
0.6							
			6		END OF BOREHOLE	Slough	6

Disclaimer This bore log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 10 Nov 2020

HLC CONSULTING LTD.

MONITORING WELL LOG MW03

PROJECT NUMBER 20200388
PROJECT NAME Phase II ESA
CLIENT Armtec Inc.
ADDRESS 2455 Dugald Road, Winnipeg, MB
DRILLER Paddock Drilling

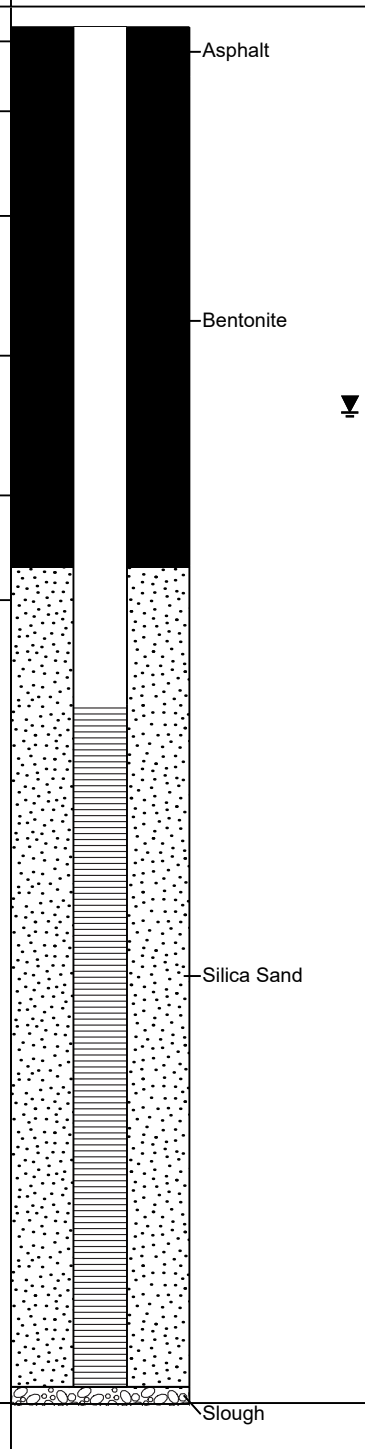
DRILLING DATE October 15, 2020
TOTAL DEPTH 6.10 mbgs
DIAMETER 152 mm
CASING 5.08 cm PVC
SCREEN 5.08 cm No. 10 slot PVC

ID MW03
COORDINATES 49.887105, -97.015798
COMPLETION October 15, 2020
SURFACE ELEVATION Not determined
WELL TOC 0.09 mbgs

COMMENTS Well was checked for water on October 19, 2020.

LOGGED BY Reegan Lawrence
CHECKED BY Carolyn Baldwin

PID (ppm)	Sample ID	Analyzed	Depth (mbgs)	Material Description
	Unrecovered			CONCRETE
0.9	SS01			FILL, sandy gravel, light brown, moist, no odour
0.6	SS02		0.5	Silty clay, black, moist, no odour
1.0	SS03	SS03 - VOCs, BTEX, PHC F1-F4, PAHs, Metals	1	Silty clay, grey, moist, no odour
0.4	SS04		1.5	Clay, brown, moist, no odour
0.4	SS05		2	Silt, brown, moist, no odour
0.4	SS06		2.5	Clay, brown, moist, no odour
0.3	SS07		3	
0.3	SS08		3.5	
0.5	SS09		4	
0.5	SS10		4.5	
			5	
			5.5	
			6	END OF BOREHOLE



HLC CONSULTING LTD.

MONITORING WELL LOG MW04

PROJECT NUMBER 20200388
PROJECT NAME Phase II ESA
CLIENT Armtec Inc.
ADDRESS 2455 Dugald Road, Winnipeg, MB
DRILLER Paddock Drilling

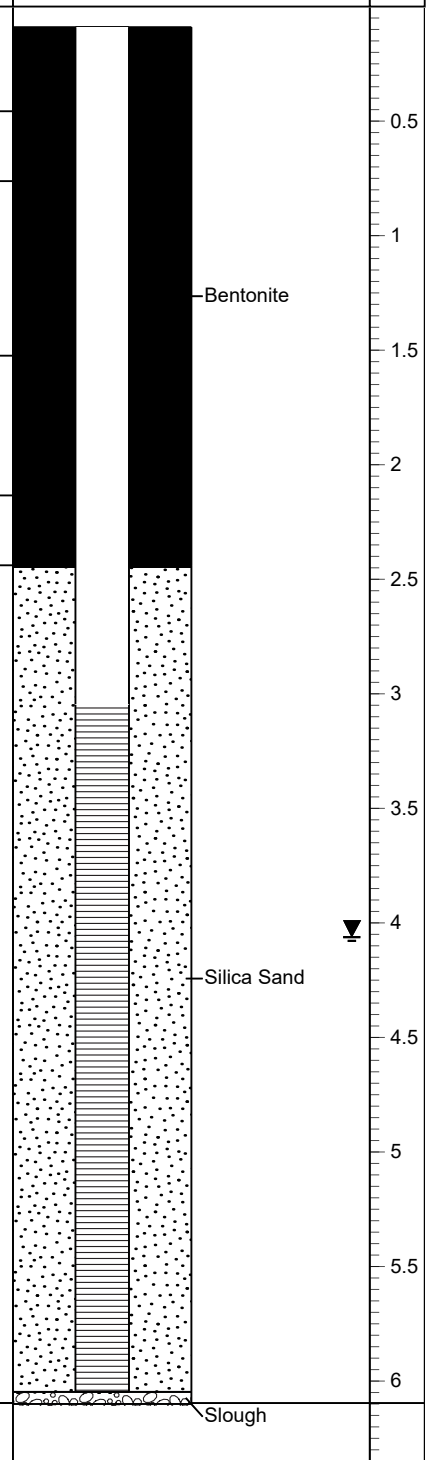
DRILLING DATE October 15, 2020
TOTAL DEPTH 6.10 mbgs
DIAMETER 152 mm
CASING 5.08 cm PVC
SCREEN 5.08 cm No. 10 slot PVC

ID MW04
COORDINATES 49.887214, -97.016411
COMPLETION October 15, 2020
SURFACE ELEVATION Not determined
WELL TOC 0.09 mbgs

COMMENTS Well was checked for water on October 19, 2020.

LOGGED BY Reegan Lawrence
CHECKED BY Carolyn Baldwin

PID (ppm)	Sample ID	Analyzed	Depth (mbgs)	Material Description
	Unrecovered			FILL, sandy gravel, light brown, moist, no odour
0.5	SS01		0.5	
0.4	SS02			Silty clay, black, moist, no odour
	SS03		1	Silty clay, grey, moist, no odour
0.4				
	SS04	SS05 - VOCs, BTEX, PHC F1-F4, PAHs, Metals; DUP01 - VOCs, BTEX, PHC F1-F4	1.5	Silty clay, brown, moist, no odour
0.2			2	
0.9	SS05			Silt, brown, moist, no odour
	SS06		2.5	Clay, brown, moist, no odour
0.3				
	SS07		3	
0.1			3.5	
	SS08		4	
0.1				
	SS09		4.5	
0.7			5	
	SS10		5.5	
0.8				
			6	END OF BOREHOLE



APPENDIX III

ANALYTICAL SOIL TEST RESULTS

Table 1: Soil Volatile Organic Compound Parameters

									Guidelines	
Sample ID	**MW01-SS04**	**MW02-SS03**	**MW02-SS03 DUP02**	**MW03-SS03**	**MW04-SS05**	**MW04-SS05 DUP01**	**Lower Detection Limit**	**Units**	**Industrial Area Subsurface Soil**	**Industrial Area Surface Soil**
Sampling Date	**15-Oct-20**	**15-Oct-20**	**15-Oct-20**	**15-Oct-20**	**15-Oct-20**	**15-Oct-20**		**dd-mmm-yy**		
Sample Depth (m)	**1.524 to 2.286**	**0.762 to 1.067**	**0.762 to 1.067**	**0.914 to 1.524**	**2.134 to 2.439**	**2.134 to 2.439**		**m**		
Acetone	<0.50	<0.50	-	<0.50	<0.50	<0.50	0.50	mg/kg	0.028[c]	0.028[b]
Bromobenzene	<0.10	<0.10	-	<0.10	<0.10	<0.10	0.10	mg/kg	NG	NG
Bromochloromethane	<0.10	<0.10	-	<0.10	<0.10	<0.10	0.10	mg/kg	NG	NG
Bromodichloromethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	0.063[c]	0.018[b]
Bromoform	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	0.0027[c]	0.0017[b]
Bromomethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	0.00005[c]	0.00005[b]
n-Butylbenzene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
sec-Butylbenzene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
tert-Butylbenzene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
Carbon disulfide	<0.25	<0.25	-	<0.25	<0.25	<0.25	0.025	mg/kg	NG	NG
Carbon Tetrachloride	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	50[a]	50[a]
Chlorobenzene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	0.0027[c]	0.0027[b]
Dibromochloromethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	0.061[c]	0.013[b]
Chloroethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
Chloroform	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	0.00019[c]	0.00018[b]
Chloromethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
2-Chlorotoluene	<0.10	<0.10	-	<0.10	<0.10	<0.10	0.10	mg/kg	NG	NG
4-Chlorotoluene	<0.10	<0.10	-	<0.10	<0.10	<0.10	0.10	mg/kg	NG	NG
1,2-Dibromo-3-chloropropane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
1,2-Dibromoethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
Dibromomethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
1,2-Dichlorobenzene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	10[a]	10[a]
1,3-Dichlorobenzene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	10[a]	10[a]
1,4-Dichlorobenzene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	10[a]	10[a]
Dichlorodifluoromethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	0.025[c]	0.025[b]
1,1-dichloroethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	50[a]	50[a]
1,2-Dichloroethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	50[a]	50[a]
1,1-dichloroethene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	50[a]	50[a]
cis-1,2-Dichloroethene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
trans-1,2-Dichloroethene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
Dichloromethane	<0.10	1.48	-	0.1	0.12	<0.10	0.10	mg/kg	50[a]	50[a]
1,2-Dichloropropane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	50[a]	50[a]
1,3-Dichloropropane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
2,2-Dichloropropane	<0.10	<0.10	-	<0.10	<0.10	<0.10	0.10	mg/kg	NG	NG
1,1-Dichloropropene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
cis-1,3-Dichloropropene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
trans-1,3-Dichloropropene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.020	mg/kg	NG	NG
Hexachlorobutadiene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	0.00011[c]	0.000095[b]
Hexane	<0.050	0.152	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
2-Hexanone (Methyl butyl ketone)	<0.50	<0.50	-	<0.50	<0.50	<0.50	0.50	mg/kg	NG	NG
Isopropylbenzene	<0.10	<0.10	-	<0.10	<0.10	<0.10	0.10	mg/kg	NG	NG
4-Isopropyltoluene	<0.10	<0.10	-	<0.10	<0.10	<0.10	0.10	mg/kg	NG	NG
MEK	<0.50	<0.50	-	<0.50	<0.50	<0.50	0.50	mg/kg	0.380[c]	0.088[b]
MIBK	<0.50	<0.50	-	<0.50	<0.50	<0.50	0.50	mg/kg	0.210[c]	0.210[b]
MTBE	<0.20	<0.20	-	<0.20	<0.20	<0.20	0.20	mg/kg	0.0034[c]	0.0032[b]
Styrene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	50[a]	50[a]
1,1,1,2-Tetrachloroethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	0.00014[c]	0.00011[b]
1,1,2,2-Tetrachloroethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	0.00011[c]	0.000094[b]
Tetrachloroethene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
1,2,3-Trichlorobenzene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.05	mg/kg	10[a]	10[a]
1,2,4-Trichlorobenzene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.05	mg/kg	10[a]	10[a]
1,1,1-Trichloroethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	50[a]	50[a]
1,1,2-Trichloroethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	50[a]	50[a]
Trichloroethene	<0.010	<0.010	-	<0.010	<0.010	<0.010	0.010	mg/kg	NG	NG
Trichlorofluoromethane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	NG	NG
1,2,3-Trichloropropane	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.05	mg/kg	NG	NG
1,2,4-Trimethylbenzene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.05	mg/kg	NG	NG
1,3,5-Trimethylbenzene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.05	mg/kg	NG	NG
Vinyl Chloride	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	0.00028[c]	0.00025[b]

Guideline Notes:

Canadian Council of Ministers of the Environment (CCME), 1991. Canadian Environmental Quality Guidelines.

[a] Soil Quality Guidelines for the Protection of Environment and Human Health. Industrial Land Use.

Ontario Ministry of Environment Conservation and Parks (MOECP). Soil, Ground Water and Sediment Standards for use under Part XV.1 of the Environmental Protection Act.

[b] Table 5: Stratified Site Condition Standards in a Non-Potable Ground Water Condition. Fine Textured Surface Soil. Industrial Land Use.

[c] Table 5: Stratified Site Condition Standards in a Non-Potable Ground Water Condition. Fine Textured Subsurface Soil. Industrial Land Use.

NG - No Guideline

Exceedance Notes:

Concentration exceeds applicable guideline

Table 2: Soil Petroleum Hydrocarbon Parameters

Sample ID	MW01-SS04	MW02-SS03	MW02-SS03 DUP02	MW03-SS03	MW04-SS05	MW04-SS05 DUP01	Lower Detection Limit	Units	CCME Guidelines: Industrial Area Subsoil	CCME Guidelines: Industrial Area Surface Soil
Sampling Date	**15-Oct-20**	**15-Oct-20**	**15-Oct-20**	**15-Oct-20**	**15-Oct-20**	**15-Oct-20**		**dd-mmm-yy**		
Sample Depth (m)	**1.524 to 2.286**	**0.762 to 1.067**	**0.762 to 1.067**	**0.914 to 1.524**	**2.134 to 2.439**	**2.134 to 2.439**		**m**		
Volatile Petroleum Hydrocarbons										
Benzene	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0050	0.0050	mg/kg	2.9 [b]	2.8 [a]
Toluene	<0.050	<0.050	-	<0.050	<0.050	<0.050	0.050	mg/kg	660 [d]	330 [c]
Ethylbenzene	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0050	0.015	mg/kg	860 [d]	430 [c]
Xylenes (Total)	<0.071	<0.071	-	<0.071	<0.071	<0.071	0.071	mg/kg	460 [d]	230 [c]
F1 (C6-C10)	<10	<10	-	<10	<10	<10	10	mg/kg	800 [f]	320 [e]
Extractable Petroleum Hydrocarbons										
F2 (C10-C16)	<10	<10	-	<10	<10	<25*	10	mg/kg	1000 [f]	260 [e]
F3 (C16-C34)	<50	<50	-	<50	<50	<50	50	mg/kg	5000 [f]	2500 [e]
F4 (C34-C50)	<50	<50	-	<50	<50	<50	50	mg/kg	10000 [f]	6600 [e]
Chrom. to baseline at nC50	YES	YES	-	YES	YES	YES	n/a	-	NG	NG
Physical Properties										
Moisture	28.8	18.9	21.1	24	20.4	22.9	0.10	%	NG	NG

Laboratory Notes:

*Lower detection limit 25 mg/kg.

Guideline Notes:

Canadian Council of Ministers of the Environment (CCME), 2004. Canadian Environmental Quality Guidelines.

[a] Soil Quality Guidelines for the Protection of Human Health. Industrial Land Use, 10^{-5} Incremental Risk, Fine grained surface soil (< 1.5m), Inhalation of indoor air check (Slab on-grade).

[b] Soil Quality Guidelines for the Protection of Human Health. Industrial Land Use, 10^{-5} Incremental Risk, Fine grained subsoil (> 1.5m), Inhalation of indoor air check (Slab on-grade).

[c] Soil Quality Guidelines for the Protection of Environmental Health. Industrial Land Use, Fine grained surface soil (< 1.5m), Soil Contact Guideline.

[d] Soil Quality Guidelines for the Protection of Environmental Health. Industrial Land Use, Fine grained subsoil (> 1.5m), Soil Contact Guideline.

Canadian Council of Ministers of the Environment (CCME), 2008. Canada-Wide Standards for Petroleum Hydrocarbons (PHC) in Soil - Technical Supplement.

[e] Tier 1 Levels (Table 2). Industrial Land Use, Fine grained surface soils, Eco Soil Contact.

[f] Tier 1 Levels (Table 4). Industrial Land Use, Fine grained subsoils, Management Limit.

NG - No Guideline

Exceedance Notes:

Concentration exceeds applicable guideline

Table 3: Soil Polycyclic Aromatic Hydrocarbon Parameters

Sample ID	MW01-SS04	MW02-SS03	MW02-SS03 DUP02	MW03-SS03	MW04-SS05	MW04-SS05 DUP01	Lower Detection Limit	Units	Guidelines: Industrial Area Surface Soil or Full Depth	Guidelines: Industrial Area Subsoil
Sampling Date	15-Oct-20	15-Oct-20	15-Oct-20	15-Oct-20	15-Oct-20	15-Oct-20		dd-mmm-yy		
Sample Depth (m)	1.524 to 2.286	0.762 to 1.067	0.762 to 1.067	0.914 to 1.524	2.134 to 2.439	2.134 to 2.439		m		
Acenaphthene	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	0.0050	mg/kg	0.096 [e]	0.62 [f]
Acenaphthylene	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	0.0050	mg/kg	0.00017 [e]	0.00017 [f]
Acridine	<0.010	<0.010	<0.010	<0.010	<0.010	-	0.010	mg/kg	NG	NG
Anthracene	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	-	0.0040	mg/kg	32 [a]	NG
Fluoranthene	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	0.0050	mg/kg	180 [a]	NG
Fluorene	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	0.0050	mg/kg	0.069 [e]	0.069 [f]
1-Methyl Naphthalene	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	0.0050	mg/kg	0.085 [e]	0.085 [f]
2-Methyl Naphthalene	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	0.0050	mg/kg	0.085 [e]	0.085 [f]
Naphthalene	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	0.0050	mg/kg	22 [b]	NG
Phenanthrene	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	0.0050	mg/kg	50 [c]	NG
Pyrene	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	0.0050	mg/kg	100 [c]	NG
Quinoline	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	0.0050	mg/kg	NG	NG
Carcinogenic PAHs										
Benzo(a)anthracene	<0.010	<0.010	<0.010	<0.010	<0.010	-	0.010	mg/kg	10 [c]	NG
Benzo(a)pyrene	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	0.0050	mg/kg	72 [a]	NG
Benzo(b)fluoranthene	<0.010	<0.010	<0.010	<0.010	<0.010	-	0.010	mg/kg	10 [c]	NG
Benzo(g,h,i)perylene	<0.010	<0.010	<0.010	<0.010	<0.010	-	0.010	mg/kg	0.0096 [e]	0.36 [f]
Benzo(k)fluoranthene	<0.010	<0.010	<0.010	<0.010	<0.010	-	0.010	mg/kg	10 [c]	NG
Chrysene	<0.010	<0.010	<0.010	<0.010	<0.010	-	0.010	mg/kg	0.0096 [e]	0.36 [f]
Dibenzo(a,h)anthracene	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	0.0050	mg/kg	10 [c]	NG
Indeno(1,2,3-cd)pyrene	<0.010	<0.010	<0.010	<0.010	<0.010	-	0.010	mg/kg	10 [c]	NG
B(a)P Total Potency Equivalent	<0.020	<0.020	<0.020	<0.020	<0.020	-	0.020	mg/kg	5.3 [d]	NG
IACR (CCME)	<0.15	<0.15	<0.15	<0.15	<0.15	-	0.15	mg/kg	NG	NG

Guideline Notes:

Canadian Council of Ministers of the Environment (CCME), 2010. Canadian Environmental Quality Guidelines.

[a] Soil Quality Guidelines for the Protection of Environmental Health. Polycyclic Aromatic Hydrocarbons. Industrial Land Use. Soil contact guideline.

[b] Soil Quality Guidelines for the Protection of Environmental Health. Polycyclic Aromatic Hydrocarbons. Industrial Land Use. Provisional Soil Quality Guideline (1997).

[c] Soil Quality Guidelines for the Protection of Environmental Health. Polycyclic Aromatic Hydrocarbons. Industrial Land Use. Interim Soil Quality Criteria (1991).

[d] Soil Quality Guidelines for the Protection of Human Health. Polycyclic Aromatic Hydrocarbons. Industrial Land Use, Calculated 10^{-5} Incremental Risk.

Ontario Ministry of Environment Conservation and Parks (MOECP). Soil, Ground Water and Sediment Standards for use under Part XV.1 of the Environmental Protection Act.

[e] Table 5: Stratified Site Condition Standards in a Non-Potable Ground Water Condition. Fine Textured Surface Soil. Industrial Land Use.

[f] Table 5: Stratified Site Condition Standards in a Non-Potable Ground Water Condition. Fine Textured Subsurface Soil. Industrial Land Use.

NG - No Guideline

Exceedance Notes:

Concentration exceeds applicable guideline

Table 4: Soil Metals Parameters

Sample ID	MW01-SS04	MW02-SS03	MW02-SS03 DUP02	MW03-SS03	MW04-SS05	MW04-SS05 DUP01	Lower Detection Limit	Units	Guidelines: Industrial Area Subsurface Soil	Guidelines: Industrial Area Surface Soil
Sampling Date	15-Oct-20	15-Oct-20	15-Oct-20	15-Oct-20	15-Oct-20	15-Oct-20		dd-mmm-yy		
Sample Depth (m)	1.524 to 2.286	0.762 to 1.067	0.762 to 1.067	0.914 to 1.524	2.134 to 2.439	2.134 to 2.439		m		
Aluminum (Al)	24500*	19000*	15400	26900*	12200	-	50	mg/kg	NG	NG
Antimony (Sb)	0.44	0.26	0.22	0.4	0.22	-	0.10	mg/kg	40[a]	40[a]
Arsenic (As)	9.41	7.74	7.55	9.87	4.61	-	0.10	mg/kg	12[a]	12[a]
Barium (Ba)	221	142	112	187	105	-	0.50	mg/kg	2000[a]	2000[a]
Beryllium (Be)	1.16	0.71	0.59	1.16	0.5	-	0.10	mg/kg	8[a]	8[a]
Bismuth (Bi)	0.3	<0.20	<0.20	0.28	<0.20	-	0.20	mg/kg	NG	NG
Boron (B)	13.8	16.2	15.2	18.7	15.1	-	5.0	mg/kg	7.9[d]	0.12[b]
Cadmium (Cd)	0.251	0.133	0.133	0.109	0.179	-	0.020	mg/kg	22[a]	22[a]
Calcium (Ca)	20900	83600	117000	34400	109000	-	50	mg/kg	NG	NG
Chromium (Cr)	46.6	35.1	27.4	50.6	25.8	-	0.50	mg/kg	87[a]	87[a]
Cobalt (Co)	16.8	9.55	7.55	15.3	7.14	-	0.10	mg/kg	300[a]	300[a]
Copper (Cu)	35.4	21.5	16.9	31.9	17.1	-	0.50	mg/kg	91[a]	91[a]
Iron (Fe)	32400	22200	17900	33200	16600	-	50	mg/kg	NG	NG
Lead (Pb)	14.3	8.93	7.32	14	6.92	-	0.50	mg/kg	600[a]	600[a]
Lithium (Li)	29.9	20	17.1	27.2	17.9	-	2.0	mg/kg	NG	NG
Magnesium (Mg)	16200	43600	50100	27600	57900	-	20	mg/kg	NG	NG
Manganese (Mn)	690	416	452	730	385	-	1.0	mg/kg	NG	NG
Molybdenum (Mo)	2.56	0.15	0.12	0.18	0.51	-	0.10	mg/kg	40[a]	40[a]
Nickel (Ni)	49.2	28.5	22.8	42.6	20.5	-	0.50	mg/kg	89[a]	89[a]
Phosphorus (P)	481	489	436	523	411	-	50	mg/kg	NG	NG
Potassium (K)	4210	3700	2630	5000	2200	-	100	mg/kg	NG	NG
Selenium (Se)	<0.20	<0.20	<0.20	<0.20	<0.20	-	0.20	mg/kg	1.2[d]	0.0055[c]
Silver (Ag)	0.11	<0.10	<0.10	0.14	<0.10	-	0.10	mg/kg	40[a]	40[a]
Sodium (Na)	302	123	117	144	223	-	50	mg/kg	NG	NG
Strontium (Sr)	71.6	70.2	75.3	47.6	72.8	-	0.50	mg/kg	NG	NG
Sulfur (S)	<1000	<1000	<1000	<1000	<1000	-	1000	mg/kg	NG	NG
Thallium (Tl)	0.328	0.249	0.195	0.354	0.188	-	0.050	mg/kg	1[a]	1[a]
Tin (Sn)	<2.0	<2.0	<2.0	<2.0	<2.0	-	2.0	mg/kg	300[a]	300[a]
Titanium (Ti)	40	250	212	187	293	-	1.0	mg/kg	NG	NG
Tungsten (W)	<0.50	<0.50	<0.50	<0.50	<0.50	-	0.50	mg/kg	NG	NG
Uranium (U)	1.4	0.745	0.659	0.985	1.14	-	0.050	mg/kg	300[a]	300[a]
Vanadium (V)	73.4	58.5	49.9	81	38.8	-	0.20	mg/kg	130[a]	130[a]
Zinc (Zn)	89.6	53.1	42.1	82.9	38.7	-	2.0	mg/kg	410[a]	410[a]
Zirconium (Zr)	8.2	7.2	5	11.4	9.5	-	1.0	mg/kg	NG	NG

Guideline Notes:

Canadian Council of Ministers of the Environment (CCME), 1991. Canadian Environmental Quality Guidelines.

