PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

7060 Old Mill Lane, Mississauga, Ontario

Prepared for:
Ms. Suzie Losiak
Credit Valley Conservation
1255 Old Derry Road
Mississauga, ON L5N 6R4

Prepared by:
Brian J. Schuyler, C.E.T.
Lou Locatelli, C.E.T., P.Geo., QP_{ESA}

Trinity Consultants Ontario Inc.
885 Don Mills Road, Suite 106
Toronto, Ontario

January 26, 2018

Project 177201.0263

885 Don Mills Road | Suite 106 | Toronto, ON M3C 1V9 | P (416) 391-2527 | F (416) 391-1931
trinityconsultants.com

January 26, 2018

Ms. Suzie Losiak, M.Sc.Pl.,RPP
Conservation Lands Planner
Credit Valley Conservation
1255 Old Derry Road
Mississauga, ON L5N 6R4

REFERENCE: **Phase Two Environmental Site Assessment**
7060 Old Mill Lane, Mississauga, Ontario
Trinity Reference 177201.0263

Trinity Consultants Ontario Inc. (**Trinity**) is pleased to provide our report for the Phase Two Environmental Site Assessment (ESA) for the property located at 7060 Old Mill Lane in Mississauga, Ontario (the Site).

A review of the soil and groundwater quality in the samples submitted for analysis, shows compliance of the applicable Ontario Ministry of Environment and Climate Change (MOECC), Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, Table 2 and 3 Standards for Industrial/Commercial/Community property use in coarse textured soil.

Based on these results, no further environmental assessment is recommended and a Record of Site Condition may be submitted to the MOECC for filing.

Thank you for the opportunity to be of service. Should you have any questions I can be reached at (416) 391-2527 at extension 59 or Brian Schuyler at extension 60. We can also be reached via email at llocatelli@trinityconsultants.com or bschuyler@trinityconsultants.com.

Yours truly
Trinity Consultants Ontario Inc.

Lou Locatelli, C.E.T., P.Geo.
Principal Consultant

Table of Contents

TABLES (in TEXT)

FIGURES

TABLES (in APPENDICES)

APPENDICES

1 Executive Summary

Trinity Consultants Ontario Inc. (Trinity) was retained by **Credit Valley Conservation (CVC)** to conduct a Phase Two Environmental Site Assessment (ESA) of a 0.16-ha community property located at 7060 Old Mill Lane in Mississauga, Ontario. Refer to **Figure 1** for the Site Location.

The main objectives of the Phase Two ESA were to determine soil and groundwater quality in areas of potential environmental concern (APECs) as identified in the Phase One ESA, and complete a comparison of the analytical results to applicable Ministry of the Environment and Climate Change (MOECC) Standards. The Phase Two ESA has been supervised by a Qualified Person (QP_{ESA}).

The work and reporting was completed on the basis of O. Reg. 153/04 (as amended) for the purpose of submitting a Record of Site Condition (RSC) to the Ministry of the Environment and Climate Change (MOECC).

The Phase Two Property consists of a total area of 0.16-ha. The Phase Two property is located in a residential area in the City of Mississauga, on the west side of Old Mill Lane, 165 m north of the intersection with Old Derry Road as shown on **Figure 1** (Site Location). The Phase Two Property is bounded to the south by a residential dwelling, to the east by Old Mill Lane, to the west by woodland in a CVC greenspace, and to the north by a gravel walkway connecting the greenspace to Old Mill Lane. The municipal address assigned to the Phase Two Property is 7060 Old Mill Lane, which also includes the walkway to the north of the Phase Two Property.

The legal description of the Phase Two Property is part of PIN 14085-2910, being Part of Lot 11, Concession 3, and Part of Lots 40 and 41 of Registered Plan TOR-5, in the City of Mississauga, Ontario as shown is the site survey as provided in **Appendix D**.

The geo-referencing coordinates for the approximate centre of the Phase Two Property are Universal Transverse Mercator (UTM) 17T 602410 4831220.

The QP_{ESA} has determined that there are no surface water bodies on or within 30 m of the property, therefore it is not in proximity to a waterbody. The property is not on or within an area of natural significance and, therefore it is not considered to be a "Sensitive Site" under Regulation 153/04 (as amended). The City of Mississauga obtains drinking water from Lake Ontario. Based on the observations of the soil encountered during the drilling and the results of a particle size distribution sample, the majority of soil underlying the property is representative of fine grained texture as defined under O. Reg. 153/04 (as amended).