[a] Soil Quality Guidelines for the Protection of Environment and Human Health. Industrial Land Use.

Ontario Ministry of Environment Conservation and Parks (MOECP). Soil, Ground Water and Sediment Standards for use under Part XV.1 of the Environmental Protection Act

[b] Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition. Industrial Land Use.

[c] Table 5: Stratified Site Condition Standards in a Non-Potable Ground Water Condition. Fine Textured Surface Soil. Industrial Land Use.

[d] Table 5: Stratified Site Condition Standards in a Non-Potable Ground Water Condition. Fine Textured Subsurface Soil. Industrial Land Use.

NG - No Guideline

Exceedance Notes:

Concentration exceeds applicable guideline

Table 5: Groundwater Volatile Organic Compound Parameters

Sample ID	MW01	MW03	MW03 DUP01	MW04	Lowest Detection Limit	Units	MOECC Guidelines[a] All Land Uses
Sampling Date	19-Oct-20	19-Oct-20	19-Oct-20	19-Oct-20		dd-mmm-yy	
Acetone	<0.050	<0.050	<0.050	<0.050	0.050	mg/L	130
Bromobenzene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
Bromochloromethane	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
Bromodichloromethane	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	85
Bromoform	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	0.77
Bromomethane	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	0.056
n-Butylbenzene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
sec-Butylbenzene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
tert-Butylbenzene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
Carbon disulfide	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	mg/L	NG
Carbon Tetrachloride	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	0.0084
Chlorobenzene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	0.63
Dibromochloromethane	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	82
Chloroethane	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
Chloroform	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	0.022
Chloromethane	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	mg/L	NG
2-Chlorotoluene	<0.020	<0.020	<0.020	<0.020	0.020	mg/L	NG
4-Chlorotoluene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
1,2-Dibromo-3-chloropropane	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
1,2-Dibromoethane	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
Dibromomethane	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
1,2-Dichlorobenzene	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	9.6
1,3-Dichlorobenzene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	9.6
1,4-Dichlorobenzene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	0.067
Dichlorodifluoromethane	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	4.4
1,1-dichloroethane	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	3.1
1,2-Dichloroethane	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	0.012
1,1-dichloroethene	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	0.017
cis-1,2-Dichloroethene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	0.017
trans-1,2-Dichloroethene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	0.017
Dichloromethane	<0.020*	<0.0020*	<0.0020*	<0.0020*	0.0020	mg/L	NG
1,2-Dichloropropane	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	0.14
1,3-Dichloropropane	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
2,2-Dichloropropane	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
1,1-Dichloropropene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
cis-1,3-Dichloropropene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
trans-1,3-Dichloropropene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
Hexachlorobutadiene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	0.0045
Hexane	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
2-Hexanone (Methyl butyl ketone)	<0.020	<0.020	<0.020	<0.020	0.020	mg/L	NG
Isopropylbenzene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
4-Isopropyltoluene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
MEK	<0.020	<0.020	<0.020	<0.020	0.020	mg/L	1500
MIBK	<0.020	<0.020	<0.020	<0.020	0.020	mg/L	580
MTBE	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	1.4
Styrene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	9.1
1,1,1,2-Tetrachloroethane	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	0.028
1,1,2,2-Tetrachloroethane	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	0.015
Tetrachloroethene	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	0.017
1,2,3-Trichlorobenzene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
1,2,4-Trichlorobenzene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	0.85
1,1,1-Trichloroethane	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	6.7
1,1,2-Trichloroethane	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	0.03
Trichloroethene	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	NG
Trichlorofluoromethane	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	2.5
1,2,3-Trichloropropane	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
1,2,4-Trimethylbenzene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
1,3,5-Trimethylbenzene	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	mg/L	NG
Vinyl Chloride	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	0.0017

Laboratory Notes:

* DLM - Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).

Guideline Notes:

Ontario Ministry of Environment Conservation and Parks (MOECP). Soil, Ground Water and Sediment Standards for use under Part XV.1 of the Environmental Protection Act

[a] Table 3, Non-potable Ground Water Conditions. All Types of Land Use. Fine-textured Soil.

NG - No Guideline

Exceedance Notes:

Concentration exceeds applicable guideline

Table 6: Groundwater Petroleum Hydrocarbon Parameters							
Sample ID	**MW01**	**MW03**	**MW03 DUP01**	**MW04**	**Lower Detection Limit**	**Units**	**Water Quality Guidelines[a]**
Sampling Date	**19-Oct-20**	**19-Oct-20**	**19-Oct-20**	**19-Oct-20**		**dd-mmm-yy**	
Volatile Petroleum Hydrocarbons							
Benzene	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	0.43
Toluene	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	18
Ethylbenzene	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	mg/L	2.3
Xylenes (Total)	<0.00064	<0.00064	<0.00064	<0.00064	0.00064	mg/L	4.2
F1 (C6-C10)	<0.10	<0.10	<0.10	<0.10	0.10	mg/L	0.750
Extractable Petroleum Hydrocarbons							
F2 (C10-C16)	<0.10	<0.10	<0.10	<0.10	0.10	mg/L	0.150
F3 (C16-C34)	<0.25	<0.25	<0.25	<0.25	0.25	mg/L	0.50
F4 (C34-C50)	<0.25	<0.25	<0.25	<0.25	0.25	mg/L	0.50

Guideline Notes:

Ontario Ministry of Environment Conservation and Parks (MOECP). Soil, Ground Water and Sediment Standards for use under Part XV.1 of the Environmental Protection Act

[a] Table 3, Non-potable Ground Water Conditions. All Types of Land Use.

Exceedance Notes:

Concentration exceeds applicable guideline

Table 7: Groundwater Polycyclic Aromatic Hydrocarbon Parameters

Sample ID	MW01	MW01 DUP01	MW02	MW03	Lower Detection Limit	Units	MOECC Guidelines[a] All Land Uses
Sampling Date	**11-Aug-20**	**11-Aug-20**	**11-Aug-20**	**11-Aug-20**		**dd-mmm-yy**	
Acenaphthene	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	mg/L	1.7
Acenaphthylene	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	mg/L	0.0018
Acridine	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	mg/L	NG
Anthracene	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	mg/L	0.0024
Fluoranthene	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	mg/L	0.13
Fluorene	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	mg/L	0.4
1-Methyl Naphthalene	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	mg/L	1.8
2-Methyl Naphthalene	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	mg/L	1.8
Naphthalene	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	mg/L	6.4
Phenanthrene	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	mg/L	0.58
Pyrene	<0.000010	<0.000010	<0.000010	0.000011	0.000010	mg/L	0.068
Quinoline	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	mg/L	NG
Carcinogenic PAHs							
Benzo(a)anthracene	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	mg/L	0.0047
Benzo(a)pyrene	<0.0000050	<0.0000050	<0.0000050	0.0000059	0.000005	mg/L	0.00081
Benzo(b&j)fluoranthene	<0.000010	<0.000010	<0.000010	0.000016	0.000010	mg/L	0.00075
Benzo(g,h,i)perylene	<0.000020	<0.000020	<0.000020	0.000023	0.000020	mg/L	0.0002
Benzo(k)fluoranthene	<0.000010	<0.000010	<0.000010	0.000011	0.000010	mg/L	0.0004
Chrysene	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	mg/L	0.001
Dibenzo(a,h)anthracene	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	mg/L	0.00052
Indeno(1,2,3-cd)pyrene	<0.000010	<0.000010	<0.000010	0.000018	0.000010	mg/L	0.0002
B(a)P Total Potency Equivalent	<0.000030	<0.000030	<0.000030	<0.000030	0.000030	mg/L	NG

Guideline Notes:

Ontario Ministry of Environment Conservation and Parks (MOECP). Soil, Ground Water and Sediment Standards for use under Part XV.1 of the Environmental Protection Act

[a] Table 3, Non-potable Ground Water Conditions. All Types of Land Use.

NG - No Guideline

Exceedance Notes:

Concentration exceeds applicable guideline

Table 8: Groundwater Total Metals Parameters

Sample ID	MW01	MW03	MW03 DUP01	MW04	Lower Detection Limit	Units	MOECC Guidelines[a] All Land Uses
Sampling Date	20-Oct-20	19-Oct-20	19-Oct-20	19-Oct-20		dd-mmm-yy	
Aluminum (Al)-Total	3.29	11.4	10.9	12.3	0.0030	mg/L	NG
Antimony (Sb)-Total	0.00026	0.00028	0.00028	0.0004	0.00010	mg/L	20
Arsenic (As)-Total	0.00352	0.00851	0.00871	0.0128	0.00010	mg/L	1.9
Barium (Ba)-Total	0.0803	0.154	0.156	0.191	0.00010	mg/L	29
Beryllium (Be)-Total	0.00025	0.00151	0.00145	0.00162	0.00010	mg/L	0.067
Bismuth (Bi)-Total	0.000052	0.000161	0.000163	0.000187	0.000050	mg/L	NG
Boron (B)-Total	0.175	0.221	0.216	0.254	0.010	mg/L	45
Cadmium (Cd)-Total	0.000262	0.000268	0.000258	0.000354	0.0000050	mg/L	0.0027
Calcium (Ca)-Total	559*	239	240	223	0.050	mg/L	NG
Cesium (Cs)-Total	0.000563	0.00174	0.00172	0.00162	0.000010	mg/L	NG
Chromium (Cr)-Total	0.00669	0.0227	0.0224	0.0239	0.00010	mg/L	0.81
Cobalt (Co)-Total	0.00879	0.00662	0.00667	0.00734	0.00010	mg/L	0.066
Copper (Cu)-Total	0.0146	0.0252	0.0253	0.0373	0.00050	mg/L	0.087
Iron (Fe)-Total	5.41	15.2	15.2	15.5	0.010	mg/L	NG
Lead (Pb)-Total	0.00337	0.0147	0.015	0.0274	0.000050	mg/L	0.025
Lithium (Li)-Total	0.87	0.212	0.214	0.419	0.0010	mg/L	NG
Magnesium (Mg)-Total	337**	211	210	183	0.050	mg/L	NG
Manganese (Mn)-Total	4.46	0.395	0.4	0.902	0.00010	mg/L	NG
Molybdenum (Mo)-Total	0.00229	0.00244	0.00241	0.00642	0.000050	mg/L	9.2
Nickel (Ni)-Total	0.0284	0.0284	0.0279	0.0233	0.00050	mg/L	0.49
Phosphorus (P)-Total	0.348	1.2	1.19	1.47	0.030	mg/L	NG
Potassium (K)-Total	15	9.96	9.83	13.9	0.050	mg/L	NG
Rubidium (Rb)-Total	0.00879	0.0256	0.0252	0.0263	0.00020	mg/L	NG
Selenium (Se)-Total	0.000988	0.000655	0.000679	0.00151	0.000050	mg/L	0.063
Silicon (Si)-Total	21.5	41.3	39.8	39.1	0.10	mg/L	NG
Silver (Ag)-Total	0.000064	0.000098	0.000105	0.000124	0.000010	mg/L	0.0015
Sodium (Na)-Total	202	78.4	78	190	0.50	mg/L	NG
Strontium (Sr)-Total	3.8	1.03	1.04	1.33	0.00020	mg/L	NG
Sulfur (S)-Total	840***	104	103	250	0.50	mg/L	NG
Tellurium (Te)-Total	0.00035	<0.00020	<0.00020	<0.00020	0.00020	mg/L	NG
Thallium (Tl)-Total	0.000083	0.000229	0.000232	0.000244	0.000010	mg/L	0.51
Thorium (Th)-Total	0.00168	0.00606	0.00626	0.00699	0.00010	mg/L	NG
Tin (Sn)-Total	0.00195	0.00086	0.00086	0.00121	0.00010	mg/L	NG
Titanium (Ti)-Total	0.0981	0.239	0.234	0.238	0.00030	mg/L	NG
Tungsten (W)-Total	<0.00010	0.0001	0.00021	<0.00010	0.00010	mg/L	NG
Uranium (U)-Total	0.152	0.0188	0.0191	0.0659	0.000010	mg/L	0.42
Vanadium (V)-Total	0.0112	0.0264	0.0259	0.0267	0.00050	mg/L	0.25
Zinc (Zn)-Total	0.0775	0.055	0.0544	0.142	0.0030	mg/L	1.1
Zirconium (Zr)-Total	0.00555	0.00394	0.00348	0.0061	0.00020	mg/L	NG

Laboratory Notes:

* DL = 0.50mg/L

** DL = 0.050mg/L

*** DL = 5.0mg/L

Guideline Notes:

Ontario Ministry of Environment Conservation and Parks (MOECP). Soil, Ground Water and Sediment Standards for use under Part XV.1 of the Environmental Protection Act

[a] Table 3, Non-potable Ground Water Conditions. All Types of Land Use.

NG - No Guideline

Exceedance Notes:

Concentration exceeds applicable guideline

APPENDIX IV

LABORATORY CERTIFICATES OF ANALYSIS

HLC Consulting Ltd
ATTN: REEGAN LAWRENCE
3 Red Lily Road
Winnipeg Manitoba R3X 0G3

Date Received: 15-OCT-20
Report Date: 27-OCT-20 12:59 (MT)
Version: FINAL

Client Phone: 204-479-8140

Certificate of Analysis

Lab Work Order #: L2517207

Project P.O. #: NOT SUBMITTED
Job Reference: 20200388
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2517207-1 MW01-SS04							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
Miscellaneous Parameters							
% Moisture	28.8		0.25	%	21-OCT-20	21-OCT-20	R5261276
Xylenes (Total)	<0.071		0.071	mg/kg		27-OCT-20	
Total THMs	<0.10		0.10	mg/kg		27-OCT-20	
Metals in Soil by CRC ICPMS							
Aluminum (Al)	24500		5000	mg/kg	20-OCT-20	20-OCT-20	R5260436
Antimony (Sb)	0.44		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Arsenic (As)	9.41		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Barium (Ba)	221		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Beryllium (Be)	1.16		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Boron (B)	13.8		5.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Bismuth (Bi)	0.30		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Cadmium (Cd)	0.251		0.020	mg/kg	20-OCT-20	20-OCT-20	R5260436
Calcium (Ca)	20900		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Chromium (Cr)	46.6		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Cobalt (Co)	16.8		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Copper (Cu)	35.4		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Iron (Fe)	32400		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Lead (Pb)	14.3		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Lithium (Li)	29.9		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Magnesium (Mg)	16200		20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Manganese (Mn)	690		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Molybdenum (Mo)	2.56		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Nickel (Ni)	49.2		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Phosphorus (P)	481		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Potassium (K)	4210		100	mg/kg	20-OCT-20	20-OCT-20	R5260436
Selenium (Se)	<0.20		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Silver (Ag)	0.11		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Sodium (Na)	302		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Strontium (Sr)	71.6		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Sulfur (S)	<1000		1000	mg/kg	20-OCT-20	20-OCT-20	R5260436
Thallium (Tl)	0.328		0.050	mg/kg	20-OCT-20	20-OCT-20	R5260436
Tin (Sn)	<2.0		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Titanium (Ti)	40.0		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Tungsten (W)	<0.50		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Uranium (U)	1.40		0.050	mg/kg	20-OCT-20	20-OCT-20	R5260436
Vanadium (V)	73.4		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Zinc (Zn)	89.6		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Zirconium (Zr)	8.2		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
VOC plus F1 by GCMS							
Acetone	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
Benzene	<0.0050		0.0050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromobenzene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromochloromethane	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromodichloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromoform	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromomethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
n-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
sec-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
tert-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Carbon disulfide	<0.25		0.25	mg/kg	15-OCT-20	21-OCT-20	R5269285
Carbon Tetrachloride	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285

* 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
L2517207-1 MW01-SS04							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
VOC plus F1 by GCMS							
Chlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloroform	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2-Chlorotoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
4-Chlorotoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dibromochloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dibromo-3-chloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dibromoethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dibromomethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,3-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,4-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dichlorodifluoromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1-dichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1-dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
cis-1,2-Dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
trans-1,2-Dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dichloromethane	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,3-Dichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2,2-Dichloropropane	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
cis-1,3-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
trans-1,3-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Ethylbenzene	<0.015		0.015	mg/kg	15-OCT-20	21-OCT-20	R5269285
F1	<10		10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Hexachlorobutadiene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Hexane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2-Hexanone (Methyl butyl ketone)	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
Isopropylbenzene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
4-Isopropyltoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
MEK	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
MIBK	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
MTBE	<0.20		0.20	mg/kg	15-OCT-20	21-OCT-20	R5269285
Styrene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,1,2-Tetrachloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,2,2-Tetrachloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Tetrachloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Toluene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,3-Trichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,4-Trichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,1-Trichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,2-Trichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Trichloroethene	<0.010		0.010	mg/kg	15-OCT-20	21-OCT-20	R5269285
Trichlorofluoromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,3-Trichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,4-Trimethylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,3,5-Trimethylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Vinyl Chloride	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285

* 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
L2517207-1 MW01-SS04							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
VOC plus F1 by GCMS							
M+P-Xylenes	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
o-Xylene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Surrogate: 1,4-Difluorobenzene (SS)	106.8		70-130	%	15-OCT-20	21-OCT-20	R5269285
Surrogate: 3,4-Dichlorotoluene (SS)	122.4		70-130	%	15-OCT-20	21-OCT-20	R5269285
Surrogate: 4-Bromofluorobenzene (SS)	99.0		70-130	%	15-OCT-20	21-OCT-20	R5269285
F2-F4 (O.Reg.153/04)							
F2 (C10-C16)	<10		10	ug/g	23-OCT-20	26-OCT-20	R5268752
F3 (C16-C34)	<50		50	ug/g	23-OCT-20	26-OCT-20	R5268752
F4 (C34-C50)	<50		50	ug/g	23-OCT-20	26-OCT-20	R5268752
Chrom. to baseline at nC50	YES				23-OCT-20	26-OCT-20	R5268752
Surrogate: 2-Bromobenzotrifluoride	89.1		60-140	%	23-OCT-20	26-OCT-20	R5268752
PAHs in Sediment							
1-Methylnaphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
2-Methylnaphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acenaphthene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acenaphthylene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acridine	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Anthracene	<0.0040		0.0040	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(a)anthracene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(a)pyrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(b)fluoranthene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(g,h,i)perylene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(k)fluoranthene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Chrysene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Dibenzo(ah)anthracene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Fluoranthene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Fluorene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Indeno(1,2,3-cd)pyrene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Naphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Phenanthrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Pyrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Quinoline	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
B(a)P Total Potency Equivalent	<0.020		0.020	ug/g	19-OCT-20	21-OCT-20	R5260420
IACR (CCME)	<0.15		0.15		19-OCT-20	21-OCT-20	R5260420
Surrogate: 2-Fluorobiphenyl	66.4		60-140	%	19-OCT-20	21-OCT-20	R5260420
Surrogate: p-Terphenyl d14	72.0		60-140	%	19-OCT-20	21-OCT-20	R5260420
L2517207-2 MW02-SS03							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
Miscellaneous Parameters							
% Moisture	18.9		0.25	%	21-OCT-20	22-OCT-20	R5262236
Xylenes (Total)	<0.071		0.071	mg/kg		27-OCT-20	
Total THMs	<0.10		0.10	mg/kg		27-OCT-20	
Metals in Soil by CRC ICPMS							
Aluminum (Al)	19000		5000	mg/kg	20-OCT-20	20-OCT-20	R5260436
Antimony (Sb)	0.26		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Arsenic (As)	7.74		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Barium (Ba)	142		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Beryllium (Be)	0.71		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Boron (B)	16.2		5.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Bismuth (Bi)	<0.20		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436

* 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
L2517207-2 MW02-SS03							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
Metals in Soil by CRC ICPMS							
Cadmium (Cd)	0.133		0.020	mg/kg	20-OCT-20	20-OCT-20	R5260436
Calcium (Ca)	83600		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Chromium (Cr)	35.1		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Cobalt (Co)	9.55		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Copper (Cu)	21.5		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Iron (Fe)	22200		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Lead (Pb)	8.93		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Lithium (Li)	20.0		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Magnesium (Mg)	43600		20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Manganese (Mn)	416		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Molybdenum (Mo)	0.15		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Nickel (Ni)	28.5		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Phosphorus (P)	489		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Potassium (K)	3700		100	mg/kg	20-OCT-20	20-OCT-20	R5260436
Selenium (Se)	<0.20		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Silver (Ag)	<0.10		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Sodium (Na)	123		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Strontium (Sr)	70.2		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Sulfur (S)	<1000		1000	mg/kg	20-OCT-20	20-OCT-20	R5260436
Thallium (Tl)	0.249		0.050	mg/kg	20-OCT-20	20-OCT-20	R5260436
Tin (Sn)	<2.0		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Titanium (Ti)	250		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Tungsten (W)	<0.50		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Uranium (U)	0.745		0.050	mg/kg	20-OCT-20	20-OCT-20	R5260436
Vanadium (V)	58.5		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Zinc (Zn)	53.1		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Zirconium (Zr)	7.2		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
VOC plus F1 by GCMS							
Acetone	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
Benzene	<0.0050		0.0050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromobenzene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromochloromethane	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromodichloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromoform	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromomethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
n-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
sec-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
tert-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Carbon disulfide	<0.25		0.25	mg/kg	15-OCT-20	21-OCT-20	R5269285
Carbon Tetrachloride	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloroform	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2-Chlorotoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
4-Chlorotoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dibromochloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dibromo-3-chloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dibromoethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dibromomethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285

* 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
L2517207-2 MW02-SS03							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
VOC plus F1 by GCMS							
1,3-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,4-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dichlorodifluoromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1-dichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1-dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
cis-1,2-Dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
trans-1,2-Dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dichloromethane	1.48		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,3-Dichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2,2-Dichloropropane	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
cis-1,3-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
trans-1,3-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Ethylbenzene	<0.015		0.015	mg/kg	15-OCT-20	21-OCT-20	R5269285
F1	<10		10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Hexachlorobutadiene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Hexane	0.152		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2-Hexanone (Methyl butyl ketone)	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
Isopropylbenzene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
4-Isopropyltoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
MEK	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
MIBK	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
MTBE	<0.20		0.20	mg/kg	15-OCT-20	21-OCT-20	R5269285
Styrene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,1,2-Tetrachloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,2,2-Tetrachloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Tetrachloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Toluene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,3-Trichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,4-Trichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,1-Trichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,2-Trichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Trichloroethene	<0.010		0.010	mg/kg	15-OCT-20	21-OCT-20	R5269285
Trichlorofluoromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,3-Trichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,4-Trimethylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,3,5-Trimethylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Vinyl Chloride	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
M+P-Xylenes	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
o-Xylene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Surrogate: 1,4-Difluorobenzene (SS)	108.4		70-130	%	15-OCT-20	21-OCT-20	R5269285
Surrogate: 3,4-Dichlorotoluene (SS)	134.0	SURR-ND	70-130	%	15-OCT-20	21-OCT-20	R5269285
Surrogate: 4-Bromofluorobenzene (SS)	102.1		70-130	%	15-OCT-20	21-OCT-20	R5269285
F2-F4 (O.Reg.153/04)							
F2 (C10-C16)	<10		10	ug/g	23-OCT-20	26-OCT-20	R5268752
F3 (C16-C34)	<50		50	ug/g	23-OCT-20	26-OCT-20	R5268752
F4 (C34-C50)	<50		50	ug/g	23-OCT-20	26-OCT-20	R5268752
Chrom. to baseline at nC50	YES				23-OCT-20	26-OCT-20	R5268752
Surrogate: 2-Bromobenzotrifluoride	89.5		60-140	%	23-OCT-20	26-OCT-20	R5268752

* 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
L2517207-2 MW02-SS03							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
PAHs in Sediment							
1-Methylnaphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
2-Methylnaphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acenaphthene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acenaphthylene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acridine	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Anthracene	<0.0040		0.0040	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(a)anthracene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(a)pyrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(b)fluoranthene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(g,h,i)perylene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(k)fluoranthene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Chrysene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Dibenzo(ah)anthracene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Fluoranthene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Fluorene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Indeno(1,2,3-cd)pyrene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Naphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Phenanthrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Pyrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Quinoline	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
B(a)P Total Potency Equivalent	<0.020		0.020	ug/g	19-OCT-20	21-OCT-20	R5260420
IACR (CCME)	<0.15		0.15		19-OCT-20	21-OCT-20	R5260420
Surrogate: 2-Fluorobiphenyl	89.3		60-140	%	19-OCT-20	21-OCT-20	R5260420
Surrogate: p-Terphenyl d14	98.6		60-140	%	19-OCT-20	21-OCT-20	R5260420
L2517207-3 MW03-SS03							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
Miscellaneous Parameters							
% Moisture	24.0		0.25	%	21-OCT-20	22-OCT-20	R5262236
Xylenes (Total)	<0.071		0.071	mg/kg		27-OCT-20	
Total THMs	<0.10		0.10	mg/kg		27-OCT-20	
Metals in Soil by CRC ICPMS							
Aluminum (Al)	26900		5000	mg/kg	20-OCT-20	20-OCT-20	R5260436
Antimony (Sb)	0.40		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Arsenic (As)	9.87		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Barium (Ba)	187		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Beryllium (Be)	1.16		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Boron (B)	18.7		5.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Bismuth (Bi)	0.28		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Cadmium (Cd)	0.109		0.020	mg/kg	20-OCT-20	20-OCT-20	R5260436
Calcium (Ca)	34400		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Chromium (Cr)	50.6		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Cobalt (Co)	15.3		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Copper (Cu)	31.9		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Iron (Fe)	33200		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Lead (Pb)	14.0		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Lithium (Li)	27.2		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Magnesium (Mg)	27600		20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Manganese (Mn)	730		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Molybdenum (Mo)	0.18		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Nickel (Ni)	42.6		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436

* 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
L2517207-3 MW03-SS03							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
Metals in Soil by CRC ICPMS							
Phosphorus (P)	523		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Potassium (K)	5000		100	mg/kg	20-OCT-20	20-OCT-20	R5260436
Selenium (Se)	<0.20		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Silver (Ag)	0.14		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Sodium (Na)	144		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Strontium (Sr)	47.6		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Sulfur (S)	<1000		1000	mg/kg	20-OCT-20	20-OCT-20	R5260436
Thallium (Tl)	0.354		0.050	mg/kg	20-OCT-20	20-OCT-20	R5260436
Tin (Sn)	<2.0		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Titanium (Ti)	187		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Tungsten (W)	<0.50		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Uranium (U)	0.985		0.050	mg/kg	20-OCT-20	20-OCT-20	R5260436
Vanadium (V)	81.0		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Zinc (Zn)	82.9		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Zirconium (Zr)	11.4		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
VOC plus F1 by GCMS							
Acetone	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
Benzene	<0.0050		0.0050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromobenzene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromochloromethane	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromodichloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromoform	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromomethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
n-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
sec-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
tert-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Carbon disulfide	<0.25		0.25	mg/kg	15-OCT-20	21-OCT-20	R5269285
Carbon Tetrachloride	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloroform	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2-Chlorotoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
4-Chlorotoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dibromochloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dibromo-3-chloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dibromoethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dibromomethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,3-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,4-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dichlorodifluoromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1-dichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1-dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
cis-1,2-Dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
trans-1,2-Dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dichloromethane	0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,3-Dichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2,2-Dichloropropane	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285

* 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
L2517207-3 MW03-SS03							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
VOC plus F1 by GCMS							
1,1-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
cis-1,3-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
trans-1,3-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Ethylbenzene	<0.015		0.015	mg/kg	15-OCT-20	21-OCT-20	R5269285
F1	<10		10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Hexachlorobutadiene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Hexane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2-Hexanone (Methyl butyl ketone)	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
Isopropylbenzene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
4-Isopropyltoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
MEK	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
MIBK	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
MTBE	<0.20		0.20	mg/kg	15-OCT-20	21-OCT-20	R5269285
Styrene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,1,2-Tetrachloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,2,2-Tetrachloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Tetrachloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Toluene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,3-Trichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,4-Trichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,1-Trichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,2-Trichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Trichloroethene	<0.010		0.010	mg/kg	15-OCT-20	21-OCT-20	R5269285
Trichlorofluoromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,3-Trichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,4-Trimethylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,3,5-Trimethylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Vinyl Chloride	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
M+P-Xylenes	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
o-Xylene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Surrogate: 1,4-Difluorobenzene (SS)	115.9		70-130	%	15-OCT-20	21-OCT-20	R5269285
Surrogate: 3,4-Dichlorotoluene (SS)	137.2	SURR-ND	70-130	%	15-OCT-20	21-OCT-20	R5269285
Surrogate: 4-Bromofluorobenzene (SS)	107.3		70-130	%	15-OCT-20	21-OCT-20	R5269285
F2-F4 (O.Reg.153/04)							
F2 (C10-C16)	<10		10	ug/g	23-OCT-20	26-OCT-20	R5268752
F3 (C16-C34)	<50		50	ug/g	23-OCT-20	26-OCT-20	R5268752
F4 (C34-C50)	<50		50	ug/g	23-OCT-20	26-OCT-20	R5268752
Chrom. to baseline at nC50	YES				23-OCT-20	26-OCT-20	R5268752
Surrogate: 2-Bromobenzotrifluoride	89.6		60-140	%	23-OCT-20	26-OCT-20	R5268752
PAHs in Sediment							
1-Methylnaphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
2-Methylnaphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acenaphthene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acenaphthylene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acridine	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Anthracene	<0.0040		0.0040	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(a)anthracene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(a)pyrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(b)fluoranthene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(g,h,i)perylene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(k)fluoranthene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420

* 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
L2517207-3 MW03-SS03							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
PAHs in Sediment							
Chrysene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Dibenzo(ah)anthracene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Fluoranthene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Fluorene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Indeno(1,2,3-cd)pyrene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Naphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Phenanthrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Pyrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Quinoline	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
B(a)P Total Potency Equivalent	<0.020		0.020	ug/g	19-OCT-20	21-OCT-20	R5260420
IACR (CCME)	<0.15		0.15		19-OCT-20	21-OCT-20	R5260420
Surrogate: 2-Fluorobiphenyl	97.0		60-140	%	19-OCT-20	21-OCT-20	R5260420
Surrogate: p-Terphenyl d14	106.5		60-140	%	19-OCT-20	21-OCT-20	R5260420
L2517207-4 MW04-SS05							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
Miscellaneous Parameters							
% Moisture	20.4		0.25	%	21-OCT-20	22-OCT-20	R5262236
Xylenes (Total)	<0.071		0.071	mg/kg		27-OCT-20	
Total THMs	<0.10		0.10	mg/kg		27-OCT-20	
Metals in Soil by CRC ICPMS							
Aluminum (Al)	12200		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Antimony (Sb)	0.22		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Arsenic (As)	4.61		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Barium (Ba)	105		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Beryllium (Be)	0.50		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Boron (B)	15.1		5.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Bismuth (Bi)	<0.20		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Cadmium (Cd)	0.179		0.020	mg/kg	20-OCT-20	20-OCT-20	R5260436
Calcium (Ca)	109000		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Chromium (Cr)	25.8		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Cobalt (Co)	7.14		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Copper (Cu)	17.1		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Iron (Fe)	16600		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Lead (Pb)	6.92		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Lithium (Li)	17.9		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Magnesium (Mg)	57900		20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Manganese (Mn)	385		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Molybdenum (Mo)	0.51		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Nickel (Ni)	20.5		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Phosphorus (P)	411		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Potassium (K)	2200		100	mg/kg	20-OCT-20	20-OCT-20	R5260436
Selenium (Se)	<0.20		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Silver (Ag)	<0.10		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Sodium (Na)	223		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Strontium (Sr)	72.8		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Sulfur (S)	<1000		1000	mg/kg	20-OCT-20	20-OCT-20	R5260436
Thallium (Tl)	0.188		0.050	mg/kg	20-OCT-20	20-OCT-20	R5260436
Tin (Sn)	<2.0		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Titanium (Ti)	293		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Tungsten (W)	<0.50		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2517207-4 MW04-SS05							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
Metals in Soil by CRC ICPMS							
Uranium (U)	1.14		0.050	mg/kg	20-OCT-20	20-OCT-20	R5260436
Vanadium (V)	38.8		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Zinc (Zn)	38.7		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Zirconium (Zr)	9.5		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
VOC plus F1 by GCMS							
Acetone	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
Benzene	<0.0050		0.0050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromobenzene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromochloromethane	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromodichloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromoform	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromomethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
n-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
sec-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
tert-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Carbon disulfide	<0.25		0.25	mg/kg	15-OCT-20	21-OCT-20	R5269285
Carbon Tetrachloride	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloroform	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2-Chlorotoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
4-Chlorotoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dibromochloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dibromo-3-chloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dibromoethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dibromomethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,3-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,4-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dichlorodifluoromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1-dichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1-dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
cis-1,2-Dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
trans-1,2-Dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dichloromethane	0.12		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,3-Dichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2,2-Dichloropropane	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
cis-1,3-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
trans-1,3-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Ethylbenzene	<0.015		0.015	mg/kg	15-OCT-20	21-OCT-20	R5269285
F1	<10		10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Hexachlorobutadiene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Hexane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2-Hexanone (Methyl butyl ketone)	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
Isopropylbenzene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
4-Isopropyltoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
MEK	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285

* 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
L2517207-4 MW04-SS05							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
VOC plus F1 by GCMS							
MIBK	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
MTBE	<0.20		0.20	mg/kg	15-OCT-20	21-OCT-20	R5269285
Styrene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,1,2-Tetrachloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,2,2-Tetrachloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Tetrachloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Toluene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,3-Trichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,4-Trichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,1-Trichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,2-Trichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Trichloroethene	<0.010		0.010	mg/kg	15-OCT-20	21-OCT-20	R5269285
Trichlorofluoromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,3-Trichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,4-Trimethylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,3,5-Trimethylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Vinyl Chloride	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
M+P-Xylenes	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
o-Xylene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Surrogate: 1,4-Difluorobenzene (SS)	113.6		70-130	%	15-OCT-20	21-OCT-20	R5269285
Surrogate: 3,4-Dichlorotoluene (SS)	129.3		70-130	%	15-OCT-20	21-OCT-20	R5269285
Surrogate: 4-Bromofluorobenzene (SS)	103.7		70-130	%	15-OCT-20	21-OCT-20	R5269285
F2-F4 (O.Reg.153/04)							
F2 (C10-C16)	<10		10	ug/g	23-OCT-20	26-OCT-20	R5268752
F3 (C16-C34)	<50		50	ug/g	23-OCT-20	26-OCT-20	R5268752
F4 (C34-C50)	<50		50	ug/g	23-OCT-20	26-OCT-20	R5268752
Chrom. to baseline at nC50	YES				23-OCT-20	26-OCT-20	R5268752
Surrogate: 2-Bromobenzotrifluoride	89.5		60-140	%	23-OCT-20	26-OCT-20	R5268752
PAHs in Sediment							
1-Methylnaphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
2-Methylnaphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acenaphthene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acenaphthylene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acridine	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Anthracene	<0.0040		0.0040	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(a)anthracene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(a)pyrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(b)fluoranthene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(g,h,i)perylene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(k)fluoranthene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Chrysene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Dibenzo(ah)anthracene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Fluoranthene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Fluorene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Indeno(1,2,3-cd)pyrene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Naphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Phenanthrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Pyrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Quinoline	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
B(a)P Total Potency Equivalent	<0.020		0.020	ug/g	19-OCT-20	21-OCT-20	R5260420
IACR (CCME)	<0.15		0.15		19-OCT-20	21-OCT-20	R5260420

* 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
L2517207-4 MW04-SS05							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
PAHs in Sediment							
Surrogate: 2-Fluorobiphenyl	90.9		60-140	%	19-OCT-20	21-OCT-20	R5260420
Surrogate: p-Terphenyl d14	99.5		60-140	%	19-OCT-20	21-OCT-20	R5260420
L2517207-5 DUP01							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
Miscellaneous Parameters							
Moisture	22.9		0.10	%		20-OCT-20	R5261396
VOC plus F1-F4 by Tumbler							
CCME Total Extractable Hydrocarbons							
F2 (C10-C16)	<25		25	mg/kg	20-OCT-20	21-OCT-20	R5264196
F3 (C16-C34)	<50		50	mg/kg	20-OCT-20	21-OCT-20	R5264196
F4 (C34-C50)	<50		50	mg/kg	20-OCT-20	21-OCT-20	R5264196
Surrogate: 2-Bromobenzotrifluoride	84.0		60-140	%	20-OCT-20	21-OCT-20	R5264196
Chrom. to baseline at nC50	YES				20-OCT-20	21-OCT-20	R5264196
CCME Total Hydrocarbons							
F1-BTEX	<10		10	mg/kg		27-OCT-20	
Total Hydrocarbons (C6-C50)	<76		76	mg/kg		27-OCT-20	
Sum of Xylene Isomer Concentrations							
Xylenes (Total)	<0.071		0.071	mg/kg		27-OCT-20	
VOC plus F1 by GCMS							
Acetone	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
Benzene	<0.0050		0.0050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromobenzene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromochloromethane	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromodichloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromoform	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Bromomethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
n-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
sec-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
tert-Butylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Carbon disulfide	<0.25		0.25	mg/kg	15-OCT-20	21-OCT-20	R5269285
Carbon Tetrachloride	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloroform	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Chloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2-Chlorotoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
4-Chlorotoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dibromochloromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dibromo-3-chloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dibromoethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dibromomethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,3-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,4-Dichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Dichlorodifluoromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1-dichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1-dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
cis-1,2-Dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
trans-1,2-Dichloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285

* 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
L2517207-5 DUP01							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
VOC plus F1 by GCMS							
Dichloromethane	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2-Dichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,3-Dichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2,2-Dichloropropane	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
cis-1,3-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
trans-1,3-Dichloropropene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Ethylbenzene	<0.015		0.015	mg/kg	15-OCT-20	21-OCT-20	R5269285
F1	<10		10	mg/kg	15-OCT-20	21-OCT-20	R5269285
Hexachlorobutadiene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Hexane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
2-Hexanone (Methyl butyl ketone)	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
Isopropylbenzene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
4-Isopropyltoluene	<0.10		0.10	mg/kg	15-OCT-20	21-OCT-20	R5269285
MEK	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
MIBK	<0.50		0.50	mg/kg	15-OCT-20	21-OCT-20	R5269285
MTBE	<0.20		0.20	mg/kg	15-OCT-20	21-OCT-20	R5269285
Styrene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,1,2-Tetrachloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,2,2-Tetrachloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Tetrachloroethene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Toluene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,3-Trichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,4-Trichlorobenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,1-Trichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,1,2-Trichloroethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Trichloroethene	<0.010		0.010	mg/kg	15-OCT-20	21-OCT-20	R5269285
Trichlorofluoromethane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,3-Trichloropropane	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,2,4-Trimethylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
1,3,5-Trimethylbenzene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Vinyl Chloride	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
M+P-Xylenes	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
o-Xylene	<0.050		0.050	mg/kg	15-OCT-20	21-OCT-20	R5269285
Surrogate: 1,4-Difluorobenzene (SS)	108.7		70-130	%	15-OCT-20	21-OCT-20	R5269285
Surrogate: 3,4-Dichlorotoluene (SS)	136.3	SURR-ND	70-130	%	15-OCT-20	21-OCT-20	R5269285
Surrogate: 4-Bromofluorobenzene (SS)	111.7		70-130	%	15-OCT-20	21-OCT-20	R5269285
L2517207-6 DUP02							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
Miscellaneous Parameters							
% Moisture	21.1		0.25	%	19-OCT-20	20-OCT-20	R5257276
Metals in Soil by CRC ICPMS							
Aluminum (Al)	15400		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Antimony (Sb)	0.22		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Arsenic (As)	7.55		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Barium (Ba)	112		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Beryllium (Be)	0.59		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Boron (B)	15.2		5.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Bismuth (Bi)	<0.20		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Cadmium (Cd)	0.133		0.020	mg/kg	20-OCT-20	20-OCT-20	R5260436

* 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
L2517207-6 DUP02							
Sampled By: CLIENT on 15-OCT-20							
Matrix: SOIL							
Metals in Soil by CRC ICPMS							
Calcium (Ca)	117000		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Chromium (Cr)	27.4		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Cobalt (Co)	7.55		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Copper (Cu)	16.9		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Iron (Fe)	17900		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Lead (Pb)	7.32		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Lithium (Li)	17.1		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Magnesium (Mg)	50100		20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Manganese (Mn)	452		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Molybdenum (Mo)	0.12		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Nickel (Ni)	22.8		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Phosphorus (P)	436		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Potassium (K)	2630		100	mg/kg	20-OCT-20	20-OCT-20	R5260436
Selenium (Se)	<0.20		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Silver (Ag)	<0.10		0.10	mg/kg	20-OCT-20	20-OCT-20	R5260436
Sodium (Na)	117		50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Strontium (Sr)	75.3		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Sulfur (S)	<1000		1000	mg/kg	20-OCT-20	20-OCT-20	R5260436
Thallium (Tl)	0.195		0.050	mg/kg	20-OCT-20	20-OCT-20	R5260436
Tin (Sn)	<2.0		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Titanium (Ti)	212		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Tungsten (W)	<0.50		0.50	mg/kg	20-OCT-20	20-OCT-20	R5260436
Uranium (U)	0.659		0.050	mg/kg	20-OCT-20	20-OCT-20	R5260436
Vanadium (V)	49.9		0.20	mg/kg	20-OCT-20	20-OCT-20	R5260436
Zinc (Zn)	42.1		2.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
Zirconium (Zr)	5.0		1.0	mg/kg	20-OCT-20	20-OCT-20	R5260436
PAHs in Sediment							
1-Methylnaphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
2-Methylnaphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acenaphthene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acenaphthylene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Acridine	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Anthracene	<0.0040		0.0040	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(a)anthracene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(a)pyrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(b)fluoranthene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(g,h,i)perylene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Benzo(k)fluoranthene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Chrysene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Dibenzo(ah)anthracene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Fluoranthene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Fluorene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Indeno(1,2,3-cd)pyrene	<0.010		0.010	ug/g	19-OCT-20	21-OCT-20	R5260420
Naphthalene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Phenanthrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Pyrene	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
Quinoline	<0.0050		0.0050	ug/g	19-OCT-20	21-OCT-20	R5260420
B(a)P Total Potency Equivalent	<0.020		0.020	ug/g	19-OCT-20	21-OCT-20	R5260420
IACR (CCME)	<0.15		0.15		19-OCT-20	21-OCT-20	R5260420
Surrogate: 2-Fluorobiphenyl	88.2		60-140	%	19-OCT-20	21-OCT-20	R5260420
Surrogate: p-Terphenyl d14	90.3		60-140	%	19-OCT-20	21-OCT-20	R5260420

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

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
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).
SURR-ND	Surrogate recovery marginally exceeded ALS DQO. Reported non-detect results for associated samples were deemed to be unaffected.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
F1-F4-CALC-WP	Soil	CCME Total Hydrocarbons	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.

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, 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.

F2-F4-TMB-FID-WP	Soil	CCME Total Extractable Hydrocarbons	CCME CWS-PHC, Pub #1310, Dec 2001

A soil or sediment sample is extracted with 1:1 hexane/acetone in a tumbler, followed by a silica gel clean up to facilitate separation of the hydrocarbons from other polar extractions. An aliquot of the solvent is analyzed using a gas chromatograph equipped with a flame -ionization detector.

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

A sub-sample of the solid sample is extracted with a solvent mixture. Following extraction, the sample extract is treated in situ with Silica Gel analyzed by GC/FID.

The F2 fraction is determined by integrating the area in the chromatogram from the apex of nC10 to the apex nC16 and quantitating using external calibration using a standard mix containing nC10, nC16 and nC34. Similarly, the F3 fraction extends from the apex of nC16 to the apex nC34 and the F4 fraction covers the area from the apex nC34 to the apex nC50. If the chromatogram does not return to the baseline by the time nC50 elutes, a gravimetric determination of the F4 is performed.

MET-200.2-CCMS-WP	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). 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.

MOISTURE-WP	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

Moisture content in solid matrices is determined gravimetrically after drying to constant weight at 105°C.

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)
PAH-CCME-SQGL-WT	Soil	PAHs in Sediment	SW846 8270

The procedure uses a mechanical shaking technique to extract a representative sub-sample with a mixture of methanol and toluene. The extract is analyzed by GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

THM-SUM-CALC-WP	Soil	Total Trihalomethanes (THMs)	CALCULATION

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
Total Trihalomethanes (THMs) represents the sum of bromodichloromethane, bromoform, chlorodibromomethane and chloroform. For the purpose of calculation, results less than the detection limit (DL) are treated as zero.			
VOC+F1-HSMS-WP	Soil	VOC plus F1 by GCMS	EPA 8260C
The soil methanol extract is added to water and reagents, then heated in a sealed vial to equilibrium. The headspace from the vial is transferred into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.			
XYLENES-SUM-CALC-WP	Soil	Sum of Xylene Isomer Concentrations	CALCULATED RESULT
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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