Accordingly, analytical results for soil and groundwater were compared to Table 2 of the MOECC *"Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act,"* April 15, 2011 for Residential/Parkland/Institutional Property Use and Medium to Fine Textured Soil in both Potable Groundwater (Table 2).

Based on the results from this investigation, all soil and groundwater samples analyzed without exception are in compliance with the MOECC 2011 Table 2 Site Condition Standards.

Recommendations

No further environmental site assessment is warranted nor recommended.

Groundwater monitoring wells are regulated under the Ontario Water Resources Act (OWRA), Ontario Regulation 903, s.20, 21. A well owner is required to maintain the monitoring wells in good condition. If the monitoring well is no longer intended for use, it should be decommissioned in accordance with O. Reg. 903.

2 Introduction

Trinity Consultants Ontario Inc. (Trinity) was retained by **Credit Valley Conservation (CVC)** to conduct a Phase Two Environmental Site Assessment (ESA) of a 0.16-ha community property located at 7060 Old Mill Lane in Mississauga, Ontario. Refer to **Figure 1** for the Site Location.

The main objectives of the Phase Two ESA were to determine soil and groundwater quality in areas of potential environmental concern (APECs) as identified in the Phase One ESA, and complete a comparison of the analytical results to applicable Ministry of the Environment and Climate Change (MOECC) Standards. The Phase Two ESA has been supervised by a Qualified Person (QP_{ESA}).

The work and reporting was completed on the basis of O. Reg. 153/04 (as amended) for the purpose of submitting a Record of Site Condition (RSC) to the Ministry of the Environment and Climate Change (MOECC).

2.1 Site Description

The Phase Two Property consists of a total area of 0.16-ha. The Phase Two property is located in a residential area in the City of Mississauga, on the west side of Old Mill Lane, 165 m north of the intersection with Old Derry Road as shown on **Figure 1** (Site Location). The Phase Two Property is bounded to the south by a residential dwelling, to the east by Old Mill Lane, to the west by woodland in a CVC greenspace, and to the north by a gravel walkway connecting the greenspace to Old Mill Lane. The municipal address assigned to the Phase Two Property is 7060 Old Mill Lane, which also includes the walkway to the north of the Phase Two Property.

The legal description of the Phase Two Property is part of PIN 14085-2910, being Part of Lot 11, Concession 3, and Part of Lots 40 and 41 of Registered Plan TOR-5, in the City of Mississauga, Ontario as shown is the site survey as attached as **Figure 3**.

The geo-referencing coordinates for the approximate centre of the Phase Two Property are Universal Transverse Mercator (UTM) 17T 602410 4831220.

The oldest available records for the Phase Two Property area obtained during the Phase One ESA, were Land Registry Records and a historical map of Peel County from 1877, which showed the Phase Two

Property to be part of an undeveloped residential lot on the west side of Mill Street (later renamed Old Mill Lane), just to the east of a Mill Pond (subsequently drained in the late 1800s or early 1900s. No developed uses as defined by O. Reg. 153/04 (as amended) were noted on the Phase Two Property until the development of the existing building in 1972, after which point the Phase Two Property has been used for conservation authority equipment storage and maintenance.

Vehicle access to the Phase Two Property is provided via a gravel surfaced parking area located east of the building and west of Old Mill Lane.

2.2 Property Ownership

The Phase Two property is owned by:

Credit Valley Conservation
1255 Old Derry Road
Mississauga, ON L5N 6R4
Contact: Ms. Suzie Loziak

2.3 Current and Proposed Future Uses

Since 1972, when the property was first developed with the current building it has been used by CVC for equipment storage and maintenance.

Trinity understands that CVC is planning to sell the Phase Two Property and although unconfirmed a proposed future use will likely consist of residential land use.

2.4 Applicable Site Condition Standard

The MOECC released Regulations 511/09 and 179/11 (amending Regulation 153/04) defining Qualified Persons (QP), enhancing soil and groundwater standards and providing sampling protocols for volatile organic compounds (VOCs) sampling methodologies (i.e., methanol field stabilization or hermetic sampling devices) which came into force on July 1, 2011.

The QP_{ESA} has determined that there are no surface water bodies on or within 30 m of the property, therefore it is not in proximity to a waterbody. The property is not on or within an area of natural significance and, therefore it is not considered to be a "Sensitive Site" under Regulation 153/04 (as amended). The City of Mississauga obtains drinking water from Lake Ontario. Based on the observations of the soil encountered during the drilling and the results of a particle size distribution sample, the majority of soil underlying the property is representative of fine grained texture as defined under O. Reg. 153/04 (as amended).