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

Quality Control Report

Workorder: L2517207 Report Date: 27-OCT-20

Client: HLC Consulting Ltd
3 Red Lily Road
Winnipeg Manitoba R3X 0G3
Contact: REEGAN LAWRENCE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-TMB-FID-WP	**Soil**							
Batch R5264196								
WG3428169-12 DUP		**L2517207-5**						
F2 (C10-C16)		<25	<25	RPD-NA	mg/kg	N/A	40	21-OCT-20
F3 (C16-C34)		<50	<50	RPD-NA	mg/kg	N/A	40	21-OCT-20
F4 (C34-C50)		<50	<50	RPD-NA	mg/kg	N/A	40	21-OCT-20
WG3428169-11 IRM		**ALS PHC RM3**						
F2 (C10-C16)			90.4		%		70-130	21-OCT-20
F3 (C16-C34)			93.0		%		70-130	21-OCT-20
F4 (C34-C50)			99.9		%		70-130	21-OCT-20
WG3428169-10 LCS								
F2 (C10-C16)			94.6		%		70-130	21-OCT-20
F3 (C16-C34)			95.4		%		70-130	21-OCT-20
F4 (C34-C50)			102.2		%		70-130	21-OCT-20
WG3428169-9 MB								
F2 (C10-C16)			<25		mg/kg		25	21-OCT-20
F3 (C16-C34)			<50		mg/kg		50	21-OCT-20
F4 (C34-C50)			<50		mg/kg		50	21-OCT-20
Surrogate: 2-Bromobenzotrifluoride			92.6		%		60-140	21-OCT-20
F2-F4-WT	**Soil**							
Batch R5268752								
WG3430578-2 LCS								
F2 (C10-C16)			99.9		%		80-120	26-OCT-20
F3 (C16-C34)			98.0		%		80-120	26-OCT-20
F4 (C34-C50)			97.8		%		80-120	26-OCT-20
WG3430578-1 MB								
F2 (C10-C16)			<10		ug/g		10	26-OCT-20
F3 (C16-C34)			<50		ug/g		50	26-OCT-20
F4 (C34-C50)			<50		ug/g		50	26-OCT-20
Surrogate: 2-Bromobenzotrifluoride			90.5		%		60-140	26-OCT-20
MET-200.2-CCMS-WP	**Soil**							
Batch R5260436								
WG3428614-4 CRM		**TILL2**						
Aluminum (Al)			97.6		%		70-130	20-OCT-20
Antimony (Sb)			89.6		%		70-130	20-OCT-20
Arsenic (As)			96.6		%		70-130	20-OCT-20
Barium (Ba)			95.2		%		70-130	20-OCT-20
Beryllium (Be)			94.3		%		70-130	20-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WP	**Soil**							
Batch R5260436								
WG3428614-4 CRM		**TILL2**						
Bismuth (Bi)			99.7		%		70-130	20-OCT-20
Cadmium (Cd)			96.9		%		70-130	20-OCT-20
Calcium (Ca)			97.1		%		70-130	20-OCT-20
Chromium (Cr)			96.5		%		70-130	20-OCT-20
Cobalt (Co)			97.2		%		70-130	20-OCT-20
Copper (Cu)			99.9		%		70-130	20-OCT-20
Iron (Fe)			97.6		%		70-130	20-OCT-20
Lead (Pb)			98.4		%		70-130	20-OCT-20
Lithium (Li)			96.1		%		70-130	20-OCT-20
Magnesium (Mg)			101.1		%		70-130	20-OCT-20
Manganese (Mn)			97.4		%		70-130	20-OCT-20
Molybdenum (Mo)			95.8		%		70-130	20-OCT-20
Nickel (Ni)			96.9		%		70-130	20-OCT-20
Phosphorus (P)			89.8		%		70-130	20-OCT-20
Potassium (K)			92.7		%		70-130	20-OCT-20
Selenium (Se)			0.27		mg/kg		0.15-0.55	20-OCT-20
Silver (Ag)			0.26		mg/kg		0.16-0.36	20-OCT-20
Sodium (Na)			80.9		%		70-130	20-OCT-20
Strontium (Sr)			92.9		%		70-130	20-OCT-20
Thallium (Tl)			99.4		%		70-130	20-OCT-20
Tin (Sn)			2.0		mg/kg		0.2-4.2	20-OCT-20
Titanium (Ti)			73.4		%		70-130	20-OCT-20
Uranium (U)			93.7		%		70-130	20-OCT-20
Vanadium (V)			95.0		%		70-130	20-OCT-20
Zinc (Zn)			100.1		%		70-130	20-OCT-20
Zirconium (Zr)			105.3		%		70-130	20-OCT-20
WG3428614-2 LCS								
Aluminum (Al)			99.3		%		80-120	20-OCT-20
Antimony (Sb)			105.7		%		80-120	20-OCT-20
Arsenic (As)			104.8		%		80-120	20-OCT-20
Barium (Ba)			102.8		%		80-120	20-OCT-20
Beryllium (Be)			95.8		%		80-120	20-OCT-20
Boron (B)			98.2		%		80-120	20-OCT-20
Bismuth (Bi)			101.3		%		80-120	20-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WP	**Soil**							
Batch R5260436								
WG3428614-2 LCS								
Cadmium (Cd)			101.8		%		80-120	20-OCT-20
Calcium (Ca)			101.3		%		80-120	20-OCT-20
Chromium (Cr)			103.1		%		80-120	20-OCT-20
Cobalt (Co)			101.7		%		80-120	20-OCT-20
Copper (Cu)			102.8		%		80-120	20-OCT-20
Iron (Fe)			109.2		%		80-120	20-OCT-20
Lead (Pb)			98.9		%		80-120	20-OCT-20
Lithium (Li)			90.7		%		80-120	20-OCT-20
Magnesium (Mg)			107.9		%		80-120	20-OCT-20
Manganese (Mn)			102.3		%		80-120	20-OCT-20
Molybdenum (Mo)			104.4		%		80-120	20-OCT-20
Nickel (Ni)			100.7		%		80-120	20-OCT-20
Phosphorus (P)			110.4		%		80-120	20-OCT-20
Potassium (K)			103.9		%		80-120	20-OCT-20
Selenium (Se)			105.0		%		80-120	20-OCT-20
Silver (Ag)			100.2		%		80-120	20-OCT-20
Sodium (Na)			103.7		%		80-120	20-OCT-20
Strontium (Sr)			106.3		%		80-120	20-OCT-20
Sulfur (S)			102.6		%		70-130	20-OCT-20
Thallium (Tl)			100.9		%		80-120	20-OCT-20
Tin (Sn)			100.4		%		80-120	20-OCT-20
Titanium (Ti)			98.7		%		80-120	20-OCT-20
Tungsten (W)			100.4		%		70-130	20-OCT-20
Uranium (U)			95.8		%		80-120	20-OCT-20
Vanadium (V)			103.3		%		80-120	20-OCT-20
Zinc (Zn)			116.7		%		80-120	20-OCT-20
Zirconium (Zr)			94.8		%		80-120	20-OCT-20
WG3428614-1 MB								
Aluminum (Al)			<50		mg/kg		50	20-OCT-20
Antimony (Sb)			<0.10		mg/kg		0.1	20-OCT-20
Arsenic (As)			<0.10		mg/kg		0.1	20-OCT-20
Barium (Ba)			<0.50		mg/kg		0.5	20-OCT-20
Beryllium (Be)			<0.10		mg/kg		0.1	20-OCT-20
Boron (B)			<5.0		mg/kg		5	20-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WP	**Soil**							
Batch R5260436								
WG3428614-1 MB								
Bismuth (Bi)			<0.20		mg/kg		0.2	20-OCT-20
Cadmium (Cd)			<0.020		mg/kg		0.02	20-OCT-20
Calcium (Ca)			<50		mg/kg		50	20-OCT-20
Chromium (Cr)			<0.50		mg/kg		0.5	20-OCT-20
Cobalt (Co)			<0.10		mg/kg		0.1	20-OCT-20
Copper (Cu)			<0.50		mg/kg		0.5	20-OCT-20
Iron (Fe)			<50		mg/kg		50	20-OCT-20
Lead (Pb)			<0.50		mg/kg		0.5	20-OCT-20
Lithium (Li)			<2.0		mg/kg		2	20-OCT-20
Magnesium (Mg)			<20		mg/kg		20	20-OCT-20
Manganese (Mn)			<1.0		mg/kg		1	20-OCT-20
Molybdenum (Mo)			<0.10		mg/kg		0.1	20-OCT-20
Nickel (Ni)			<0.50		mg/kg		0.5	20-OCT-20
Phosphorus (P)			<50		mg/kg		50	20-OCT-20
Potassium (K)			<100		mg/kg		100	20-OCT-20
Selenium (Se)			<0.20		mg/kg		0.2	20-OCT-20
Silver (Ag)			<0.10		mg/kg		0.1	20-OCT-20
Sodium (Na)			<50		mg/kg		50	20-OCT-20
Strontium (Sr)			<0.50		mg/kg		0.5	20-OCT-20
Sulfur (S)			<1000		mg/kg		1000	20-OCT-20
Thallium (Tl)			<0.050		mg/kg		0.05	20-OCT-20
Tin (Sn)			<2.0		mg/kg		2	20-OCT-20
Titanium (Ti)			<1.0		mg/kg		1	20-OCT-20
Tungsten (W)			<0.50		mg/kg		0.5	20-OCT-20
Uranium (U)			<0.050		mg/kg		0.05	20-OCT-20
Vanadium (V)			<0.20		mg/kg		0.2	20-OCT-20
Zinc (Zn)			16.6	B	mg/kg		2	20-OCT-20
Zirconium (Zr)			<1.0		mg/kg		1	20-OCT-20
MOISTURE-WP	**Soil**							
Batch R5261396								
WG3428249-3 DUP		**L2517207-5**						
Moisture		22.9	22.7		%	0.9	20	20-OCT-20
WG3428249-2 LCS								
Moisture			99.4		%		90-110	20-OCT-20
WG3428249-1 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WP	**Soil**							
Batch R5261396								
WG3428249-1 MB								
Moisture			<0.10		%		0.1	20-OCT-20
MOISTURE-WT	**Soil**							
Batch R5257276								
WG3427103-2 LCS								
% Moisture			100.2		%		90-110	20-OCT-20
WG3427103-1 MB								
% Moisture			<0.25		%		0.25	20-OCT-20
Batch R5261276								
WG3428937-3 DUP		**L2517207-1**						
% Moisture		28.8	28.0		%	2.8	20	21-OCT-20
WG3428937-2 LCS								
% Moisture			99.5		%		90-110	21-OCT-20
WG3428937-1 MB								
% Moisture			<0.25		%		0.25	21-OCT-20
Batch R5262236								
WG3428833-2 LCS								
% Moisture			100.0		%		90-110	22-OCT-20
WG3428833-1 MB								
% Moisture			<0.25		%		0.25	22-OCT-20
PAH-CCME-SQGL-WT	**Soil**							
Batch R5260420								
WG3426984-3 DUP		**L2517207-1**						
1-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	21-OCT-20
2-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	21-OCT-20
Acenaphthene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	21-OCT-20
Acenaphthylene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	21-OCT-20
Acridine		<0.010	<0.010	RPD-NA	ug/g	N/A	50	21-OCT-20
Anthracene		<0.0040	<0.0040	RPD-NA	ug/g	N/A	50	21-OCT-20
Benzo(a)anthracene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	21-OCT-20
Benzo(a)pyrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	21-OCT-20
Benzo(b)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	21-OCT-20
Benzo(g,h,i)perylene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	21-OCT-20
Benzo(k)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	21-OCT-20
Chrysene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	21-OCT-20
Dibenzo(ah)anthracene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	21-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5260420								
WG3426984-3 DUP		**L2517207-1**						
Fluoranthene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	21-OCT-20
Fluorene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	21-OCT-20
Indeno(1,2,3-cd)pyrene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	21-OCT-20
Naphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	21-OCT-20
Phenanthrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	21-OCT-20
Pyrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	21-OCT-20
Quinoline		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	21-OCT-20
WG3426984-2 LCS								
1-Methylnaphthalene			94.3		%		50-140	21-OCT-20
2-Methylnaphthalene			89.9		%		50-140	21-OCT-20
Acenaphthene			94.4		%		50-140	21-OCT-20
Acenaphthylene			88.2		%		50-140	21-OCT-20
Acridine			83.8		%		50-140	21-OCT-20
Anthracene			86.9		%		50-140	21-OCT-20
Benzo(a)anthracene			86.8		%		50-140	21-OCT-20
Benzo(a)pyrene			86.5		%		50-140	21-OCT-20
Benzo(b)fluoranthene			87.1		%		50-140	21-OCT-20
Benzo(g,h,i)perylene			83.7		%		50-140	21-OCT-20
Benzo(k)fluoranthene			87.7		%		50-140	21-OCT-20
Chrysene			102.0		%		50-140	21-OCT-20
Dibenzo(ah)anthracene			86.2		%		50-140	21-OCT-20
Fluoranthene			86.3		%		50-140	21-OCT-20
Fluorene			88.8		%		50-140	21-OCT-20
Indeno(1,2,3-cd)pyrene			78.7		%		50-140	21-OCT-20
Naphthalene			92.2		%		50-140	21-OCT-20
Phenanthrene			89.0		%		50-140	21-OCT-20
Pyrene			87.2		%		50-140	21-OCT-20
Quinoline			77.2		%		50-140	21-OCT-20
WG3426984-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	21-OCT-20
2-Methylnaphthalene			<0.0050		ug/g		0.005	21-OCT-20
Acenaphthene			<0.0050		ug/g		0.005	21-OCT-20
Acenaphthylene			<0.0050		ug/g		0.005	21-OCT-20
Acridine			<0.010		ug/g		0.01	21-OCT-20
Anthracene			<0.0040		ug/g		0.004	21-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5260420								
WG3426984-1 MB								
Benzo(a)anthracene			<0.010		ug/g		0.01	21-OCT-20
Benzo(a)pyrene			<0.0050		ug/g		0.005	21-OCT-20
Benzo(b)fluoranthene			<0.010		ug/g		0.01	21-OCT-20
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	21-OCT-20
Benzo(k)fluoranthene			<0.010		ug/g		0.01	21-OCT-20
Chrysene			<0.010		ug/g		0.01	21-OCT-20
Dibenzo(ah)anthracene			<0.0050		ug/g		0.005	21-OCT-20
Fluoranthene			<0.0050		ug/g		0.005	21-OCT-20
Fluorene			<0.0050		ug/g		0.005	21-OCT-20
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	21-OCT-20
Naphthalene			<0.0050		ug/g		0.005	21-OCT-20
Phenanthrene			<0.0050		ug/g		0.005	21-OCT-20
Pyrene			<0.0050		ug/g		0.005	21-OCT-20
Quinoline			<0.0050		ug/g		0.005	21-OCT-20
Surrogate: 2-Fluorobiphenyl			92.3		%		60-140	21-OCT-20
Surrogate: p-Terphenyl d14			100.0		%		60-140	21-OCT-20
WG3426984-4 MS		**L2517207-1**						
1-Methylnaphthalene			90.6		%		50-150	21-OCT-20
2-Methylnaphthalene			86.5		%		50-150	21-OCT-20
Acenaphthene			90.8		%		50-150	21-OCT-20
Acenaphthylene			85.2		%		50-150	21-OCT-20
Acridine			78.4		%		50-150	21-OCT-20
Anthracene			85.6		%		50-150	21-OCT-20
Benzo(a)anthracene			88.5		%		50-150	21-OCT-20
Benzo(a)pyrene			86.1		%		50-150	21-OCT-20
Benzo(b)fluoranthene			87.8		%		50-150	21-OCT-20
Benzo(g,h,i)perylene			86.9		%		50-150	21-OCT-20
Benzo(k)fluoranthene			85.7		%		50-150	21-OCT-20
Chrysene			99.7		%		50-150	21-OCT-20
Dibenzo(ah)anthracene			93.7		%		50-150	21-OCT-20
Fluoranthene			86.8		%		50-150	21-OCT-20
Fluorene			86.3		%		50-150	21-OCT-20
Indeno(1,2,3-cd)pyrene			86.1		%		50-150	21-OCT-20
Naphthalene			87.7		%		50-150	21-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5260420								
WG3426984-4 MS		**L2517207-1**						
Phenanthrene			87.0		%		50-150	21-OCT-20
Pyrene			87.3		%		50-150	21-OCT-20
Quinoline			67.7		%		50-150	21-OCT-20
VOC+F1-HSMS-WP	**Soil**							
Batch R5269285								
WG3428839-3 DUP		**L2517207-1**						
Acetone		<0.50	<0.50	RPD-NA	mg/kg	N/A	50	21-OCT-20
Benzene		<0.0050	<0.0050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Bromobenzene		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	21-OCT-20
Bromochloromethane		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	21-OCT-20
Bromodichloromethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Bromoform		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Bromomethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
n-Butylbenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
sec-Butylbenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
tert-Butylbenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Carbon disulfide		<0.25	<0.25	RPD-NA	mg/kg	N/A	50	21-OCT-20
Carbon Tetrachloride		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Chlorobenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Chloroethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Chloroform		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Chloromethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
2-Chlorotoluene		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	21-OCT-20
4-Chlorotoluene		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	21-OCT-20
Dibromochloromethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,2-Dibromo-3-chloropropane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Dibromomethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,1-dichloroethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC+F1-HSMS-WP	**Soil**							
Batch R5269285								
WG3428839-3 DUP		**L2517207-1**						
1,1-dichloroethene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
cis-1,2-Dichloroethene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
trans-1,2-Dichloroethene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Dichloromethane		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,3-Dichloropropane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
2,2-Dichloropropane		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,1-Dichloropropene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
cis-1,3-Dichloropropene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
trans-1,3-Dichloropropene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Ethylbenzene		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	21-OCT-20
F1		<10	<10	RPD-NA	mg/kg	N/A	50	21-OCT-20
Hexachlorobutadiene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Hexane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
2-Hexanone (Methyl butyl ketone)		<0.50	<0.50	RPD-NA	mg/kg	N/A	50	21-OCT-20
Isopropylbenzene		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	21-OCT-20
4-Isopropyltoluene		<0.10	<0.10	RPD-NA	mg/kg	N/A	50	21-OCT-20
MEK		<0.50	<0.50	RPD-NA	mg/kg	N/A	50	21-OCT-20
MIBK		<0.50	<0.50	RPD-NA	mg/kg	N/A	50	21-OCT-20
MTBE		<0.20	<0.20	RPD-NA	mg/kg	N/A	50	21-OCT-20
Styrene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Tetrachloroethene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Toluene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,2,3-Trichlorobenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,2,4-Trichlorobenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
Trichloroethene		<0.010	<0.010	RPD-NA	mg/kg	N/A	50	21-OCT-20
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,2,3-Trichloropropane		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,2,4-Trimethylbenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
1,3,5-Trimethylbenzene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC+F1-HSMS-WP	**Soil**							
Batch R5269285								
WG3428839-3 DUP		**L2517207-1**						
Vinyl Chloride		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
M+P-Xylenes		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
o-Xylene		<0.050	<0.050	RPD-NA	mg/kg	N/A	50	21-OCT-20
WG3428839-2 LCS								
Acetone			92.6		%		70-130	21-OCT-20
Benzene			89.7		%		70-130	21-OCT-20
Bromobenzene			95.1		%		70-130	21-OCT-20
Bromochloromethane			90.2		%		70-130	21-OCT-20
Bromodichloromethane			98.7		%		70-130	21-OCT-20
Bromoform			86.1		%		70-130	21-OCT-20
Bromomethane			99.9		%		60-140	21-OCT-20
n-Butylbenzene			104.5		%		70-130	21-OCT-20
sec-Butylbenzene			110.1		%		70-130	21-OCT-20
tert-Butylbenzene			103.3		%		70-130	21-OCT-20
Carbon disulfide			86.9		%		70-130	21-OCT-20
Carbon Tetrachloride			92.8		%		70-130	21-OCT-20
Chlorobenzene			92.6		%		70-130	21-OCT-20
Chloroethane			86.9		%		60-140	21-OCT-20
Chloroform			93.1		%		70-130	21-OCT-20
Chloromethane			90.9		%		60-140	21-OCT-20
2-Chlorotoluene			99.3		%		70-130	21-OCT-20
4-Chlorotoluene			108.4		%		70-130	21-OCT-20
Dibromochloromethane			83.1		%		70-130	21-OCT-20
1,2-Dibromo-3-chloropropane			89.1		%		70-130	21-OCT-20
1,2-Dibromoethane			83.7		%		70-130	21-OCT-20
Dibromomethane			93.1		%		70-130	21-OCT-20
1,2-Dichlorobenzene			92.5		%		70-130	21-OCT-20
1,3-Dichlorobenzene			94.5		%		70-130	21-OCT-20
1,4-Dichlorobenzene			96.0		%		70-130	21-OCT-20
Dichlorodifluoromethane			58.5	MES	%		60-140	21-OCT-20
1,1-dichloroethane			89.6		%		70-130	21-OCT-20
1,2-Dichloroethane			86.7		%		70-130	21-OCT-20
1,1-dichloroethene			82.7		%		70-130	21-OCT-20
cis-1,2-Dichloroethene			87.8		%		70-130	21-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC+F1-HSMS-WP	**Soil**							
Batch R5269285								
WG3428839-2 LCS								
trans-1,2-Dichloroethene			84.2		%		70-130	21-OCT-20
Dichloromethane			86.9		%		60-140	21-OCT-20
1,2-Dichloropropane			86.1		%		70-130	21-OCT-20
1,3-Dichloropropane			87.6		%		70-130	21-OCT-20
2,2-Dichloropropane			84.6		%		70-130	21-OCT-20
1,1-Dichloropropene			92.0		%		70-130	21-OCT-20
cis-1,3-Dichloropropene			87.9		%		70-130	21-OCT-20
trans-1,3-Dichloropropene			88.9		%		70-130	21-OCT-20
Ethylbenzene			97.7		%		70-130	21-OCT-20
Hexachlorobutadiene			87.6		%		70-130	21-OCT-20
Hexane			86.3		%		70-130	21-OCT-20
2-Hexanone (Methyl butyl ketone)			90.3		%		70-130	21-OCT-20
Isopropylbenzene			107.9		%		70-130	21-OCT-20
4-Isopropyltoluene			102.6		%		70-130	21-OCT-20
MEK			91.8		%		70-130	21-OCT-20
MIBK			90.7		%		70-130	21-OCT-20
MTBE			90.6		%		70-130	21-OCT-20
Styrene			101.6		%		70-130	21-OCT-20
1,1,1,2-Tetrachloroethane			86.4		%		70-130	21-OCT-20
1,1,2,2-Tetrachloroethane			80.7		%		70-130	21-OCT-20
Tetrachloroethene			91.7		%		70-130	21-OCT-20
Toluene			88.6		%		70-130	21-OCT-20
1,2,3-Trichlorobenzene			84.2		%		70-130	21-OCT-20
1,2,4-Trichlorobenzene			76.4		%		70-130	21-OCT-20
1,1,1-Trichloroethane			91.6		%		70-130	21-OCT-20
1,1,2-Trichloroethane			90.1		%		70-130	21-OCT-20
Trichloroethene			91.5		%		70-130	21-OCT-20
Trichlorofluoromethane			78.4		%		60-140	21-OCT-20
1,2,3-Trichloropropane			81.4		%		70-130	21-OCT-20
1,2,4-Trimethylbenzene			101.0		%		70-130	21-OCT-20
1,3,5-Trimethylbenzene			104.9		%		70-130	21-OCT-20
Vinyl Chloride			82.5		%		60-140	21-OCT-20
M+P-Xylenes			107.7		%		70-130	21-OCT-20
o-Xylene			106.6		%		70-130	21-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC+F1-HSMS-WP	**Soil**							
Batch R5269285								
WG3428839-4 LCS								
F1			117.7		%		70-130	21-OCT-20
WG3428839-1 MB								
Acetone			<0.50		mg/kg		0.5	21-OCT-20
Benzene			<0.0050		mg/kg		0.005	21-OCT-20
Bromobenzene			<0.10		mg/kg		0.1	21-OCT-20
Bromochloromethane			<0.10		mg/kg		0.1	21-OCT-20
Bromodichloromethane			<0.050		mg/kg		0.05	21-OCT-20
Bromoform			<0.050		mg/kg		0.05	21-OCT-20
Bromomethane			<0.050		mg/kg		0.05	21-OCT-20
n-Butylbenzene			<0.050		mg/kg		0.05	21-OCT-20
sec-Butylbenzene			<0.050		mg/kg		0.05	21-OCT-20
tert-Butylbenzene			<0.050		mg/kg		0.05	21-OCT-20
Carbon disulfide			<0.25		mg/kg		0.25	21-OCT-20
Carbon Tetrachloride			<0.050		mg/kg		0.05	21-OCT-20
Chlorobenzene			<0.050		mg/kg		0.05	21-OCT-20
Chloroethane			<0.050		mg/kg		0.05	21-OCT-20
Chloroform			<0.050		mg/kg		0.05	21-OCT-20
Chloromethane			<0.050		mg/kg		0.05	21-OCT-20
2-Chlorotoluene			<0.10		mg/kg		0.1	21-OCT-20
4-Chlorotoluene			<0.10		mg/kg		0.1	21-OCT-20
Dibromochloromethane			<0.050		mg/kg		0.05	21-OCT-20
1,2-Dibromo-3-chloropropane			<0.050		mg/kg		0.05	21-OCT-20
1,2-Dibromoethane			<0.050		mg/kg		0.05	21-OCT-20
Dibromomethane			<0.050		mg/kg		0.05	21-OCT-20
1,2-Dichlorobenzene			<0.050		mg/kg		0.05	21-OCT-20
1,3-Dichlorobenzene			<0.050		mg/kg		0.05	21-OCT-20
1,4-Dichlorobenzene			<0.050		mg/kg		0.05	21-OCT-20
Dichlorodifluoromethane			<0.050		mg/kg		0.05	21-OCT-20
1,1-dichloroethane			<0.050		mg/kg		0.05	21-OCT-20
1,2-Dichloroethane			<0.050		mg/kg		0.05	21-OCT-20
1,1-dichloroethene			<0.050		mg/kg		0.05	21-OCT-20
cis-1,2-Dichloroethene			<0.050		mg/kg		0.05	21-OCT-20
trans-1,2-Dichloroethene			<0.050		mg/kg		0.05	21-OCT-20
Dichloromethane			<0.10		mg/kg		0.1	21-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC+F1-HSMS-WP	**Soil**							
Batch R5269285								
WG3428839-1 MB								
1,2-Dichloropropane			<0.050		mg/kg		0.05	21-OCT-20
1,3-Dichloropropane			<0.050		mg/kg		0.05	21-OCT-20
2,2-Dichloropropane			<0.10		mg/kg		0.1	21-OCT-20
1,1-Dichloropropene			<0.050		mg/kg		0.05	21-OCT-20
cis-1,3-Dichloropropene			<0.050		mg/kg		0.05	21-OCT-20
trans-1,3-Dichloropropene			<0.050		mg/kg		0.05	21-OCT-20
Ethylbenzene			<0.015		mg/kg		0.015	21-OCT-20
F1			<10		mg/kg		10	21-OCT-20
Hexachlorobutadiene			<0.050		mg/kg		0.05	21-OCT-20
Hexane			<0.050		mg/kg		0.05	21-OCT-20
2-Hexanone (Methyl butyl ketone)			<0.50		mg/kg		0.5	21-OCT-20
Isopropylbenzene			<0.10		mg/kg		0.1	21-OCT-20
4-Isopropyltoluene			<0.10		mg/kg		0.1	21-OCT-20
MEK			<0.50		mg/kg		0.5	21-OCT-20
MIBK			<0.50		mg/kg		0.5	21-OCT-20
MTBE			<0.20		mg/kg		0.2	21-OCT-20
Styrene			<0.050		mg/kg		0.05	21-OCT-20
1,1,1,2-Tetrachloroethane			<0.050		mg/kg		0.05	21-OCT-20
1,1,2,2-Tetrachloroethane			<0.050		mg/kg		0.05	21-OCT-20
Tetrachloroethene			<0.050		mg/kg		0.05	21-OCT-20
Toluene			<0.050		mg/kg		0.05	21-OCT-20
1,2,3-Trichlorobenzene			<0.050		mg/kg		0.05	21-OCT-20
1,2,4-Trichlorobenzene			<0.050		mg/kg		0.05	21-OCT-20
1,1,1-Trichloroethane			<0.050		mg/kg		0.05	21-OCT-20
1,1,2-Trichloroethane			<0.050		mg/kg		0.05	21-OCT-20
Trichloroethene			<0.010		mg/kg		0.01	21-OCT-20
Trichlorofluoromethane			<0.050		mg/kg		0.05	21-OCT-20
1,2,3-Trichloropropane			<0.050		mg/kg		0.05	21-OCT-20
1,2,4-Trimethylbenzene			<0.050		mg/kg		0.05	21-OCT-20
1,3,5-Trimethylbenzene			<0.050		mg/kg		0.05	21-OCT-20
Vinyl Chloride			<0.050		mg/kg		0.05	21-OCT-20
M+P-Xylenes			<0.050		mg/kg		0.05	21-OCT-20
o-Xylene			<0.050		mg/kg		0.05	21-OCT-20
Surrogate: 1,4-Difluorobenzene (SS)			99.2		%		70-130	21-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC+F1-HSMS-WP	**Soil**							
Batch R5269285								
WG3428839-1 MB								
Surrogate: 3,4-Dichlorotoluene (SS)			95.2		%		70-130	21-OCT-20
Surrogate: 4-Bromofluorobenzene (SS)			93.4		%		70-130	21-OCT-20

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
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
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.

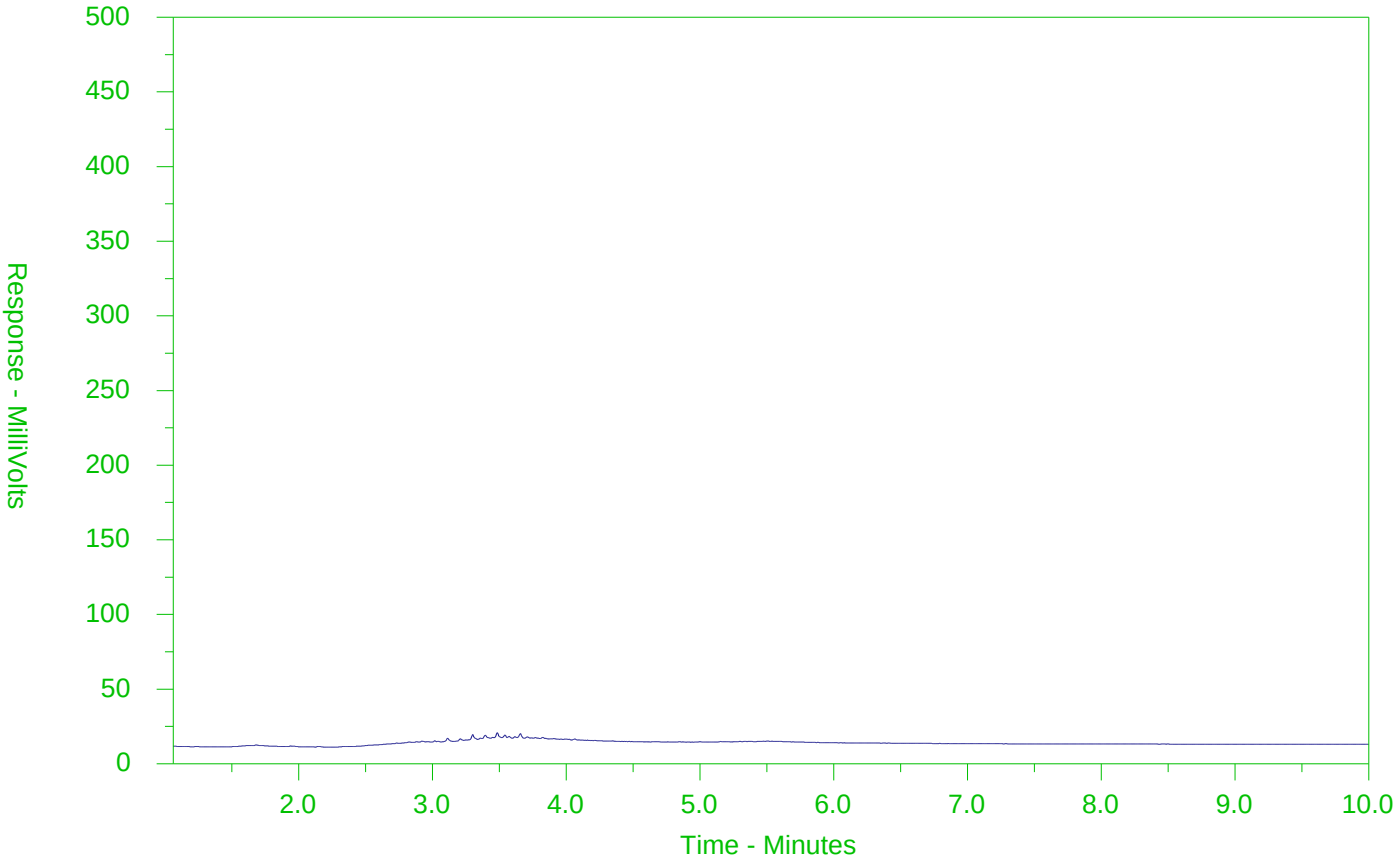
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where 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: L2517207-1
Client Sample ID: MW01-SS04



←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.

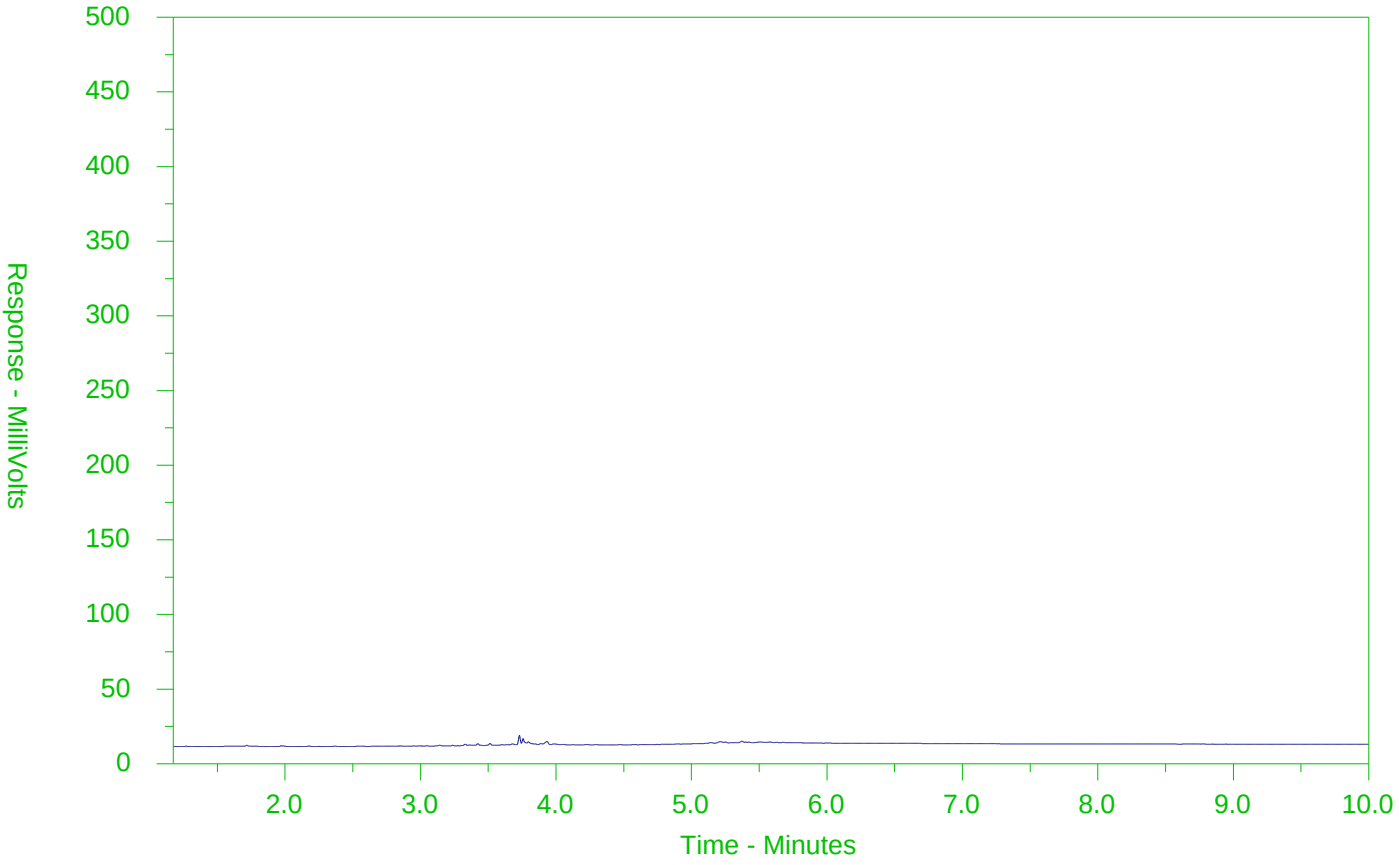
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2517207-2
Client Sample ID: MW02-SS03



←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.

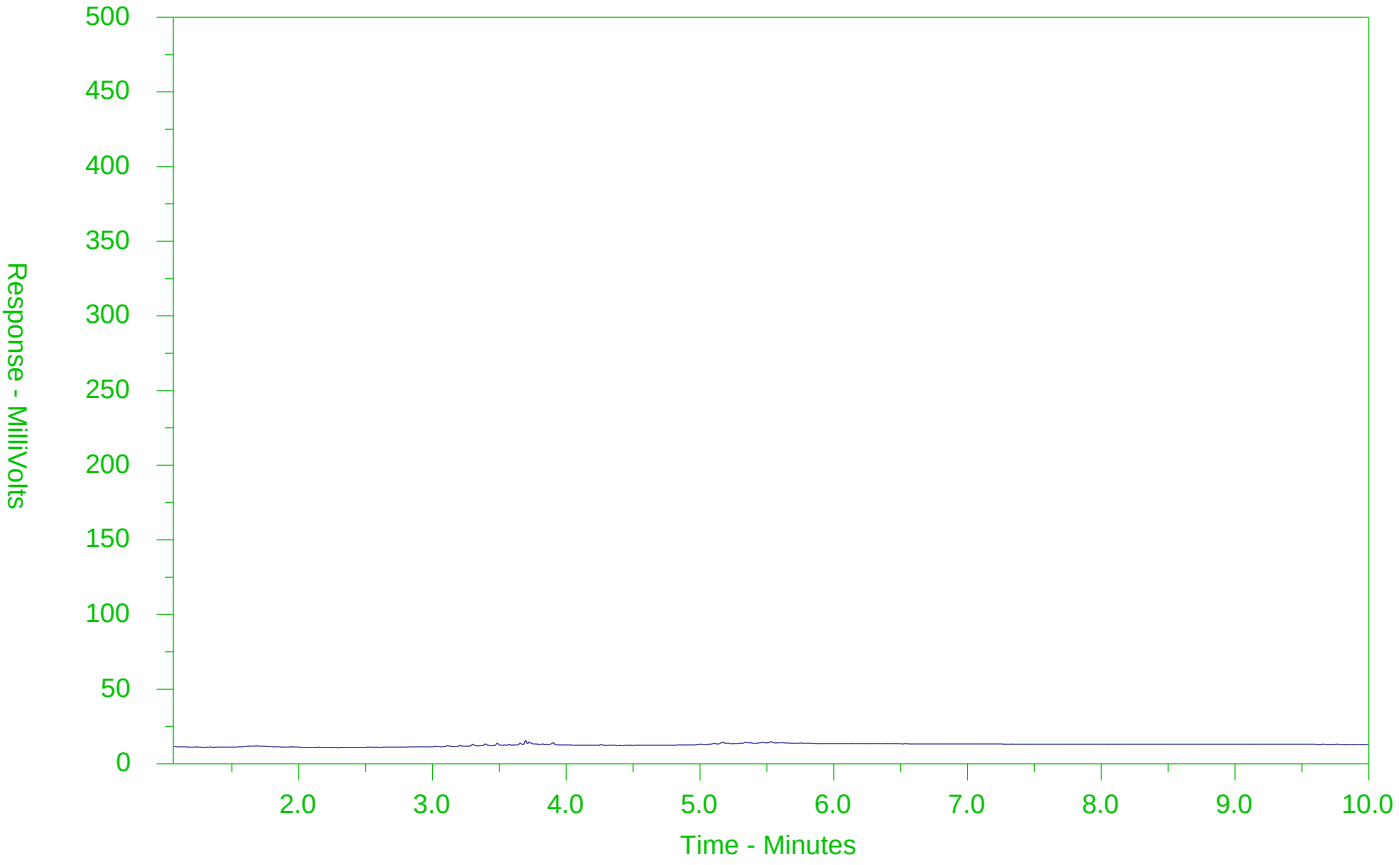
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2517207-3
Client Sample ID: MW03-SS03



←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.

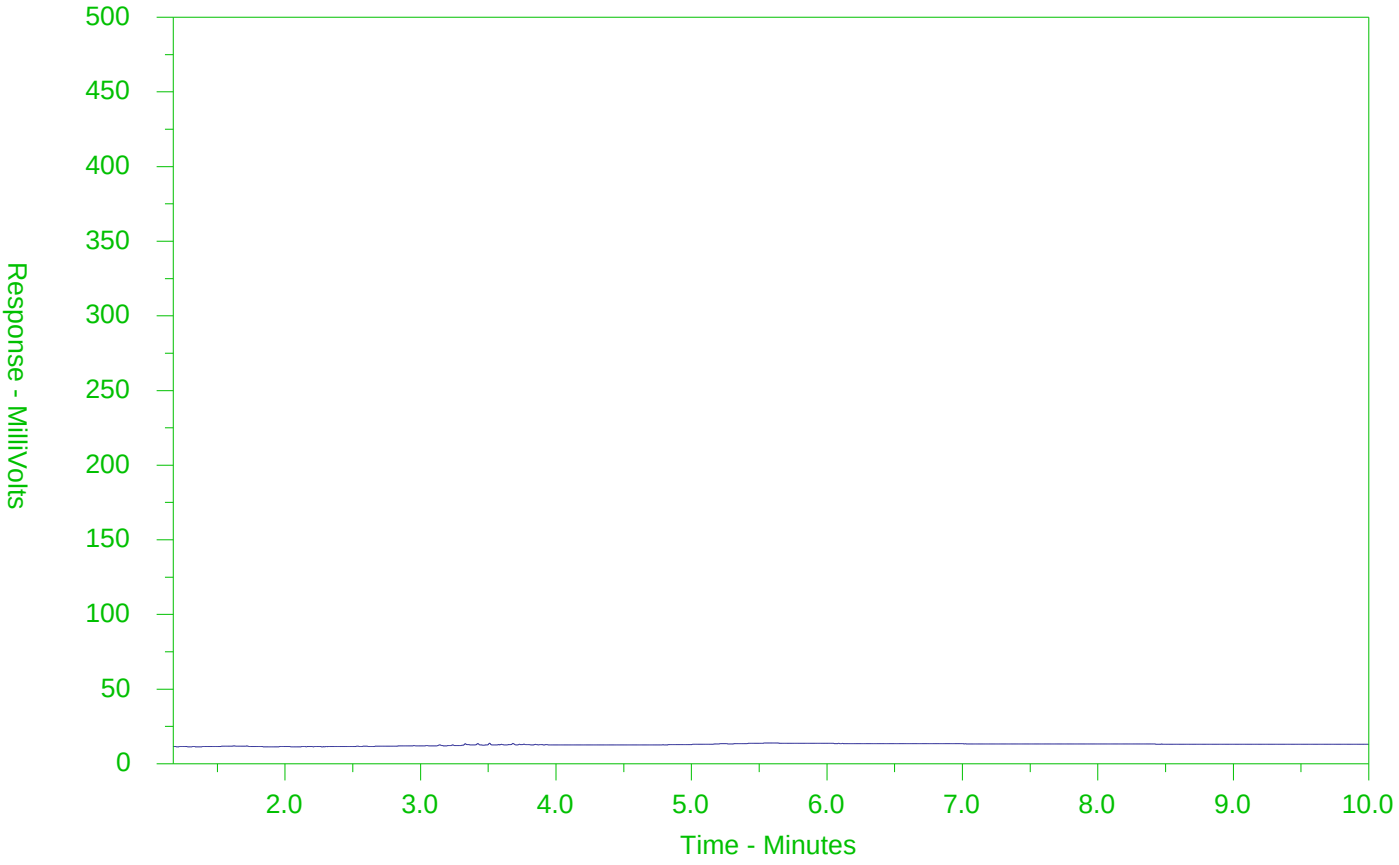
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2517207-4
Client Sample ID: MW04-SS05



←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.

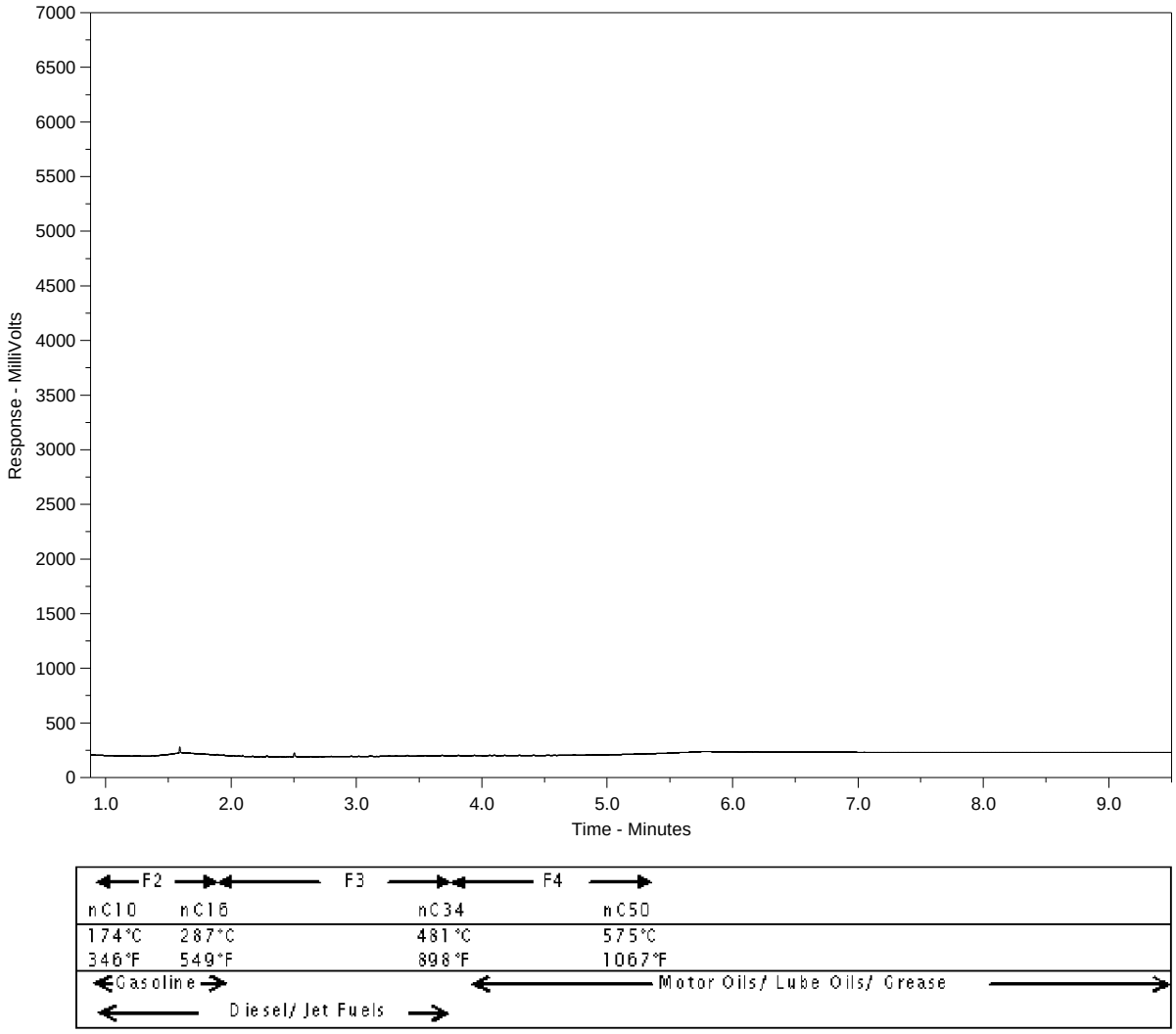
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2517207-5
Client Sample ID: DUP01



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 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.

ALS Environmental
www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

L2517207-COFC

COC Number: 17 - 883841

Page 1 of 1

Report To	Contact and company name below will appear on the final report	Report Format / Distribution	Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)
Company:	HLC CONSULTING LTD.	Select Report Format: [X] PDF [X] EXCEL [ ] EDD (DIGITAL)	Regular [R] [X] Standard TAT if received by 3 pm - business days - no surcharges apply
Contact:	REEGAN LAWRENCE	Quality Control (QC) Report with Report [ ] YES [ ] NO	PRIORITY (Business Days): 4 day [P4-20%] [ ]; 3 day [P3-25%] [ ]; 2 day [P2-50%] [ ]
Phone:	204-479-8140	[ ] Compare Results to Criteria on Report - provide details below if box checked	EMERGENCY: 1 Business day [E - 100%] [ ]; Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] [ ]
	Company address below will appear on the final report	Select Distribution: [X] EMAIL [ ] MAIL [ ] FAX	
Street:	5-55 HENLOW BAY	Email 1 or Fax rlawrence@hlcconsultingltd.ca	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm
City/Province:	WINNIPEG MB	Email 2 cbaldwin@hlcconsultingltd.ca	For tests that can not be performed according to the service level selected, you will be contacted.
Postal Code:	R3Y 1G4	Email 3	

Invoice To		Invoice Distribution	Analysis Request
	Same as Report To [X] YES [ ] NO	Select Invoice Distribution: [X] EMAIL [ ] MAIL [ ] FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
	Copy of Invoice with Report [X] YES [ ] NO		
Company:	HLC CONSULTING LTD.	Email 1 or Fax	
Contact:	CAROLYN BALDWIN	Email 2	

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	Q75942	AFE/Cost Center:	PO#
Job #:	20200388	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	
ALS Lab Work Order # (lab use only):		ALS Contact: C. RIDDELL	Sampler: R. LAWRENCE

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	VOCs F1	PHC F2-F4	PAHs	METALS	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	MW01-SS04	15-10-2020	am	soil	6	X	X	X	X		
	MW02-SS03	"	"	"	6	X	X	X	X		
	MW03-SS03	"	"	"	6	X	X	X	X		
	MW04-SS05	"	"	"	6	X	X	X	X		
	DUP01	"	"	"	4	X	X				
	DUP02	"	"	"	2			X	X		

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)
Are samples taken from a Regulated DW System? [ ] YES [ ] NO	
Are samples for human consumption/ use? [ ] YES [ ] NO	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen	[ ]	SIF Observations	Yes [ ]	No	[ ]
Ice Packs	[X]	Ice Cubes [ ]	Custody seal intact	Yes [ ]	No [ ]
Cooling Initiated	[ ]				

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
			7.4				

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
R. LAWRENCE	2020-10-15	3:00		Oct 15	3 PM		OCT 15 2020	

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2015 FRONT

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

HLC Consulting Ltd
ATTN: REEGAN LAWRENCE
3 Red Lily Road
Winnipeg Manitoba R3X 0G3

Date Received: 20-OCT-20
Report Date: 29-OCT-20 11:26 (MT)
Version: FINAL

Client Phone: 204-479-8140

Certificate of Analysis

Lab Work Order #: L2518739

Project P.O. #: NOT SUBMITTED
Job Reference: 20200388
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2518739-1 MW01							
Sampled By: CLIENT on 19-OCT-20							
Matrix: WATER							
Miscellaneous Parameters							
Xylenes (Total)	<0.00064		0.00064	mg/L		29-OCT-20	
Total THMs	<0.0013		0.0013	mg/L		29-OCT-20	
VOC plus F1 by GCMS							
Acetone	<0.050		0.050	mg/L		28-OCT-20	R5270774
Benzene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Bromobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Bromochloromethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Bromodichloromethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Bromoform	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Bromomethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
n-Butylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
sec-Butylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
tert-Butylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Carbon disulfide	<0.0050		0.0050	mg/L		28-OCT-20	R5270774
Carbon Tetrachloride	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Chlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Chloroethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Chloroform	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Chloromethane	<0.0050		0.0050	mg/L		28-OCT-20	R5270774
2-Chlorotoluene	<0.020		0.020	mg/L		28-OCT-20	R5270774
4-Chlorotoluene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dibromochloromethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,2-Dibromo-3-chloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2-Dibromoethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dibromomethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2-Dichlorobenzene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,3-Dichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,4-Dichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dichlorodifluoromethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1-dichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,2-Dichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,1-dichloroethene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
cis-1,2-Dichloroethene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
trans-1,2-Dichloroethene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dichloromethane	<0.020	DLM	0.020	mg/L		28-OCT-20	R5270774
1,2-Dichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,3-Dichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
2,2-Dichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1-Dichloropropene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
cis-1,3-Dichloropropene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
trans-1,3-Dichloropropene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Ethylbenzene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
F1	<0.10		0.10	mg/L		28-OCT-20	R5270774
Hexachlorobutadiene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Hexane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
2-Hexanone (Methyl butyl ketone)	<0.020		0.020	mg/L		28-OCT-20	R5270774
Isopropylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
4-Isopropyltoluene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
MEK	<0.020		0.020	mg/L		28-OCT-20	R5270774
MIBK	<0.020		0.020	mg/L		28-OCT-20	R5270774
MTBE	<0.00050		0.00050	mg/L		28-OCT-20	R5270774