In keeping with the Region of Peel's intentions, accordingly, analytical results for soil and groundwater were compared to Table 2 of the MOECC *"*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*,"* April 15, 2011 for Residential/Parkland/Institutional Property Use and Medium to Fine Textured Soil in both Potable Groundwater (Table 2).

3 Background

3.1 Physical Setting

The Phase Two Property is located in a residential area in the City of Mississauga, on the west side of Old Mill Lane, 165 m north of the intersection with Old Derry Road (**Figure 1**). The Phase Two Property is bounded to the south by a residential dwelling, to the east by Old Mill Lane, to the west by woodland in a CVC greenspace, and to the north by a gravel walkway connecting the greenspace to the roadway.

The topography of the Phase Two Property is level to gently sloping to the west, towards the Credit River, which is located 175 m to the southwest of the Phase Two Property. Surface water from the Phase Two Property drains overland into the wooded area east of the on-Site building.

3.2 Previous Investigations

The following previous reports were reviewed by Trinity in the completion of this Phase Two ESA:

Table 3.1 – Summary of Previous Reports

Report Title	Report Date	Report Short Reference
Phase One Environmental Site Assessment, 7060 Old Mill Lane, Mississauga, by Trinity Consultants Ontario Inc., Project No. 177201.0205	December 29, 2017	Trinity Phase One ESA
Phase I Environmental Site Assessment, 7060 Old Mill Lane, Mississauga, Ontario, by exp Services Inc., Project BAR-00046221-AO	March 16, 2017	exp Services Phase I ESA
Designated Substance Survey, 7060 Old Mill Lane, Mississauga, Ontario, by exp Services Inc., Project BAR-00046221-AO	April 27, 2017	exp Services Designated Substance Survey

Trinity Phase One ESA

Based on the results of the Phase One ESA, two potentially contaminating activities (PCAs) as listed in Table 2, Schedule D, Part VI, Section 19 of O. Reg. 153/04 (as amended) were identified on the Phase Two Property, including #27 – **Garages**, and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles, and #28 – Gasoline and Associated Products Storage in Fixed Tanks.

Two Areas of Potential Environmental Concern (APECs) were identified in the Phase One ESA, both of which were located on the Phase One Property.

A Phase Two ESA was recommended to investigate soil and groundwater quality.

exp Services Phase I ESA

This report was prepared in general accordance to CSA Standard Z768-01 (R2012), provided the following findings and recommendations:

- A 250-gallon fuel above-ground storage tank (AST) was historically located behind the building on the west side of the subject property, equipped with a hand pump and was mounted on a concrete pad. The AST was reportedly installed in the 1970s. No recorded spills had been associated with this AST and exp did not identify this AST as a significant potential source of soil or groundwater contamination;
- After removal of the diesel AST (late 1980s or early 1990s), a fire-proof storage cabinet was installed on a concrete slab and housed small containers of fuel, such as jerry cans. This cabinet was reportedly removed before 2012, and exp did not identify this former storage area as a significant source of soil or groundwater contamination;
- A buried septic holding tank was located near the northwest corner of the building;
- Wastewater generated at the Site is contained in a holding tank located near the northwest corner of the building. The holding tank is pumped out and hauled off-Site by a licensed contractor approximately once per year;
- exp noted that the Site grades are generally similar to those of the surrounding properties, and as such, significant amounts of fill are not likely to be present; and
- exp noted that based on the age of the Site building and observations made during the site visit there is a possibility for hazardous building materials to be present within the Site building.

exp Services Designated Substance Survey

This report noted the following:

- No asbestos-containing materials (ACMs) were identified in the interior of the 7060 Old Mill Lane building; however, exterior window/siding caulking was noted to be non-friable ACM;
- Paint on the building was noted to have trace amounts (<0.053 %) lead;
- Polychlorinated biphenyls (PCBs) may be present in older lighting ballasts, but none were observed on-Site;
- No ozone-depleting substances were noted;
- No visual indication of any mould growth was noted on the property; and
- Mercury may be present in the thermostats and switches, as well as fluorescent tubes.

Recommendations were made for abatement of these materials prior to building demolition; however, no materials were noted that appeared to present a significant environmental concern to the Phase One Property.

4 Scope of the Investigation

This Phase Two ESA commenced within 18 months of the completion of the Phase One ESA and the QP_{ESA} has confirmed that there have been no material changes to the property and no additional APEC's identified. The Phase Two ESA applies to the entire Phase Two property.