* 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
L2518739-1 MW01							
Sampled By: CLIENT on 19-OCT-20							
Matrix: WATER							
VOC plus F1 by GCMS							
Styrene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1,1,2-Tetrachloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,1,2,2-Tetrachloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Tetrachloroethene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Toluene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,2,3-Trichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2,4-Trichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1,1-Trichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,1,2-Trichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Trichloroethene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Trichlorofluoromethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2,3-Trichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2,4-Trimethylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,3,5-Trimethylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Vinyl Chloride	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
M+P-Xylenes	<0.00040		0.00040	mg/L		28-OCT-20	R5270774
o-Xylene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Surrogate: 4-Bromofluorobenzene (SS)	91.9		70-130	%		28-OCT-20	R5270774
Surrogate: 1,4-Difluorobenzene (SS)	99.4		70-130	%		28-OCT-20	R5270774
Surrogate: 3,4-Dichlorotoluene (SS)	96.9		70-130	%		28-OCT-20	R5270774
F2-F4 (O.Reg.153/04)							
F2 (C10-C16)	<100		100	ug/L	22-OCT-20	23-OCT-20	R5266967
F3 (C16-C34)	<250		250	ug/L	22-OCT-20	23-OCT-20	R5266967
F4 (C34-C50)	<250		250	ug/L	22-OCT-20	23-OCT-20	R5266967
Chrom. to baseline at nC50	YES				22-OCT-20	23-OCT-20	R5266967
Surrogate: 2-Bromobenzotrifluoride	90.3		60-140	%	22-OCT-20	23-OCT-20	R5266967
CCME PAHs in mg/L							
1-Methyl Naphthalene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Acenaphthene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Acenaphthylene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Anthracene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Acridine	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(a)anthracene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(a)pyrene	<0.0000050		0.0000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(g,h,i)perylene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(k)fluoranthene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Chrysene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Dibenzo(a,h)anthracene	<0.0000050		0.0000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Fluoranthene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Fluorene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Naphthalene	<0.000050		0.000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Phenanthrene	<0.000050		0.000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Pyrene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Quinoline	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	22-OCT-20	28-OCT-20	R5270071
Surrogate: d8-Naphthalene	99.2		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d10-Phenanthrene	100.0		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d12-Chrysene	83.3		50-150	%	22-OCT-20	28-OCT-20	R5270071

* 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
L2518739-1 MW01							
Sampled By: CLIENT on 19-OCT-20							
Matrix: WATER							
CCME PAHs in mg/L							
Surrogate: d10-Acenaphthene	99.8		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d9-Acridine (SS)	69.7		50-150	%	22-OCT-20	28-OCT-20	R5270071
L2518739-2 MW03							
Sampled By: CLIENT on 19-OCT-20							
Matrix: WATER							
Miscellaneous Parameters							
Xylenes (Total)	<0.00064		0.00064	mg/L		29-OCT-20	
Total THMs	<0.0013		0.0013	mg/L		29-OCT-20	
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	11.4		0.0030	mg/L	22-OCT-20	22-OCT-20	R5266932
Antimony (Sb)-Total	0.00028		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Arsenic (As)-Total	0.00851		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Barium (Ba)-Total	0.154		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Beryllium (Be)-Total	0.00151		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Bismuth (Bi)-Total	0.000161		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Boron (B)-Total	0.221		0.010	mg/L	22-OCT-20	22-OCT-20	R5266932
Cadmium (Cd)-Total	0.000268		0.0000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Calcium (Ca)-Total	239		0.050	mg/L	22-OCT-20	22-OCT-20	R5266932
Cesium (Cs)-Total	0.00174		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Chromium (Cr)-Total	0.0227		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Cobalt (Co)-Total	0.00662		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Copper (Cu)-Total	0.0252		0.00050	mg/L	22-OCT-20	22-OCT-20	R5266932
Iron (Fe)-Total	15.2		0.010	mg/L	22-OCT-20	22-OCT-20	R5266932
Lead (Pb)-Total	0.0147		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Lithium (Li)-Total	0.212		0.0010	mg/L	22-OCT-20	22-OCT-20	R5266932
Magnesium (Mg)-Total	211		0.0050	mg/L	22-OCT-20	22-OCT-20	R5266932
Manganese (Mn)-Total	0.395		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Molybdenum (Mo)-Total	0.00244		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Nickel (Ni)-Total	0.0284		0.00050	mg/L	22-OCT-20	22-OCT-20	R5266932
Potassium (K)-Total	9.96		0.050	mg/L	22-OCT-20	22-OCT-20	R5266932
Phosphorus (P)-Total	1.20		0.030	mg/L	22-OCT-20	22-OCT-20	R5266932
Rubidium (Rb)-Total	0.0256		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
Selenium (Se)-Total	0.000655		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Silicon (Si)-Total	41.3		0.10	mg/L	22-OCT-20	22-OCT-20	R5266932
Silver (Ag)-Total	0.000098		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Sodium (Na)-Total	78.4		0.050	mg/L	22-OCT-20	22-OCT-20	R5266932
Strontium (Sr)-Total	1.03		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
Sulfur (S)-Total	104		0.50	mg/L	22-OCT-20	22-OCT-20	R5266932
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
Thallium (Tl)-Total	0.000229		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Thorium (Th)-Total	0.00606		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Tin (Sn)-Total	0.00086		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Titanium (Ti)-Total	0.239		0.00030	mg/L	22-OCT-20	22-OCT-20	R5266932
Tungsten (W)-Total	0.00010		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Uranium (U)-Total	0.0188		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Vanadium (V)-Total	0.0264		0.00050	mg/L	22-OCT-20	22-OCT-20	R5266932
Zinc (Zn)-Total	0.0550		0.0030	mg/L	22-OCT-20	22-OCT-20	R5266932
Zirconium (Zr)-Total	0.00394		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
VOC plus F1 by GCMS							
Acetone	<0.050		0.050	mg/L		28-OCT-20	R5270774
Benzene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774

* 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
L2518739-2 MW03							
Sampled By: CLIENT on 19-OCT-20							
Matrix: WATER							
VOC plus F1 by GCMS							
Bromobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Bromochloromethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Bromodichloromethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Bromoform	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Bromomethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
n-Butylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
sec-Butylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
tert-Butylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Carbon disulfide	<0.0050		0.0050	mg/L		28-OCT-20	R5270774
Carbon Tetrachloride	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Chlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Chloroethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Chloroform	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Chloromethane	<0.0050		0.0050	mg/L		28-OCT-20	R5270774
2-Chlorotoluene	<0.020		0.020	mg/L		28-OCT-20	R5270774
4-Chlorotoluene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dibromochloromethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,2-Dibromo-3-chloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2-Dibromoethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dibromomethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2-Dichlorobenzene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,3-Dichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,4-Dichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dichlorodifluoromethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1-dichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,2-Dichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,1-dichloroethene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
cis-1,2-Dichloroethene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
trans-1,2-Dichloroethene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dichloromethane	<0.020	DLM	0.020	mg/L		28-OCT-20	R5270774
1,2-Dichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,3-Dichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
2,2-Dichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1-Dichloropropene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
cis-1,3-Dichloropropene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
trans-1,3-Dichloropropene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Ethylbenzene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
F1	<0.10		0.10	mg/L		28-OCT-20	R5270774
Hexachlorobutadiene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Hexane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
2-Hexanone (Methyl butyl ketone)	<0.020		0.020	mg/L		28-OCT-20	R5270774
Isopropylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
4-Isopropyltoluene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
MEK	<0.020		0.020	mg/L		28-OCT-20	R5270774
MIBK	<0.020		0.020	mg/L		28-OCT-20	R5270774
MTBE	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Styrene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1,1,2-Tetrachloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,1,2,2-Tetrachloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Tetrachloroethene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Toluene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774

* 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
L2518739-2 MW03							
Sampled By: CLIENT on 19-OCT-20							
Matrix: WATER							
VOC plus F1 by GCMS							
1,2,3-Trichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2,4-Trichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1,1-Trichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,1,2-Trichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Trichloroethene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Trichlorofluoromethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2,3-Trichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2,4-Trimethylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,3,5-Trimethylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Vinyl Chloride	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
M+P-Xylenes	<0.00040		0.00040	mg/L		28-OCT-20	R5270774
o-Xylene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Surrogate: 4-Bromofluorobenzene (SS)	86.2		70-130	%		28-OCT-20	R5270774
Surrogate: 1,4-Difluorobenzene (SS)	98.3		70-130	%		28-OCT-20	R5270774
Surrogate: 3,4-Dichlorotoluene (SS)	88.6		70-130	%		28-OCT-20	R5270774
F2-F4 (O.Reg.153/04)							
F2 (C10-C16)	<100		100	ug/L	22-OCT-20	23-OCT-20	R5266967
F3 (C16-C34)	<250		250	ug/L	22-OCT-20	23-OCT-20	R5266967
F4 (C34-C50)	<250		250	ug/L	22-OCT-20	23-OCT-20	R5266967
Chrom. to baseline at nC50	YES				22-OCT-20	23-OCT-20	R5266967
Surrogate: 2-Bromobenzotrifluoride	93.5		60-140	%	22-OCT-20	23-OCT-20	R5266967
CCME PAHs in mg/L							
1-Methyl Naphthalene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Acenaphthene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Acenaphthylene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Anthracene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Acridine	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(a)anthracene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(a)pyrene	<0.0000050		0.0000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(g,h,i)perylene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(k)fluoranthene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Chrysene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Dibenzo(a,h)anthracene	<0.0000050		0.0000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Fluoranthene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Fluorene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Naphthalene	<0.000050		0.000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Phenanthrene	<0.000050		0.000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Pyrene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Quinoline	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	22-OCT-20	28-OCT-20	R5270071
Surrogate: d8-Naphthalene	96.6		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d10-Phenanthrene	99.2		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d12-Chrysene	79.9		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d10-Acenaphthene	99.0		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d9-Acridine (SS)	84.1		50-150	%	22-OCT-20	28-OCT-20	R5270071
L2518739-3 MW04							
Sampled By: CLIENT on 19-OCT-20							
Matrix: WATER							

* 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
L2518739-3 MW04							
Sampled By: CLIENT on 19-OCT-20							
Matrix: WATER							
Miscellaneous Parameters							
Xylenes (Total)	<0.00064		0.00064	mg/L		29-OCT-20	
Total THMs	<0.0013		0.0013	mg/L		29-OCT-20	
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	12.3		0.0030	mg/L	22-OCT-20	22-OCT-20	R5266932
Antimony (Sb)-Total	0.00040		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Arsenic (As)-Total	0.0128		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Barium (Ba)-Total	0.191		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Beryllium (Be)-Total	0.00162		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Bismuth (Bi)-Total	0.000187		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Boron (B)-Total	0.254		0.010	mg/L	22-OCT-20	22-OCT-20	R5266932
Cadmium (Cd)-Total	0.000354		0.0000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Calcium (Ca)-Total	223		0.050	mg/L	22-OCT-20	22-OCT-20	R5266932
Cesium (Cs)-Total	0.00162		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Chromium (Cr)-Total	0.0239		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Cobalt (Co)-Total	0.00734		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Copper (Cu)-Total	0.0373		0.00050	mg/L	22-OCT-20	22-OCT-20	R5266932
Iron (Fe)-Total	15.5		0.010	mg/L	22-OCT-20	22-OCT-20	R5266932
Lead (Pb)-Total	0.0274		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Lithium (Li)-Total	0.419		0.0010	mg/L	22-OCT-20	22-OCT-20	R5266932
Magnesium (Mg)-Total	183		0.0050	mg/L	22-OCT-20	22-OCT-20	R5266932
Manganese (Mn)-Total	0.902		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Molybdenum (Mo)-Total	0.00642		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Nickel (Ni)-Total	0.0233		0.00050	mg/L	22-OCT-20	22-OCT-20	R5266932
Potassium (K)-Total	13.9		0.050	mg/L	22-OCT-20	22-OCT-20	R5266932
Phosphorus (P)-Total	1.47		0.030	mg/L	22-OCT-20	22-OCT-20	R5266932
Rubidium (Rb)-Total	0.0263		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
Selenium (Se)-Total	0.00151		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Silicon (Si)-Total	39.1		0.10	mg/L	22-OCT-20	22-OCT-20	R5266932
Silver (Ag)-Total	0.000124		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Sodium (Na)-Total	190		0.050	mg/L	22-OCT-20	22-OCT-20	R5266932
Strontium (Sr)-Total	1.33		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
Sulfur (S)-Total	250		0.50	mg/L	22-OCT-20	22-OCT-20	R5266932
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
Thallium (Tl)-Total	0.000244		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Thorium (Th)-Total	0.00699		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Tin (Sn)-Total	0.00121		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Titanium (Ti)-Total	0.238		0.00030	mg/L	22-OCT-20	22-OCT-20	R5266932
Tungsten (W)-Total	<0.00010		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Uranium (U)-Total	0.0659		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Vanadium (V)-Total	0.0267		0.00050	mg/L	22-OCT-20	22-OCT-20	R5266932
Zinc (Zn)-Total	0.142		0.0030	mg/L	22-OCT-20	22-OCT-20	R5266932
Zirconium (Zr)-Total	0.00610		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
VOC plus F1 by GCMS							
Acetone	<0.050		0.050	mg/L		28-OCT-20	R5270774
Benzene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Bromobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Bromochloromethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Bromodichloromethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Bromoform	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Bromomethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
n-Butylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774

* 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
L2518739-3 MW04							
Sampled By: CLIENT on 19-OCT-20							
Matrix: WATER							
VOC plus F1 by GCMS							
sec-Butylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
tert-Butylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Carbon disulfide	<0.0050		0.0050	mg/L		28-OCT-20	R5270774
Carbon Tetrachloride	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Chlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Chloroethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Chloroform	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Chloromethane	<0.0050		0.0050	mg/L		28-OCT-20	R5270774
2-Chlorotoluene	<0.020		0.020	mg/L		28-OCT-20	R5270774
4-Chlorotoluene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dibromochloromethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,2-Dibromo-3-chloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2-Dibromoethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dibromomethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2-Dichlorobenzene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,3-Dichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,4-Dichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dichlorodifluoromethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1-dichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,2-Dichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,1-dichloroethene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
cis-1,2-Dichloroethene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
trans-1,2-Dichloroethene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dichloromethane	<0.020	DLM	0.020	mg/L		28-OCT-20	R5270774
1,2-Dichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,3-Dichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
2,2-Dichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1-Dichloropropene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
cis-1,3-Dichloropropene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
trans-1,3-Dichloropropene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Ethylbenzene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
F1	<0.10		0.10	mg/L		28-OCT-20	R5270774
Hexachlorobutadiene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Hexane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
2-Hexanone (Methyl butyl ketone)	<0.020		0.020	mg/L		28-OCT-20	R5270774
Isopropylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
4-Isopropyltoluene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
MEK	<0.020		0.020	mg/L		28-OCT-20	R5270774
MIBK	<0.020		0.020	mg/L		28-OCT-20	R5270774
MTBE	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Styrene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1,1,2-Tetrachloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,1,2,2-Tetrachloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Tetrachloroethene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Toluene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,2,3-Trichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2,4-Trichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1,1-Trichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,1,2-Trichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Trichloroethene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Trichlorofluoromethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774

* 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
L2518739-3 MW04							
Sampled By: CLIENT on 19-OCT-20							
Matrix: WATER							
VOC plus F1 by GCMS							
1,2,3-Trichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2,4-Trimethylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,3,5-Trimethylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Vinyl Chloride	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
M+P-Xylenes	<0.00040		0.00040	mg/L		28-OCT-20	R5270774
o-Xylene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Surrogate: 4-Bromofluorobenzene (SS)	84.6		70-130	%		28-OCT-20	R5270774
Surrogate: 1,4-Difluorobenzene (SS)	97.4		70-130	%		28-OCT-20	R5270774
Surrogate: 3,4-Dichlorotoluene (SS)	70.2		70-130	%		28-OCT-20	R5270774
F2-F4 (O.Reg.153/04)							
F2 (C10-C16)	<100		100	ug/L	22-OCT-20	23-OCT-20	R5266967
F3 (C16-C34)	<250		250	ug/L	22-OCT-20	23-OCT-20	R5266967
F4 (C34-C50)	<250		250	ug/L	22-OCT-20	23-OCT-20	R5266967
Chrom. to baseline at nC50	YES				22-OCT-20	23-OCT-20	R5266967
Surrogate: 2-Bromobenzotrifluoride	92.8		60-140	%	22-OCT-20	23-OCT-20	R5266967
CCME PAHs in mg/L							
1-Methyl Naphthalene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Acenaphthene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Acenaphthylene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Anthracene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Acridine	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(a)anthracene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(a)pyrene	0.0000059		0.0000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(b&j)fluoranthene	0.000016		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(g,h,i)perylene	0.000023		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(k)fluoranthene	0.000011		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Chrysene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Dibenzo(a,h)anthracene	<0.0000050		0.0000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Fluoranthene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Fluorene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Indeno(1,2,3-cd)pyrene	0.000018		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Naphthalene	<0.000050		0.000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Phenanthrene	<0.000050		0.000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Pyrene	0.000011		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Quinoline	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	22-OCT-20	28-OCT-20	R5270071
Surrogate: d8-Naphthalene	97.8		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d10-Phenanthrene	100.1		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d12-Chrysene	81.8		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d10-Acenaphthene	100.0		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d9-Acridine (SS)	67.9		50-150	%	22-OCT-20	28-OCT-20	R5270071
L2518739-4 DUP01							
Sampled By: CLIENT on 19-OCT-20							
Matrix: WATER							
Miscellaneous Parameters							
Xylenes (Total)	<0.00064		0.00064	mg/L		29-OCT-20	
Total THMs	<0.0013		0.0013	mg/L		29-OCT-20	
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	10.9		0.0030	mg/L	22-OCT-20	22-OCT-20	R5266932
Antimony (Sb)-Total	0.00028		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932

* 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
L2518739-4 DUP01							
Sampled By: CLIENT on 19-OCT-20							
Matrix: WATER							
Total Metals in Water by CRC ICPMS							
Arsenic (As)-Total	0.00871		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Barium (Ba)-Total	0.156		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Beryllium (Be)-Total	0.00145		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Bismuth (Bi)-Total	0.000163		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Boron (B)-Total	0.216		0.010	mg/L	22-OCT-20	22-OCT-20	R5266932
Cadmium (Cd)-Total	0.000258		0.0000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Calcium (Ca)-Total	240		0.050	mg/L	22-OCT-20	22-OCT-20	R5266932
Cesium (Cs)-Total	0.00172		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Chromium (Cr)-Total	0.0224		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Cobalt (Co)-Total	0.00667		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Copper (Cu)-Total	0.0253		0.00050	mg/L	22-OCT-20	22-OCT-20	R5266932
Iron (Fe)-Total	15.2		0.010	mg/L	22-OCT-20	22-OCT-20	R5266932
Lead (Pb)-Total	0.0150		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Lithium (Li)-Total	0.214		0.0010	mg/L	22-OCT-20	22-OCT-20	R5266932
Magnesium (Mg)-Total	210		0.0050	mg/L	22-OCT-20	22-OCT-20	R5266932
Manganese (Mn)-Total	0.400		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Molybdenum (Mo)-Total	0.00241		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Nickel (Ni)-Total	0.0279		0.00050	mg/L	22-OCT-20	22-OCT-20	R5266932
Potassium (K)-Total	9.83		0.050	mg/L	22-OCT-20	22-OCT-20	R5266932
Phosphorus (P)-Total	1.19		0.030	mg/L	22-OCT-20	22-OCT-20	R5266932
Rubidium (Rb)-Total	0.0252		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
Selenium (Se)-Total	0.000679		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Silicon (Si)-Total	39.8		0.10	mg/L	22-OCT-20	22-OCT-20	R5266932
Silver (Ag)-Total	0.000105		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Sodium (Na)-Total	78.0		0.050	mg/L	22-OCT-20	22-OCT-20	R5266932
Strontium (Sr)-Total	1.04		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
Sulfur (S)-Total	103		0.50	mg/L	22-OCT-20	22-OCT-20	R5266932
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
Thallium (Tl)-Total	0.000232		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Thorium (Th)-Total	0.00626		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Tin (Sn)-Total	0.00086		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Titanium (Ti)-Total	0.234		0.00030	mg/L	22-OCT-20	22-OCT-20	R5266932
Tungsten (W)-Total	0.00021		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Uranium (U)-Total	0.0191		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Vanadium (V)-Total	0.0259		0.00050	mg/L	22-OCT-20	22-OCT-20	R5266932
Zinc (Zn)-Total	0.0544		0.0030	mg/L	22-OCT-20	22-OCT-20	R5266932
Zirconium (Zr)-Total	0.00348		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
VOC plus F1 by GCMS							
Acetone	<0.050		0.050	mg/L		28-OCT-20	R5270774
Benzene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Bromobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Bromochloromethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Bromodichloromethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Bromoform	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Bromomethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
n-Butylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
sec-Butylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
tert-Butylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Carbon disulfide	<0.0050		0.0050	mg/L		28-OCT-20	R5270774
Carbon Tetrachloride	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Chlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774

* 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
L2518739-4 DUP01							
Sampled By: CLIENT on 19-OCT-20							
Matrix: WATER							
VOC plus F1 by GCMS							
Chloroethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Chloroform	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Chloromethane	<0.0050		0.0050	mg/L		28-OCT-20	R5270774
2-Chlorotoluene	<0.020		0.020	mg/L		28-OCT-20	R5270774
4-Chlorotoluene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dibromochloromethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,2-Dibromo-3-chloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2-Dibromoethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dibromomethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2-Dichlorobenzene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,3-Dichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,4-Dichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dichlorodifluoromethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1-dichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,2-Dichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,1-dichloroethene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
cis-1,2-Dichloroethene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
trans-1,2-Dichloroethene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Dichloromethane	<0.020	DLM	0.020	mg/L		28-OCT-20	R5270774
1,2-Dichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,3-Dichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
2,2-Dichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1-Dichloropropene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
cis-1,3-Dichloropropene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
trans-1,3-Dichloropropene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Ethylbenzene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
F1	<0.10		0.10	mg/L		28-OCT-20	R5270774
Hexachlorobutadiene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Hexane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
2-Hexanone (Methyl butyl ketone)	<0.020		0.020	mg/L		28-OCT-20	R5270774
Isopropylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
4-Isopropyltoluene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
MEK	<0.020		0.020	mg/L		28-OCT-20	R5270774
MIBK	<0.020		0.020	mg/L		28-OCT-20	R5270774
MTBE	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Styrene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1,1,2-Tetrachloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,1,2,2-Tetrachloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Tetrachloroethene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Toluene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,2,3-Trichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2,4-Trichlorobenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,1,1-Trichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
1,1,2-Trichloroethane	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Trichloroethene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Trichlorofluoromethane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2,3-Trichloropropane	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,2,4-Trimethylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
1,3,5-Trimethylbenzene	<0.0010		0.0010	mg/L		28-OCT-20	R5270774
Vinyl Chloride	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
M+P-Xylenes	<0.00040		0.00040	mg/L		28-OCT-20	R5270774

* 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
L2518739-4 DUP01							
Sampled By: CLIENT on 19-OCT-20							
Matrix: WATER							
VOC plus F1 by GCMS							
o-Xylene	<0.00050		0.00050	mg/L		28-OCT-20	R5270774
Surrogate: 4-Bromofluorobenzene (SS)	89.1		70-130	%		28-OCT-20	R5270774
Surrogate: 1,4-Difluorobenzene (SS)	97.8		70-130	%		28-OCT-20	R5270774
Surrogate: 3,4-Dichlorotoluene (SS)	86.6		70-130	%		28-OCT-20	R5270774
F2-F4 (O.Reg.153/04)							
F2 (C10-C16)	<100		100	ug/L	22-OCT-20	23-OCT-20	R5266967
F3 (C16-C34)	<250		250	ug/L	22-OCT-20	23-OCT-20	R5266967
F4 (C34-C50)	<250		250	ug/L	22-OCT-20	23-OCT-20	R5266967
Chrom. to baseline at nC50	YES				22-OCT-20	23-OCT-20	R5266967
Surrogate: 2-Bromobenzotrifluoride	87.6		60-140	%	22-OCT-20	23-OCT-20	R5266967
CCME PAHs in mg/L							
1-Methyl Naphthalene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Acenaphthene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Acenaphthylene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Anthracene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Acridine	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(a)anthracene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(a)pyrene	<0.0000050		0.0000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(g,h,i)perylene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Benzo(k)fluoranthene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Chrysene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Dibenzo(a,h)anthracene	<0.0000050		0.0000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Fluoranthene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Fluorene	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Naphthalene	<0.000050		0.000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Phenanthrene	<0.000050		0.000050	mg/L	22-OCT-20	28-OCT-20	R5270071
Pyrene	<0.000010		0.000010	mg/L	22-OCT-20	28-OCT-20	R5270071
Quinoline	<0.000020		0.000020	mg/L	22-OCT-20	28-OCT-20	R5270071
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	22-OCT-20	28-OCT-20	R5270071
Surrogate: d8-Naphthalene	91.2		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d10-Phenanthrene	92.1		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d12-Chrysene	75.0		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d10-Acenaphthene	91.4		50-150	%	22-OCT-20	28-OCT-20	R5270071
Surrogate: d9-Acridine (SS)	67.8		50-150	%	22-OCT-20	28-OCT-20	R5270071
L2518739-5 MW01							
Sampled By: CLIENT on 20-OCT-20							
Matrix: WATER							
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	3.29		0.0030	mg/L	22-OCT-20	22-OCT-20	R5266932
Antimony (Sb)-Total	0.00026		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Arsenic (As)-Total	0.00352		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Barium (Ba)-Total	0.0803		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Beryllium (Be)-Total	0.00025		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Bismuth (Bi)-Total	0.000052		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Boron (B)-Total	0.175		0.010	mg/L	22-OCT-20	22-OCT-20	R5266932
Cadmium (Cd)-Total	0.000262		0.0000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Calcium (Ca)-Total	559		0.50	mg/L	22-OCT-20	23-OCT-20	R5268550