4.1 Overview of the Site Investigation

The Phase Two ESA was completed on the basis of O. Reg. 153/04 (as amended). The Phase Two ESA has been supervised by a QP_{ESA}.

The scope of work was developed based on the findings of the Phase One ESA and requirements of O. Reg. 153/04 (as amended). The scope of work involved the following tasks:

a) Prepared a site-specific health and safety plan, including safety provisions for project team members (i.e. protective gloves, hard hat, safety boots and glasses);
b) Prepared a Sampling and Analysis Plan based on the findings of the Phase One ESA;
c) Completed both public Ontario One-Call and private locates for clearance of underground utilities in the work areas;
d) Liaised with the drilling contractor before the start of the investigation to review logistics, equipment requirements and drilling methodologies;
e) Advanced three boreholes on the Phase Two property to maximum depths of 6.10 m to collect representative soil samples. Representative samples were collected from the surface down to the terminal depth of each borehole. All samples were logged in the field by Trinity staff noting relative moisture content, texture, colour and any visible signs of contamination, if observed. The soil samples were screened using a portable detector to check for combustible vapour and volatile vapour concentrations which could be associated with environmental impacts;
f) Installed one groundwater monitoring well in each of the three boreholes on the Phase Two property;
g) Sampled the groundwater monitoring wells on the Phase Two property;
h) Analyzed representative soil samples of the fill and native materials encountered on the Phase Two Property. Chemical analysis included Contaminants of Potential Concern (CoPC) identified in the Phase One ESA, including, PHC fractions F1-F4, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs) and metals. pH was also analyzed in shallow soil samples;
i) Analyzed representative groundwater from each groundwater monitoring well on the Phase Two property. Chemical analysis included PHC fractions F1-F4, VOCs, PAHs, metals and pH; and
j) Preparation of a Phase Two ESA report, documenting the findings of the assessment with a comparison of the analytical results to the applicable MOECC Site Condition Standards.

The sampling program (including QA/QC methods) was conducted in accordance with Trinity Standard Operating Procedures in conjunction with the MOECC document "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario," dated December 1996. All chemical analyses were performed in accordance with the document "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act," dated March 2004 (as amended).

4.2 Media Investigated

The rationale for borehole locations was based upon investigating APEC's identified in the Phase One ESA study area and in consideration of utility locations, Site and property boundaries and access constraints.

Multiple soil samples were collected from each of the boreholes in the Phase Two ESA. Soil sampling included samples to characterize fill quality and to characterize and profile native materials above and below the water table. Borehole and monitoring well locations are provided in **Figure 2**.

The results for all soil and groundwater samples submitted for analysis are included in the Phase Two ESA report. Since there is no surface water or sediment on the Phase Two Property, no media were available for sample collection. No soil vapour probes were installed as concentrations of combustible and volatile soil vapours were not detected in the soil samples at the time of drilling. Investigation derived soil cuttings and monitoring well purge water were placed on the ground surface.

4.3 Phase One Conceptual Site Model

The Phase One Conceptual Site Model (CSM) identified areas of potential environmental concern (APEC's) and potentially contaminating activities (PCA's) on-Site in the Phase One study area.

An APEC was identified on-Site for the former activity of maintenance and repair of CVC equipment and vehicles in the south central part of the building, which was conducted at the Site from the early 1970s to the early 1990s, based on an interview with Paul Kennedy, the CVC site contact for the Phase One ESA.

An APEC was identified on-Site for the former diesel fuel AST located northwest of the building, which was in place from the early 1970s to the early 1990s, which was used for fueling CVC vehicles.

A copy of the Phase One Conceptual Site Model (CSM), depicting the spatial relationship between the Site and, the APEC's and the potential contaminant pathway (groundwater flow) is provided in **Figure 3**. Based on a review of the Site servicing, none of the underground conduits in the area (limited to municipal water pipes on the north part of the Phase Two Property) appeared to have sufficient diameter and depth to influence local shallow groundwater flow. Therefore, these utility lines were not plotted in detail on the CSM.

4.4 Deviations from Sampling and Analysis Plan

No deviations from the sampling and analysis plan were identified that would affect the findings of the Phase Two ESA. A copy of the sampling and analysis plan is provided in **Appendix A**.

4.5 Impediments

There was no denial of access or other impediments during the Phase Two ESA. The overall objectives of the assessment were reviewed and met.

5 Investigation Method

5.1 General

A site specific health and safety plan (HASP) was developed in accordance with Trinity policy prior to commencement of work. The HASP identifies the location of the work, field activities, responsibilities of Trinity and contractor personnel, potential chemical compounds present, physical hazards, environmental conditions, personal protective equipment, training required and directions to the nearest emergency health care provider. A copy of the HASP is retained in Trinity's work file.

The following sections provide descriptions of the investigation methods, equipment used, sub-contractor information.

5.2 Drilling

Drilling activities were completed on October 26, 2017 and included the advancement of three (3) boreholes (MW1, MW2 and MW3), all of which were completed as groundwater monitoring wells, as shown on **Figure 2**. The maximum finished drilling depth of 6.10 mbgs (metres below ground surface) was based on field observations of geologic conditions in order to meet the project objectives.

Landshark Drilling (Landshark) of Brantford, Ontario, a licensed drilling contractor used a rubber track-mounted Geoprobe 7822DT drill to advance the boreholes. Soil was sampled at each borehole/monitoring well location using the direct push drill which is equipped with a dual tube sampling system. The dual tube system uses direct push technology together with disposable 1.52 m long by 51 mm diameter PVC macro core liners, which fit inside a 60 mm diameter outer stainless steel tube. Both tubes are simultaneously pushed into the ground and the PVC liner containing a discrete soil sample is collected for field observation and chemical sampling purposes. The stainless steel samplers (1.52 m in length) were cleaned between borehole locations using a Liquinox soap and water solution followed by a rinse with distilled water. Once the soil samples had been collected and the borehole was at the depth for groundwater monitor installation, each hole was reamed out using 200 mm diameter hollow-stem augers to the final depth of each borehole.

All soil samples were logged by Trinity noting soil colour, texture, moisture content and any visual signs of impact (i.e. staining or odours). Representative samples were split in the field and collected in sealable sample bags and appropriate laboratory containers. Samples were placed into coolers with ice to maintain sample integrity until the samples could be delivered to the laboratory for analysis.

5.3 Soil Sampling

Soil samples were collected during the drilling program for laboratory analysis. This included samples from each stratigraphic unit encountered. Selected soil samples were submitted for analysis of PHC fractions F1-F4, VOCs, PAHs and metals. One shallow soil sample from each borehole was also submitted for determination of pH.

As required by the MOECC "Protocol of Analytical Methods Used in the Assessment of Properties Under Part XV.1 of the Environmental Protection Act," dated March 9, 2004 (amended July 1, 2011), special care must be used when sampling for PHC fraction F1 and VOCs. For this project, Trinity obtained soil samples for analysis of PHC fraction F1 and VOCs using the methanol stabilization method. Soil samples for PHC fraction F1 and VOCs were collected using a Terracore sampler and were preserved in vials with a methanol preservative as per industry standard sampling procedures. Soil samples for PHC fractions F2-F4, PAHs, metals, and pH were collected by removing a portion of the soil core directly from the macro core liner and placing it into a pre-cleaned sealable glass jar provided by the laboratory. A new pair of nitrile gloves were worn by Trinity personnel to examine each soil sample and during sample preparation.

All soil samples were placed into laboratory-prepared sample containers, sealed, labeled and stored in a cooler with ice for transportation to ALS Environmental in Richmond Hill, Ontario, the same day as sample collection. Standard QA/QC protocols were followed for bottle preparation and transport as outlined by MOECC guidance documents.

Refer to **Table 5.1** for a summary of all soil samples submitted for analysis. Finalized borehole logs are included in **Appendix B**.

Table 5.1: Inventory of Soil Analyses

Sampling Date	Borehole	MW1	Depth (m)	PHC F1-F4	VOCs	PAHs	Metals	pH
26-Oct-17	**MW1**	MW1 SA1	0.30 – 1.52	✓	✓	✓	✓	✓
		MW1 SA5	3.81 – 4.57	✓	✓	✓	✓	
	MW2	MW2 SA1	0.00 – 1.52	✓	✓	✓	✓	✓
		MW2 SA4	3.05 – 3.81	✓	✓	✓	✓	
	MW3	MW3 SA1	0.00 – 1.52	✓	✓	✓	✓	✓
		MW3 SA3	3.81 – 4.57	✓	✓	✓	✓	
	MW10[1]	MW10 SA1	3.81 – 4.57	✓	✓	✓	✓	
	Blank[2]	QA/QC	NA		✓			

1 – MW10 SA1 is a blind duplicate sample of MW1 SA5.
2 – Blank is a QA/QC sample.