* 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
L2518739-5 MW01							
Sampled By: CLIENT on 20-OCT-20							
Matrix: WATER							
Total Metals in Water by CRC ICPMS							
Cesium (Cs)-Total	0.000563		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Chromium (Cr)-Total	0.00669		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Cobalt (Co)-Total	0.00879		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Copper (Cu)-Total	0.0146		0.00050	mg/L	22-OCT-20	22-OCT-20	R5266932
Iron (Fe)-Total	5.41		0.010	mg/L	22-OCT-20	22-OCT-20	R5266932
Lead (Pb)-Total	0.00337		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Lithium (Li)-Total	0.870		0.0010	mg/L	22-OCT-20	22-OCT-20	R5266932
Magnesium (Mg)-Total	337		0.050	mg/L	22-OCT-20	23-OCT-20	R5268550
Manganese (Mn)-Total	4.46		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Molybdenum (Mo)-Total	0.00229		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Nickel (Ni)-Total	0.0284		0.00050	mg/L	22-OCT-20	22-OCT-20	R5266932
Potassium (K)-Total	15.0		0.050	mg/L	22-OCT-20	22-OCT-20	R5266932
Phosphorus (P)-Total	0.348		0.030	mg/L	22-OCT-20	22-OCT-20	R5266932
Rubidium (Rb)-Total	0.00879		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
Selenium (Se)-Total	0.000988		0.000050	mg/L	22-OCT-20	22-OCT-20	R5266932
Silicon (Si)-Total	21.5		0.10	mg/L	22-OCT-20	22-OCT-20	R5266932
Silver (Ag)-Total	0.000064		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Sodium (Na)-Total	202		0.050	mg/L	22-OCT-20	22-OCT-20	R5266932
Strontium (Sr)-Total	3.80		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
Sulfur (S)-Total	840		5.0	mg/L	22-OCT-20	23-OCT-20	R5268550
Tellurium (Te)-Total	0.00035		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932
Thallium (Tl)-Total	0.000083		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Thorium (Th)-Total	0.00168		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Tin (Sn)-Total	0.00195		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Titanium (Ti)-Total	0.0981		0.00030	mg/L	22-OCT-20	22-OCT-20	R5266932
Tungsten (W)-Total	<0.00010		0.00010	mg/L	22-OCT-20	22-OCT-20	R5266932
Uranium (U)-Total	0.152		0.000010	mg/L	22-OCT-20	22-OCT-20	R5266932
Vanadium (V)-Total	0.0112		0.00050	mg/L	22-OCT-20	22-OCT-20	R5266932
Zinc (Zn)-Total	0.0775		0.0030	mg/L	22-OCT-20	22-OCT-20	R5266932
Zirconium (Zr)-Total	0.00555		0.00020	mg/L	22-OCT-20	22-OCT-20	R5266932

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

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
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**
F2-F4-WT	Water	F2-F4 (O.Reg.153/04)	MOE DECPH-E3421/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.			
MET-T-CCMS-WP	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020B (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.			
PAH-CCME-PPM-WT	Water	CCME PAHs in mg/L	EPA 3511/8270D (mod)
PAHs are extracted from water using a hexane micro-extraction technique, with analysis by GC/MS. Because the two isomers cannot be readily separated chromatographically, benzo(j)fluoranthene is reported as part of the benzo(b)fluoranthene parameter.			
THM-SUM-CALC-WP	Water	Total Trihalomethanes (THMs)	CALCULATION
Total Trihalomethanes (THMs) represents the sum of bromodichloromethane, bromoform, chlorodibromomethane and chloroform. For the purpose of calculation, results less than the detection limit (DL) are treated as zero.			
VOC+F1-HSMS-WP	Water	VOC plus F1 by GCMS	EPA 8260C / EPA 5021A
In this method samples are analyzed using a headspace autosampler interfaced to a dual column gas chromatograph with MS and Flame Ionization detectors.			
XYLENES-SUM-CALC-WP	Water	Sum of Xylene Isomer Concentrations	CALCULATED RESULT
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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

Chain of Custody Numbers:

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

GLOSSARY OF REPORT TERMS

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

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

Quality Control Report

Client: HLC Consulting Ltd
3 Red Lily Road
Winnipeg Manitoba R3X 0G3
Contact: REEGAN LAWRENCE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-WT	**Water**							
Batch R5266967								
WG3429777-2 LCS								
F2 (C10-C16)			101.5		%		65-135	23-OCT-20
F3 (C16-C34)			101.2		%		65-135	23-OCT-20
F4 (C34-C50)			102.8		%		65-135	23-OCT-20
WG3429777-1 MB								
F2 (C10-C16)			<100		ug/L		100	23-OCT-20
F3 (C16-C34)			<250		ug/L		250	23-OCT-20
F4 (C34-C50)			<250		ug/L		250	23-OCT-20
Surrogate: 2-Bromobenzotrifluoride			90.3		%		60-140	23-OCT-20
MET-T-CCMS-WP	**Water**							
Batch R5266932								
WG3429578-2 LCS								
Aluminum (Al)-Total			101.0		%		80-120	22-OCT-20
Antimony (Sb)-Total			100.3		%		80-120	22-OCT-20
Arsenic (As)-Total			101.5		%		80-120	22-OCT-20
Barium (Ba)-Total			101.4		%		80-120	22-OCT-20
Beryllium (Be)-Total			99.5		%		80-120	22-OCT-20
Bismuth (Bi)-Total			99.95		%		80-120	22-OCT-20
Boron (B)-Total			98.2		%		80-120	22-OCT-20
Cadmium (Cd)-Total			103.8		%		80-120	22-OCT-20
Calcium (Ca)-Total			98.9		%		80-120	22-OCT-20
Cesium (Cs)-Total			101.6		%		80-120	22-OCT-20
Chromium (Cr)-Total			102.8		%		80-120	22-OCT-20
Cobalt (Co)-Total			102.3		%		80-120	22-OCT-20
Copper (Cu)-Total			102.6		%		80-120	22-OCT-20
Iron (Fe)-Total			103.5		%		80-120	22-OCT-20
Lead (Pb)-Total			99.3		%		80-120	22-OCT-20
Lithium (Li)-Total			105.4		%		80-120	22-OCT-20
Magnesium (Mg)-Total			108.0		%		80-120	22-OCT-20
Manganese (Mn)-Total			100.7		%		80-120	22-OCT-20
Molybdenum (Mo)-Total			99.5		%		80-120	22-OCT-20
Nickel (Ni)-Total			101.8		%		80-120	22-OCT-20
Potassium (K)-Total			101.3		%		80-120	22-OCT-20
Phosphorus (P)-Total			109.6		%		80-120	22-OCT-20
Rubidium (Rb)-Total			102.6		%		80-120	22-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP	**Water**							
Batch R5266932								
WG3429578-2 LCS								
Selenium (Se)-Total			101.9		%		80-120	22-OCT-20
Silicon (Si)-Total			103.1		%		80-120	22-OCT-20
Silver (Ag)-Total			98.6		%		80-120	22-OCT-20
Sodium (Na)-Total			107.7		%		80-120	22-OCT-20
Strontium (Sr)-Total			103.8		%		80-120	22-OCT-20
Sulfur (S)-Total			97.8		%		80-120	22-OCT-20
Tellurium (Te)-Total			95.1		%		80-120	22-OCT-20
Thallium (Tl)-Total			98.8		%		80-120	22-OCT-20
Thorium (Th)-Total			97.9		%		80-120	22-OCT-20
Tin (Sn)-Total			98.1		%		80-120	22-OCT-20
Titanium (Ti)-Total			98.0		%		80-120	22-OCT-20
Tungsten (W)-Total			101.3		%		80-120	22-OCT-20
Uranium (U)-Total			100.8		%		80-120	22-OCT-20
Vanadium (V)-Total			102.7		%		80-120	22-OCT-20
Zinc (Zn)-Total			101.7		%		80-120	22-OCT-20
Zirconium (Zr)-Total			95.1		%		80-120	22-OCT-20
WG3429578-1 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	22-OCT-20
Antimony (Sb)-Total			0.00012	B	mg/L		0.0001	22-OCT-20
Arsenic (As)-Total			<0.00010		mg/L		0.0001	22-OCT-20
Barium (Ba)-Total			<0.00010		mg/L		0.0001	22-OCT-20
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	22-OCT-20
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	22-OCT-20
Boron (B)-Total			<0.010		mg/L		0.01	22-OCT-20
Cadmium (Cd)-Total			<0.000005(		mg/L		0.000005	22-OCT-20
Calcium (Ca)-Total			<0.050		mg/L		0.05	22-OCT-20
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	22-OCT-20
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	22-OCT-20
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	22-OCT-20
Copper (Cu)-Total			<0.00050		mg/L		0.0005	22-OCT-20
Iron (Fe)-Total			<0.010		mg/L		0.01	22-OCT-20
Lead (Pb)-Total			<0.000050		mg/L		0.00005	22-OCT-20
Lithium (Li)-Total			<0.0010		mg/L		0.001	22-OCT-20
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	22-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP	**Water**							
Batch R5266932								
WG3429578-1 MB								
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	22-OCT-20
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	22-OCT-20
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	22-OCT-20
Potassium (K)-Total			<0.050		mg/L		0.05	22-OCT-20
Phosphorus (P)-Total			<0.030		mg/L		0.03	22-OCT-20
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	22-OCT-20
Selenium (Se)-Total			<0.000050		mg/L		0.00005	22-OCT-20
Silicon (Si)-Total			<0.10		mg/L		0.1	22-OCT-20
Silver (Ag)-Total			<0.000010		mg/L		0.00001	22-OCT-20
Sodium (Na)-Total			<0.050		mg/L		0.05	22-OCT-20
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	22-OCT-20
Sulfur (S)-Total			<0.50		mg/L		0.5	22-OCT-20
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	22-OCT-20
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	22-OCT-20
Thorium (Th)-Total			<0.00010		mg/L		0.0001	22-OCT-20
Tin (Sn)-Total			<0.00010		mg/L		0.0001	22-OCT-20
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	22-OCT-20
Tungsten (W)-Total			<0.00010		mg/L		0.0001	22-OCT-20
Uranium (U)-Total			<0.000010		mg/L		0.00001	22-OCT-20
Vanadium (V)-Total			<0.00050		mg/L		0.0005	22-OCT-20
Zinc (Zn)-Total			<0.0030		mg/L		0.003	22-OCT-20
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	22-OCT-20
PAH-CCME-PPM-WT	**Water**							
Batch R5270071								
WG3429777-2 LCS								
1-Methyl Naphthalene			87.4		%		50-150	28-OCT-20
2-Methyl Naphthalene			88.6		%		50-150	28-OCT-20
Acenaphthene			100.9		%		50-150	28-OCT-20
Acenaphthylene			96.7		%		50-150	28-OCT-20
Anthracene			97.3		%		50-150	28-OCT-20
Acridine			91.0		%		50-150	28-OCT-20
Benzo(a)anthracene			100.3		%		50-150	28-OCT-20
Benzo(a)pyrene			90.3		%		50-150	28-OCT-20
Benzo(b&j)fluoranthene			69.2		%		50-150	28-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-PPM-WT	**Water**							
Batch R5270071								
WG3429777-2 LCS								
Benzo(g,h,i)perylene			100.6		%		50-150	28-OCT-20
Benzo(k)fluoranthene			92.7		%		50-150	28-OCT-20
Chrysene			118.6		%		50-150	28-OCT-20
Dibenzo(a,h)anthracene			93.5		%		50-150	28-OCT-20
Fluoranthene			99.2		%		50-150	28-OCT-20
Fluorene			94.4		%		50-150	28-OCT-20
Indeno(1,2,3-cd)pyrene			111.8		%		50-150	28-OCT-20
Naphthalene			85.5		%		50-150	28-OCT-20
Phenanthrene			98.1		%		50-150	28-OCT-20
Pyrene			100.7		%		50-150	28-OCT-20
Quinoline			112.4		%		50-150	28-OCT-20
WG3429777-1 MB								
1-Methyl Naphthalene			<0.000020		mg/L		0.00002	28-OCT-20
2-Methyl Naphthalene			<0.000020		mg/L		0.00002	28-OCT-20
Acenaphthene			<0.000020		mg/L		0.00002	28-OCT-20
Acenaphthylene			<0.000020		mg/L		0.00002	28-OCT-20
Anthracene			<0.000010		mg/L		0.00001	28-OCT-20
Acridine			<0.000020		mg/L		0.00002	28-OCT-20
Benzo(a)anthracene			<0.000010		mg/L		0.00001	28-OCT-20
Benzo(a)pyrene			<0.000005C		mg/L		0.000005	28-OCT-20
Benzo(b&j)fluoranthene			<0.000010		mg/L		0.00001	28-OCT-20
Benzo(g,h,i)perylene			<0.000020		mg/L		0.00002	28-OCT-20
Benzo(k)fluoranthene			<0.000010		mg/L		0.00001	28-OCT-20
Chrysene			<0.000020		mg/L		0.00002	28-OCT-20
Dibenzo(a,h)anthracene			<0.000005C		mg/L		0.000005	28-OCT-20
Fluoranthene			<0.000020		mg/L		0.00002	28-OCT-20
Fluorene			<0.000020		mg/L		0.00002	28-OCT-20
Indeno(1,2,3-cd)pyrene			<0.000010		mg/L		0.00001	28-OCT-20
Naphthalene			<0.000050		mg/L		0.00005	28-OCT-20
Phenanthrene			<0.000050		mg/L		0.00005	28-OCT-20
Pyrene			<0.000010		mg/L		0.00001	28-OCT-20
Quinoline			<0.000020		mg/L		0.00002	28-OCT-20
Surrogate: d8-Naphthalene			94.2		%		50-150	28-OCT-20
Surrogate: d10-Phenanthrene			98.4		%		50-150	28-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-PPM-WT	**Water**							
Batch R5270071								
WG3429777-1 MB								
Surrogate: d12-Chrysene			86.0		%		50-150	28-OCT-20
Surrogate: d10-Acenaphthene			95.4		%		50-150	28-OCT-20
Surrogate: d9-Acridine (SS)			82.6		%		50-150	28-OCT-20
VOC+F1-HSMS-WP	**Water**							
Batch R5270774								
WG3431026-2 LCS								
Acetone			101.2		%		70-130	27-OCT-20
Benzene			89.4		%		70-130	27-OCT-20
Bromobenzene			100.6		%		70-130	27-OCT-20
Bromochloromethane			93.5		%		70-130	27-OCT-20
Bromodichloromethane			103.7		%		70-130	27-OCT-20
Bromoform			96.4		%		70-130	27-OCT-20
Bromomethane			100.5		%		60-140	27-OCT-20
n-Butylbenzene			98.3		%		70-130	27-OCT-20
sec-Butylbenzene			106.1		%		70-130	27-OCT-20
tert-Butylbenzene			102.7		%		70-130	27-OCT-20
Carbon disulfide			85.6		%		70-130	27-OCT-20
Carbon Tetrachloride			93.7		%		70-130	27-OCT-20
Chlorobenzene			92.1		%		70-130	27-OCT-20
Chloroethane			86.6		%		60-140	27-OCT-20
Chloroform			93.7		%		70-130	27-OCT-20
Chloromethane			93.5		%		60-140	27-OCT-20
2-Chlorotoluene			101.9		%		70-130	27-OCT-20
4-Chlorotoluene			110.1		%		70-130	27-OCT-20
Dibromochloromethane			87.9		%		70-130	27-OCT-20
1,2-Dibromo-3-chloropropane			97.7		%		70-130	27-OCT-20
1,2-Dibromoethane			87.0		%		70-130	27-OCT-20
Dibromomethane			99.5		%		70-130	27-OCT-20
1,2-Dichlorobenzene			92.7		%		70-130	27-OCT-20
1,3-Dichlorobenzene			92.7		%		70-130	27-OCT-20
1,4-Dichlorobenzene			95.1		%		70-130	27-OCT-20
Dichlorodifluoromethane			76.2		%		60-140	27-OCT-20
1,1-dichloroethane			89.6		%		70-130	27-OCT-20
1,2-Dichloroethane			91.6		%		70-130	27-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC+F1-HSMS-WP	**Water**							
Batch R5270774								
WG3431026-2 LCS								
1,1-dichloroethene			82.6		%		70-130	27-OCT-20
cis-1,2-Dichloroethene			87.7		%		70-130	27-OCT-20
trans-1,2-Dichloroethene			83.0		%		70-130	27-OCT-20
Dichloromethane			87.1		%		70-130	27-OCT-20
1,2-Dichloropropane			87.8		%		70-130	27-OCT-20
1,3-Dichloropropane			89.1		%		70-130	27-OCT-20
2,2-Dichloropropane			92.6		%		70-130	27-OCT-20
1,1-Dichloropropene			89.9		%		70-130	27-OCT-20
cis-1,3-Dichloropropene			93.6		%		70-130	27-OCT-20
trans-1,3-Dichloropropene			92.1		%		70-130	27-OCT-20
Ethylbenzene			99.3		%		70-130	27-OCT-20
Hexachlorobutadiene			89.8		%		70-130	27-OCT-20
Hexane			86.7		%		70-130	27-OCT-20
2-Hexanone (Methyl butyl ketone)			108.9		%		70-130	27-OCT-20
Isopropylbenzene			106.5		%		70-130	27-OCT-20
4-Isopropyltoluene			103.7		%		70-130	27-OCT-20
MEK			102.3		%		70-130	27-OCT-20
MIBK			111.0		%		70-130	27-OCT-20
MTBE			94.3		%		70-130	27-OCT-20
Styrene			107.2		%		70-130	27-OCT-20
1,1,1,2-Tetrachloroethane			88.9		%		70-130	27-OCT-20
1,1,2,2-Tetrachloroethane			91.1		%		70-130	27-OCT-20
Tetrachloroethene			87.7		%		70-130	27-OCT-20
Toluene			86.9		%		70-130	27-OCT-20
1,2,3-Trichlorobenzene			98.2		%		70-130	27-OCT-20
1,2,4-Trichlorobenzene			95.6		%		70-130	27-OCT-20
1,1,1-Trichloroethane			91.6		%		70-130	27-OCT-20
1,1,2-Trichloroethane			92.2		%		70-130	27-OCT-20
Trichloroethene			92.3		%		70-130	27-OCT-20
Trichlorofluoromethane			80.8		%		60-140	27-OCT-20
1,2,3-Trichloropropane			92.0		%		70-130	27-OCT-20
1,2,4-Trimethylbenzene			103.2		%		70-130	27-OCT-20
1,3,5-Trimethylbenzene			103.8		%		70-130	27-OCT-20
Vinyl Chloride			84.9		%		60-140	27-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC+F1-HSMS-WP	**Water**							
Batch R5270774								
WG3431026-2 LCS								
M+P-Xylenes			104.5		%		70-130	27-OCT-20
o-Xylene			109.1		%		70-130	27-OCT-20
WG3431026-3 LCS								
F1			123.6		%		70-130	27-OCT-20
WG3431026-1 MB								
Acetone			<0.050		mg/L		0.05	27-OCT-20
Benzene			<0.00050		mg/L		0.0005	27-OCT-20
Bromobenzene			<0.0010		mg/L		0.001	27-OCT-20
Bromochloromethane			<0.0010		mg/L		0.001	27-OCT-20
Bromodichloromethane			<0.00050		mg/L		0.0005	27-OCT-20
Bromoform			<0.0010		mg/L		0.001	27-OCT-20
Bromomethane			<0.0010		mg/L		0.001	27-OCT-20
n-Butylbenzene			<0.0010		mg/L		0.001	27-OCT-20
sec-Butylbenzene			<0.0010		mg/L		0.001	27-OCT-20
tert-Butylbenzene			<0.0010		mg/L		0.001	27-OCT-20
Carbon disulfide			<0.0050		mg/L		0.005	27-OCT-20
Carbon Tetrachloride			<0.00050		mg/L		0.0005	27-OCT-20
Chlorobenzene			<0.0010		mg/L		0.001	27-OCT-20
Chloroethane			<0.0010		mg/L		0.001	27-OCT-20
Chloroform			<0.00050		mg/L		0.0005	27-OCT-20
Chloromethane			<0.0050		mg/L		0.005	27-OCT-20
2-Chlorotoluene			<0.020		mg/L		0.02	27-OCT-20
4-Chlorotoluene			<0.0010		mg/L		0.001	27-OCT-20
Dibromochloromethane			<0.00050		mg/L		0.0005	27-OCT-20
1,2-Dibromo-3-chloropropane			<0.0010		mg/L		0.001	27-OCT-20
1,2-Dibromoethane			<0.0010		mg/L		0.001	27-OCT-20
Dibromomethane			<0.0010		mg/L		0.001	27-OCT-20
1,2-Dichlorobenzene			<0.00050		mg/L		0.0005	27-OCT-20
1,3-Dichlorobenzene			<0.0010		mg/L		0.001	27-OCT-20
1,4-Dichlorobenzene			<0.0010		mg/L		0.001	27-OCT-20
Dichlorodifluoromethane			<0.0010		mg/L		0.001	27-OCT-20
1,1-dichloroethane			<0.00050		mg/L		0.0005	27-OCT-20
1,2-Dichloroethane			<0.00050		mg/L		0.0005	27-OCT-20
1,1-dichloroethene			<0.00050		mg/L		0.0005	27-OCT-20
cis-1,2-Dichloroethene			<0.0010		mg/L		0.001	27-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC+F1-HSMS-WP	**Water**							
Batch R5270774								
WG3431026-1 MB								
trans-1,2-Dichloroethene			<0.0010		mg/L		0.001	27-OCT-20
Dichloromethane			<0.0050		mg/L		0.005	27-OCT-20
1,2-Dichloropropane			<0.0010		mg/L		0.001	27-OCT-20
1,3-Dichloropropane			<0.0010		mg/L		0.001	27-OCT-20
2,2-Dichloropropane			<0.0010		mg/L		0.001	27-OCT-20
1,1-Dichloropropene			<0.0010		mg/L		0.001	27-OCT-20
cis-1,3-Dichloropropene			<0.0010		mg/L		0.001	27-OCT-20
trans-1,3-Dichloropropene			<0.0010		mg/L		0.001	27-OCT-20
Ethylbenzene			<0.00050		mg/L		0.0005	27-OCT-20
F1			<0.10		mg/L		0.1	27-OCT-20
Hexachlorobutadiene			<0.0010		mg/L		0.001	27-OCT-20
Hexane			<0.0010		mg/L		0.001	27-OCT-20
2-Hexanone (Methyl butyl ketone)			<0.020		mg/L		0.02	27-OCT-20
Isopropylbenzene			<0.0010		mg/L		0.001	27-OCT-20
4-Isopropyltoluene			<0.0010		mg/L		0.001	27-OCT-20
MEK			<0.020		mg/L		0.02	27-OCT-20
MIBK			<0.020		mg/L		0.02	27-OCT-20
MTBE			<0.00050		mg/L		0.0005	27-OCT-20
Styrene			<0.0010		mg/L		0.001	27-OCT-20
1,1,1,2-Tetrachloroethane			<0.00050		mg/L		0.0005	27-OCT-20
1,1,2,2-Tetrachloroethane			<0.00050		mg/L		0.0005	27-OCT-20
Tetrachloroethene			<0.00050		mg/L		0.0005	27-OCT-20
Toluene			<0.00050		mg/L		0.0005	27-OCT-20
1,2,3-Trichlorobenzene			<0.0010		mg/L		0.001	27-OCT-20
1,2,4-Trichlorobenzene			<0.0010		mg/L		0.001	27-OCT-20
1,1,1-Trichloroethane			<0.00050		mg/L		0.0005	27-OCT-20
1,1,2-Trichloroethane			<0.00050		mg/L		0.0005	27-OCT-20
Trichloroethene			<0.00050		mg/L		0.0005	27-OCT-20
Trichlorofluoromethane			<0.0010		mg/L		0.001	27-OCT-20
1,2,3-Trichloropropane			<0.0010		mg/L		0.001	27-OCT-20
1,2,4-Trimethylbenzene			<0.0010		mg/L		0.001	27-OCT-20
1,3,5-Trimethylbenzene			<0.0010		mg/L		0.001	27-OCT-20
Vinyl Chloride			<0.00050		mg/L		0.0005	27-OCT-20
M+P-Xylenes			<0.00040		mg/L		0.0004	27-OCT-20

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC+F1-HSMS-WP	**Water**							
Batch	**R5270774**							
WG3431026-1	**MB**							
o-Xylene			<0.00050		mg/L		0.0005	27-OCT-20
Surrogate: 4-Bromofluorobenzene (SS)			92.5		%		70-130	27-OCT-20
Surrogate: 1,4-Difluorobenzene (SS)			100.5		%		70-130	27-OCT-20
Surrogate: 3,4-Dichlorotoluene (SS)			101.9		%		70-130	27-OCT-20

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
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.