5.4 Field Screening Measurements

Soil samples were recovered during the drilling and examined for visual evidence of environmental impact. Soil samples were field screened by Trinity using a pre-cleaned and calibrated RKI Eagle2 dual gas detector to measure the total hydrocarbons (represented by a hexane calibration) and volatile organic carbon (VOC)(represented by a isobutylene calibration) gasses in the headspace. A portion of each soil sample was placed into a Ziploc plastic bag and the instrument probe was inserted into the bag while the bag was held closed. The soil sample was crumbled to release soil vapour and the instrument readings were recorded for each soil sample on the field borehole log.

Equipment calibration and maintenance was performed by Maxim Environmental and Safety Inc. (Maxim) of Mississauga, Ontario according to manufacturers' recommendations prior to arriving at the Site to ensure the proper operation in the field.

The calibration process included a fresh air/zero calibration and a single sensor calibration for VOCs using isobutylene. The fresh air/zero calibration is completed using a charcoal filter to clean air. The fresh air calibration calibrates the unit to background conditions. After completing a fresh air/zero calibration and moisture test response, a calibration using isobutylene was completed.

5.5 Groundwater Monitoring Well Installation

A groundwater monitoring well was installed in all three boreholes (MW1, MW2 and MW3) and was completed by Landshark. Trinity was present during the monitoring well construction and installation to record and document the well construction details. Nitrile gloves were worn during all work on the monitoring wells, including during water level measurements.

Groundwater monitoring wells were constructed with 51 mm diameter, schedule 40 PVC pipe and No. 10 slotted PVC screen. The monitor pipe and screens were received pre-cleaned and sealed in a protective plastic wrap from the manufacturer. The riser pipe and screen sections were pre-threaded with O-ring seals. No glues or solvents were used to connect the pipe sections.

A coarse grained silica sand pack was placed around the full length of the screen to allow for groundwater collection. Bentonite (Holeplug™) was placed immediately above the sand pack to hydraulically isolate the screened portion of the well. Monitoring wells MW1 and MW2 were completed with above-grade steel protective casings and MW3 (located east of the building in a grassed area) was completed with a steel flush-mount casing, which was cemented in place.

Landshark has filed an MOECC well log for the monitoring wells in accordance with Ontario Regulation 903.

Monitoring well construction details are provided in **Table 1** (in appendices). Finalized borehole logs are provided in **Appendix B**.

5.6 Groundwater Field Measurement of Water Quality Parameters

Field chemistry parameters including: pH, conductivity and temperature were monitored during well purging using a Hanna water quality meter provided from Maxim. The Hanna water quality meter was pre-calibrated by Maxim before using at the Phase Two Property.

5.7 Groundwater Sampling

Purging and well development included removing stagnant water from the monitoring wells and the surrounding sand pack to allow a representative groundwater sample to be collected. Dedicated Waterra tubing and a foot valve were used to purge the wells.

Typically, at least three well volumes of water was removed from each monitoring well prior to sampling.

Following purging, groundwater samples were collected from the on-site monitoring wells MW1, MW2 and MW3. Representative groundwater was examined for visual and olfactory evidence of impact and placed in laboratory supplied sample bottles, sealed, labeled and stored in a cooler with ice for transportation to ALS Environmental in Richmond Hill, Ontario on the same day of sample collection.

Refer to **Table 5.2** for a summary of all groundwater samples submitted for analysis.

Table 5.2: Inventory of Groundwater Analyses

Sampling Date	Borehole/Monitoring Well ID	PHC F1-F4	VOCs	PAHs	Metals	pH
02-Nov-17	**MW1**	✓	✓	✓	✓	✓
10-Nov-17	**MW2**	✓	✓	✓	✓	✓
02-Nov-17	**MW3**	✓	✓	✓	✓	✓
02-Nov-17	**MW10**[1]	✓	✓	✓	✓	✓
02-Nov-17	**Trip Blank**		✓			

1 – MW10 is a blind duplicate QA/QC sample of MW3.
2 – Trip Blank sample is a QA/QC sample.

5.8 Sediment Sampling

There is no sediment present on the Phase Two Property, therefore no sediment samples were collected.

5.9 Analytical Testing

Representative soil and groundwater samples were submitted under chain-of-custody to ALS Environmental (ALS) in Richmond Hill, Ontario. ALS is accredited by the Canadian Association for Laboratory Accreditation (CALA), through membership number 3149, in accordance with ISO/IEC 17025:2005 for the analysis of all parameters and samples in the scope of work for which Site Condition Standards have been established under O. Reg. 153/04 (as amended). The laboratory reports meet the requirements of S.47 (2b) and (3) of O. Reg. 153/04 (as amended). The ALS contact for this project is Ms. Mary-Lynn Pike at 60 Northland Drive, Waterloo, ON. Ms. Pike can be reached at (519) 886-6910.

5.10 Residue Management Procedure

Soil cuttings and purge water from monitoring well development were placed on the ground surface in the vicinity of each borehole.

5.11 Elevation Surveying

An elevation survey of the boreholes/groundwater monitoring wells was completed on October 26, 2017. A temporary on-Site benchmark (top of patio slab near northeast corner of building). This temporary benchmark was given the arbitrary elevation of 100.000 m. The top-of-pipe and ground elevation at each monitoring well was measured in reference to this temporary benchmark.

5.12 Quality Assurance and Quality Control Measures

Quality assurance/quality control (QA/QC) was maintained during the field program through equipment decontamination and sampling procedures, as outlined in the MOECC "Guidance on Sampling and Analytical Methods" (MOE, 1996).

The water level meter tape was cleaned between monitoring wells. This was accomplished by rinsing cleaning fluids over the equipment in the sequence listed below:

- Phosphate free detergent, such as Alconox or Liquinox, and potable water from a municipal water system;
- Solvent rinse with methanol; and
- De-ionized water.

All samples were placed into pre-cleaned laboratory supplied bottles then clearly labeled with a unique sample identifier, project number, Trinity contact, sample parameters required and date.

A blind duplicate soil sample was collected during the drilling on October 26, 2017 for PHC fraction F1-F4, VOCs, PAHs and metals from MW1 SA5 and labeled MW10 SA1.

Soil samples analyzed for PHC fraction F1 and VOCs were collected in Terracore samplers that take and seal a single soil sample from the undisturbed soil core in a methanol preservative. A blank sample of one of the methanol vials was submitted for analysis of VOCs.

Soil samples collected for PHC fractions F2-F4, metals and pH were collected in 120 ml unpreserved clear glass jars supplied by the laboratory.

Groundwater samples analyzed for PHC fraction F1 and VOCs were placed in septum vials with Teflon® lined lids with zero headspace and no air bubbles.

The samples were stored in insulated coolers with ice to initiate cooling for transportation to the laboratory on the same day of sampling. All soil and groundwater samples were submitted to the laboratory under 4°C.

Field logbooks were maintained by Trinity staff to record data collection and sampling activities. The equipment used to collect samples was noted, along with the time of sampling, sampling description, depth from which the samples were collected and volume and number of sample containers. All samples were accompanied by a completed chain-of-custody record which listed the sample identification, sample dates and time, sample matrix, the number of containers and analytical parameters for which the samples are to be tested.

Trinity submitted all samples within the required holding times.

The laboratory confirmed that all samples were received in good condition, within the required range of temperature and that all holding times were met.

Laboratory quality control was carried out in strict accordance with the requirements of "The Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.1 of the Environmental Protection Act." Included in the laboratory QA/QC program are the use of method blanks, laboratory control samples, matrix spikes, laboratory duplicates, surrogates and internal standards depending on the analyte of interest.

Based on a review of the QA/QC procedures listed above, the QP_{ESA}, has determined that field sampling and laboratory protocols were satisfactory and that all sample data is acceptable for evaluation.

6 Review and Evaluation

6.1 Geology

Based on field observations during the drilling and soil sampling, fill materials was encountered at locations MW2 and MW3 at depths of 1.52 and 2.20 m, respectively. This fill material consisted of fine to medium sand and fine to coarse sand and gravel. Silt was observed to a depth of 1.52 m at location MW1. Additional native soil encountered underlying the silt and the fill material at MW2 and MW3, consisted of clayey silt till.

There were no obvious signs of environmental impact noted in any of the soil samples in the form of sheen, discolouration, or odours.

6.2 Groundwater Elevations and Flow Direction

Groundwater measurements were recorded on November 2 and 10, 2017. Refer to Table **6.1** below for recorded groundwater measurements and elevations.

Table 6.1: Summary of Groundwater Measurements and Elevations

Location	Top of Pipe Elevation (m)	Water Level (mBTOP)	Water Elevation (m)	Water Level (mBTOP)	Water Elevation (m)
		November 2, 2017		November 10, 2017	
MW1	100.235	5.52	94.715	5.15	95.085
MW2	100.794	7.29	93.504	6.60	94.194
MW3	100.323	2.56	97.763	1.80	98.523

mbTOP – metres below Top of Pipe

Water elevations ranged from 94.194 m at MW2 to 98.523 m at MW3. Water elevations from November 10, 2017 were used to determine the groundwater flow direction. Based on these elevations, shallow groundwater flows across the Phase Two Property in a southwesterly direction towards the Credit River as shown in **Figure 3**.