Hold Time Exceedances:

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

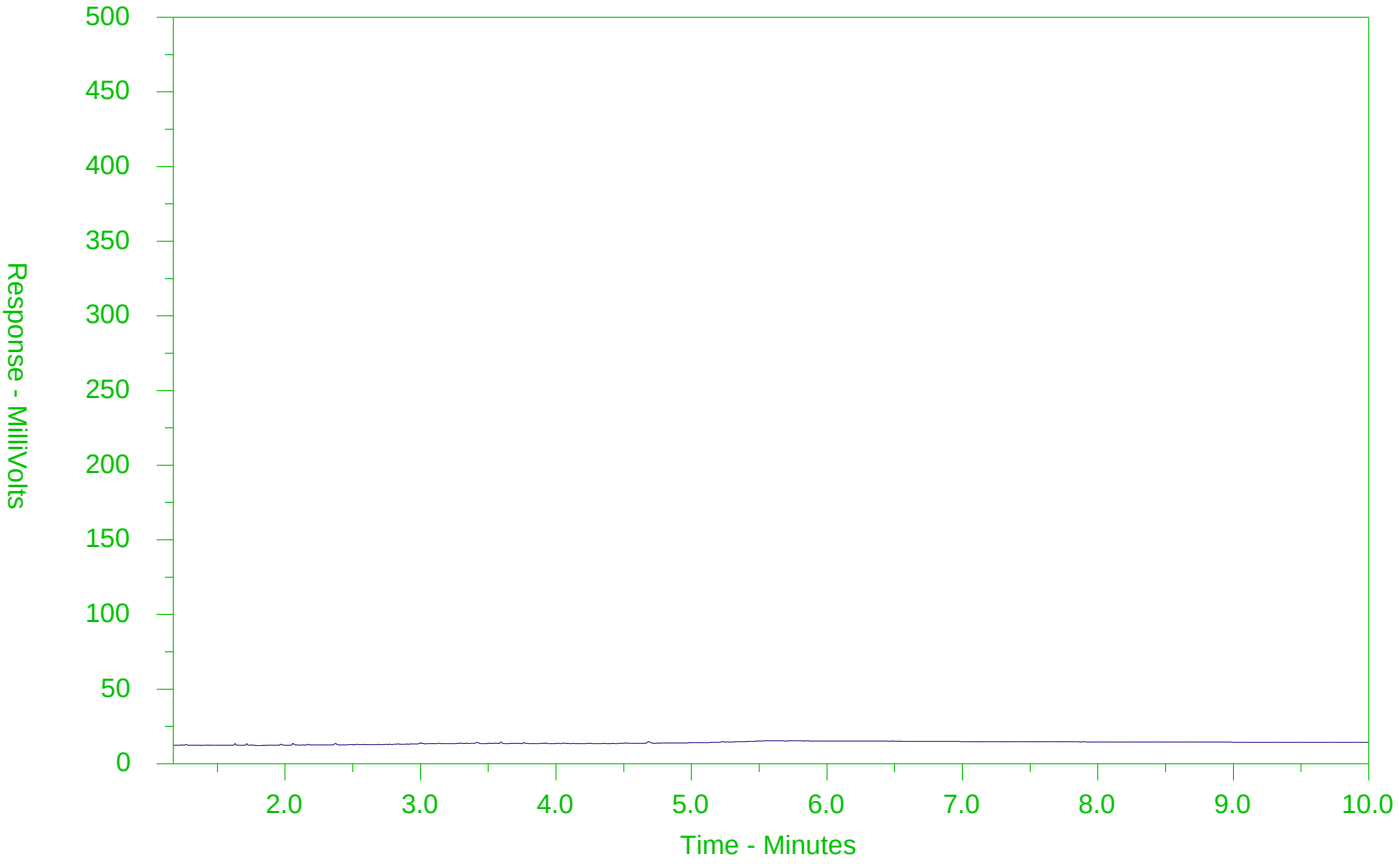
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where 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: L2518739-1
Client Sample ID: MW01



←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.

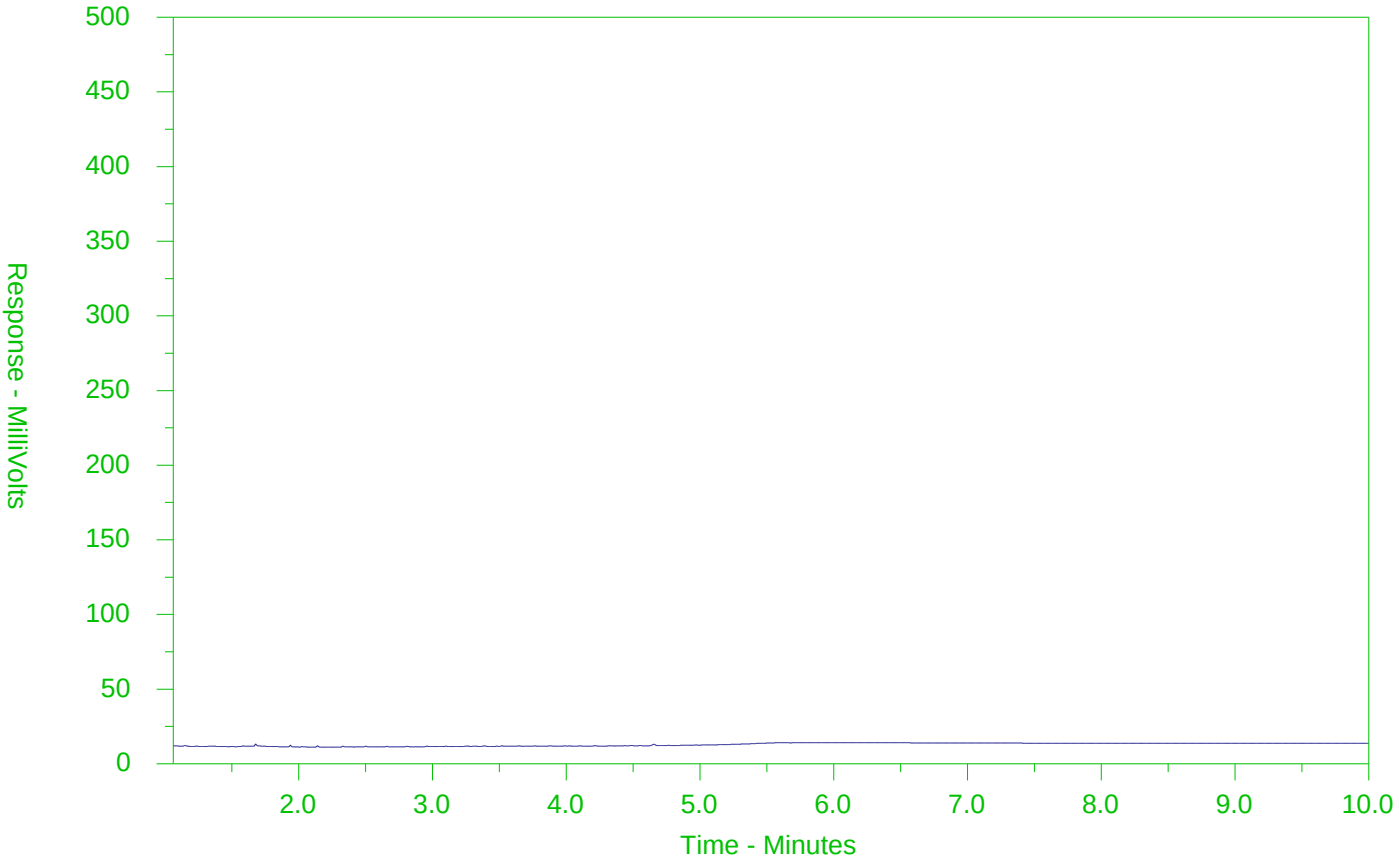
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2518739-2
Client Sample ID: MW03



←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.

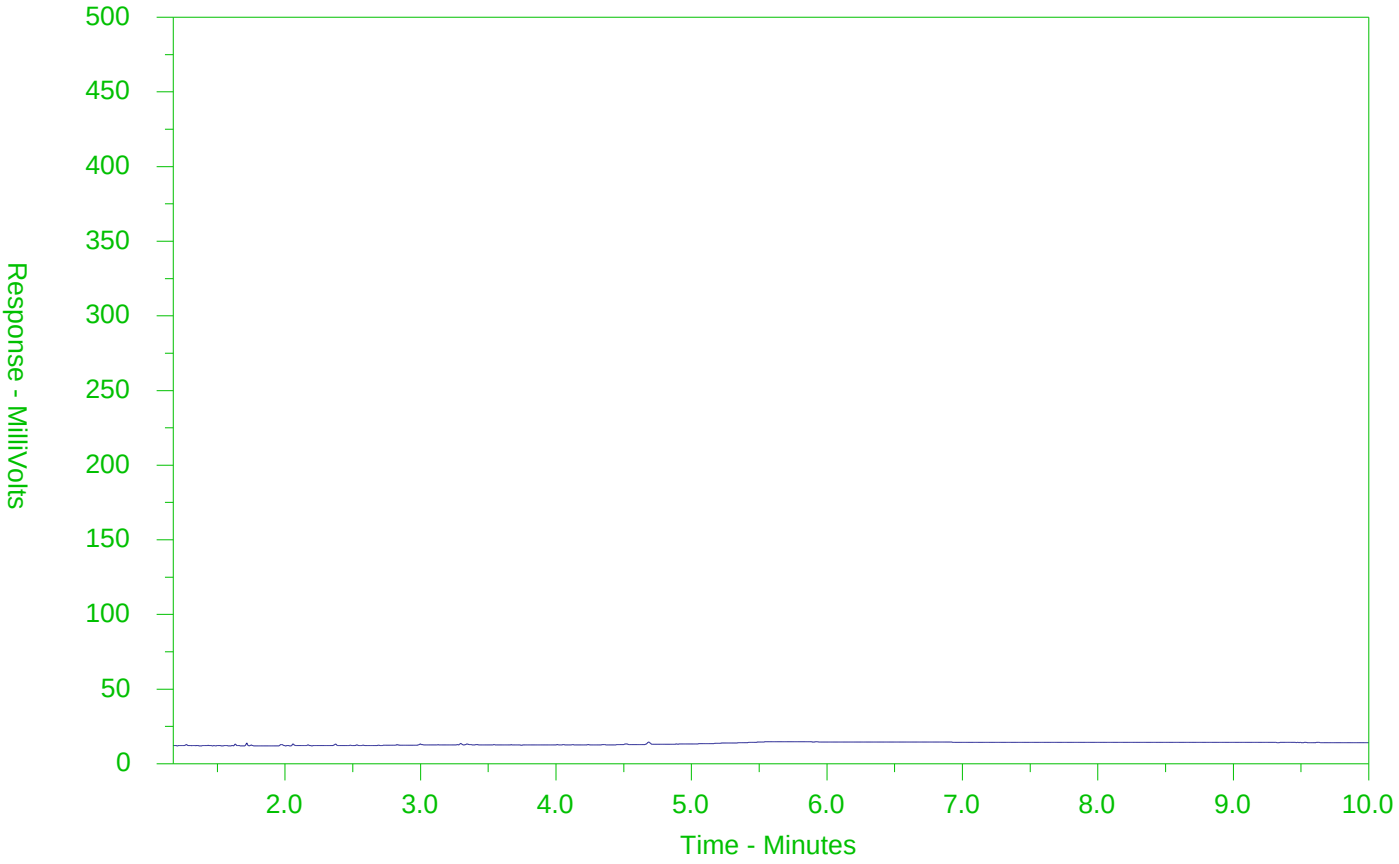
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2518739-3
Client Sample ID: MW04



←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.

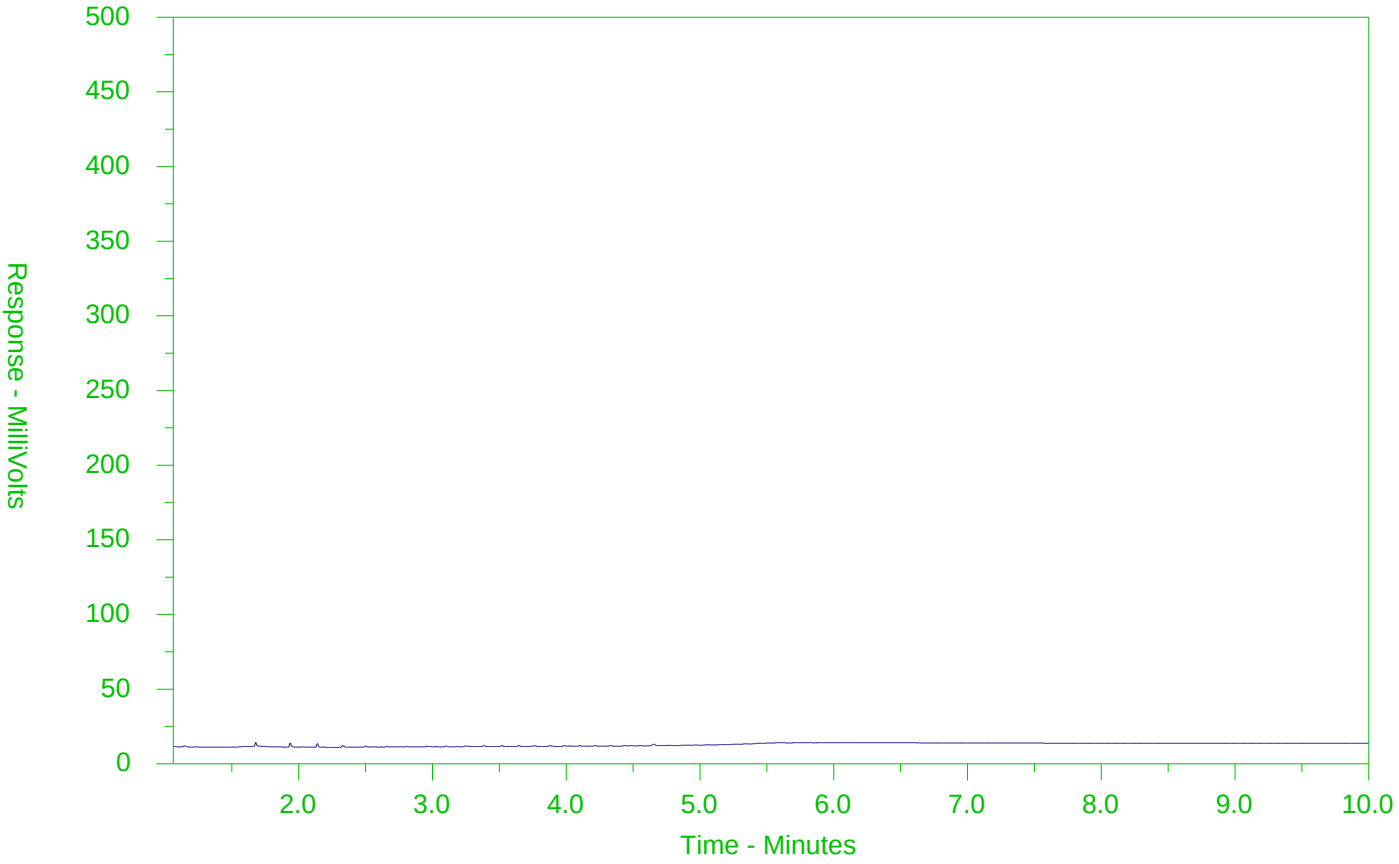
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2518739-4
Client Sample ID: DUP01



←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.

ALS Environmental

www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

L2518739-COFC

COC Number: 17 - 883842

Page 1 of 1

Report To	Contact and company name below will appear on the final report	Report Format / Distribution	Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)
Company:	HLC CONSULTING LTD.	Select Report Format: [X] PDF [X] EXCEL [ ] EDD (DIGITAL)	Regular [R] [X] Standard TAT if received by 3 pm - business days - no surcharges apply
Contact:	REEGAN LAWRENCE	Quality Control (QC) Report with Report [ ] YES [ ] NO	PRIORITY (Business Days): 4 day [P4-20%] [ ]; 3 day [P3-25%] [ ]; 2 day [P2-50%] [ ]
Phone:	204-475-8140	[ ] Compare Results to Criteria on Report - provide details below if box checked	EMERGENCY: 1 Business day [E - 100%] [ ]; Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] [ ]
	Company address below will appear on the final report	Select Distribution: [X] EMAIL [ ] MAIL [ ] FAX	
Street:	5-55 HENLOW BAY	Email 1 or Fax: rlawrence@hlcconsultingltd.ca	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm
City/Province:	WINNIPEG MB	Email 2: cbaldwin@hlcconsultingltd.ca	For tests that can not be performed according to the service level selected, you will be contacted.
Postal Code:	R3Y 1G4	Email 3	

Invoice To		Invoice Distribution	Analysis Request
	Same as Report To [X] YES [ ] NO	Select Invoice Distribution: [X] EMAIL [ ] MAIL [ ] FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
	Copy of Invoice with Report [X] YES [ ] NO		
Company:	HLC CONSULTING LTD.	Email 1 or Fax	
Contact:	CAROLYN BALDWIN	Email 2	

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	Q75942	AFE/Cost Center:	PO#
Job #:	20200388	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	
ALS Lab Work Order # (lab use only):		ALS Contact: C. RIDDELL	Sampler: R. LAWRENCE

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	VOCs - F	PHC F2-F4	PAHs	METALS	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	MW01	19-10-2020	am	water	7	X	X	X			
	MW03	"	"	"	8	X	X	X	X		
	MW04	"	"	"	8	X	X	X	X		
	DUP01	"	"	"	8	X	X	X	X		
	MW01	20-10-2020			1				X		

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)
Are samples taken from a Regulated DW System? [ ] YES [ ] NO	
Are samples for human consumption/ use? [ ] YES [ ] NO	

SAMPLE CONDITION AS RECEIVED (lab use only)

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

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
2.7							

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
	2020-10-20	9:30	CE	Oct 20/2020	9:30		OCT 20 2020	1935

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2019 FRONT

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

APPENDIX V

PERSONNEL RESUMES

HLC CONSULTING LTD.

Reegan Lawrence, B.Env.Sc.

Environmental Technologist

Reegan Lawrence is an Environmental Technologist at HLC Consulting Ltd. Reegan graduated from the University of Manitoba in 2017 with an honours degree in Environmental Science focusing on Sustainable Development and minoring in Economics. She has experience conducting Phase I, II, & III Environmental Site Assessments, waste audits, compliance inspections, and in data management and report writing. Reegan has completed work across Manitoba, Saskatchewan, and Alberta and takes pride in providing an excellent customer service experience.

Environmental Site Assessments (ESA)

(2019-2020) *Red River Mutual*

- Subsurface Investigation completed to identify impacts resulting from a heating oil tank spill in the basement of a residence in rural Manitoba.
- Remedial Excavation completed to remove impacted soil and groundwater.

(2019-2020) *1214 Real Estate Investors*

- Phase I ESA completed on an industrial property in Winnipeg.
- Phase II ESA completed to address concerns regarding the historical presence of underground fuel storage tanks on the property.
- Phase III ESA completed to remediate identified subsurface contamination.

(2020) *Leder Investments Ltd.*

- Phase I ESA completed on an industrial property in Winnipeg.
- Phase II ESA completed an industrial property in Winnipeg to address concerns regarding potential subsurface contamination that had historically originated from a neighbouring property.
- Limited Phase II ESA completed on an industrial property in Winnipeg to address concerns regarding the presence of an underground storage tank on-site.
- Delineation Programs completed to determine the extent of identified subsurface contamination.

* Denotes work was completed at a different firm

(2020) *PBX Truck Service Inc.*

- Phase I ESA completed on an industrial property in rural Manitoba.
- Phase II ESA completed to address potential environmental concerns from a neighbouring property.

(2019) *Feed Technologies Inc.*

- Phase I ESA's completed on industrial properties in Winnipeg.
- Phase II ESA completed on an industrial property to address concerns regarding stressed vegetation.

(2020) *Seagate Investments Limited*
Phase I ESA completed on an industrial property in Winnipeg.

(2019-2020) *Progressive Real Estate*
Phase I ESA completed on a commercial property to support the re-development of a multi-tenant residential building.

(2020) *Isanor Capital Corporation*
Phase I ESA completed on a multi-tenant residential development in Winnipeg.

(2019) *Royal Canadian Properties Limited*
Phase I ESA completed on a multi-tenant commercial development in Winnipeg.

Compliance Inspections

(2019) Correctional Service Canada (CSC)*
Conducted compliancy inspections across CSC sites in Manitoba, Alberta, and Saskatchewan, with respect to the Federal Halocarbon Regulations and the Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations.

Waste Audits

*(2018) Canadian Beverage Container Recycling Association (CBCRA)**
Completed audits of waste and recycling material to determine recycling recovery rates in areas across Manitoba. Assumed responsibilities in waste and recycling material sorting, and associated logistics.

Data Management

*(2017) Green Manitoba**
Generated and information management system to collect an analyze data on the waste and recycling sector in Manitoba. Contributed to the development of Green Manitoba's Waste Reduction and Recycling Support Program database.

Education

Bachelor of Environmental Science (Honours), University of Manitoba, 2017

* Denotes work was completed at a different firm

HLC CONSULTING LTD.

Carolyn Baldwin, B.Env.Sc., EP

Environmental Services Manager

Carolyn Baldwin is the Environmental Services Manager at HLC Consulting Ltd. Carolyn is a certified Environmental Professional (EP). She has over 5 years of consulting experience that includes phase I, phase II, and phase III environmental assessments, ground and surface water monitoring, environmental construction site monitoring, landfill monitoring, designated substances surveys, hazardous materials assessments, and electromagnetic surveys. She has completed work in Manitoba, Saskatchewan and Alberta.

Environmental Site Assessment Project Experience

(2014, 2013) *Manitoba Infrastructure and Transportation (MIT)**

- Multiple Phase I ESAs were required on residential properties in the East St. Paul area to support construction of a high profile interchange construction project.
- Phase II ESA completed on a former gas and service station in the Headingley area to support planning and construction of a future roadway project.
- Phase I ESAs and Electromagnetic surveys completed on 13 maintenance and storage yards located throughout Manitoba. Results were used by the province to aid in environmental liability accounting.

*(2014, 2013) Regional Municipality of Wood Buffalo**

Multiple Phase I and II ESAs were required on municipal properties utilized for the storage of excess snow from removal operations, road maintenance vehicles and road salt. Results were used by the municipality to aid in environmental liability accounting.

*(2014) Anthem Riverfront Holdings Ltd.**

Phase II ESA completed on a downtown Calgary surface parking lot intended for future high-rise development.

*(2014) Allard Developments**

Phase I ESA completed on a downtown Edmonton commercial property.

*(2014) Rohit Land Development**

Phase I ESA completed on a newly renovated apartment block and parking garage in Winnipeg.

*(2014) Timbercreek Asset Management**

Phase I ESA completed on a multi-stage residential development in Drayton Valley, Alberta.

* Denotes work was completed at a different firm

*(2014, 2013) CEDA International**
Multiple Phase I ESAs completed on industrial properties located development in Saskatchewan and Alberta.

*(2014) Qualico**
Multiple Phase I ESAs completed within the Qualico residential developments of Tamarack and Cy Becker in Edmonton, Alberta.

Environmental Site Monitoring

*(2014) CEDA International**
Groundwater monitoring campaign on an industrial property in Edmonton. Monitoring report and record of site condition provided in order for the Client to meet the requirements of their approval under the *Environmental Protection and Enhancement Act*.

(2014, 2013) *Manitoba Infrastructure and Transportation (MIT)**
Environmental site inspections were provided during the construction and post-construction phases of the CentrePort Canada Way expressway project.

Hazardous Materials Assessment

Asbestos Buildings Survey and Asbestos Management Plan – (2015) *St. Charles Catholic School**
Completion of an asbestos survey and asbestos management plan for a school/childcare facility located in Winnipeg.

Designated Substances and Asbestos Survey – (2013) *CEDA International**
Examination of an industrial shop and suite of offices in Edmonton to identify designated substances and sample materials suspected to contain asbestos.

Education

Bachelor of Environmental Science (Major), University of Manitoba, 2012

Associations

Environmental Professional (EP) with the Canadian Environmental Certification Approvals Board

* Denotes work was completed at a different firm