6.3 Groundwater Hydraulic Gradients

The horizontal hydraulic gradient was calculated at the Phase Two Property using the following equation:

Horizontal gradient "i_L" = $\Delta h/L$ (m/m)

Where Δh = difference in groundwater elevation in m between an upgradient and downgradient well; and

L = the lateral distance between the two wells in m

The groundwater elevation declines from 98.523 m at MW3 to 94.194 m at MW2, which are approximately 28 m apart. This represents a hydraulic gradient of 0.156 m/m.

All monitoring wells on the Phase Two Property are screened within approximately the same interval; therefore, a vertical hydraulic gradient could not be measured.

6.4 Fine to Medium Soil Texture

A soil sample (MW2 SA5) representative of the majority of soil underlying the Phase Two Property was submitted to ALS for analysis of Particle Size Distribution. Soil sample MW2 SA5 was measured as 31.4% >75 µm. Based on this result, the majority of the soil underlying the Phase Two Property meets the fine to medium texture requirements. A copy of the laboratory certificates of analysis are provided in **Appendix C**.

6.5 Soil Field Screening

Soil cores recovered during the drilling were examined for visual and olfactory (odour) evidence of environmental impact. There were no visual or olfactory concerns identified in the soil samples.

There were no elevated vapour readings recorded for any of the field screened samples. All field screened samples were non-detect (0 ppm).

6.6 Soil Quality

Contaminants of Potential Concern in soil identified by the Phase One ESA include the following:

a) Metals;
b) PHC fractions F1-F4;
c) VOCs; and
d) PAHs

The analytical results for soil are provided in **Tables 2, 3, 4 and 5** (in Appendices) along with a comparison to the MOECC 2011 Table 2 Site Condition Standards for Residential/Parkland/Institutional Property Use in medium to fine textured soil. Laboratory Certificates of Analysis are provided in **Appendix C**. The following sections summarize the analytical findings for the soil samples.

Metals

Seven (7) soil samples, including one (1) blind duplicate sample were submitted for analysis of metals.

There were no reported exceedances of the MOECC 2011 Table 2 Site Condition Standards for metals in any of the soil samples submitted for analysis.

VOCs

Eight (8) soil samples, including one (1) blind duplicate and blank sample were submitted for analysis of VOCs.

There were no reported exceedances of the MOECC 2011 Table 2 Site Condition Standards for VOCs in any of the soil samples or the blank sample submitted for analysis.

PHC F1-F4

Seven (7) soil samples, including one (1) blind duplicate sample were submitted for analysis of PHC fractions F1-F4.

There were no reported exceedances of the MOECC 2011 Table 2 Site Condition Standards for PHC fractions F1-F4 in any of the soil samples submitted for analysis.

PAHs

Seven (7) soil samples, including one (1) blind duplicate sample were submitted for analysis of PAHs.

There were no reported exceedances of the MOECC 2011 Table 2 Site Condition Standards for PAHs in any of the soil samples submitted for analysis.

pH

Three (3) soil samples were submitted for analysis of pH.

There were no exceedances of the MOECC Table 2 Site Condition Standards in the soil samples submitted for analysis of pH.

6.7 Groundwater Quality

The contaminants of potential concern in groundwater identified by the Phase One ESA included the following:

a) Metals;
b) PHC fractions F1-F4;
c) VOCs; and
d) PAHs

The analytical results for groundwater are provided in **Tables 6, 7, 8 and 9** (in Appendices) along with a comparison to the MOECC 2011 Table 2 Site Condition Standards, All Types of Property Use, medium to fine textured soil. Laboratory Certificates of Analysis are provided in **Appendix C**. The following sections summarize the analytical findings for the groundwater samples.

Metals

Four (4) groundwater samples, including one (1) blind duplicate sample were submitted for analysis of metals.

There were no reported exceedances of the MOECC 2011 Table 2 Site Condition Standards for metals in any of the groundwater samples submitted for analysis.

VOCs

Five (5) groundwater samples, including one (1) blind duplicate and trip blank sample were submitted for analysis of VOCs.

There were no reported exceedances of the MOECC 2011 Table 2 Site Condition Standards for VOCs in any of the groundwater samples submitted for analysis.

PHC F1-F4

Four (4) groundwater samples, including one (1) blind duplicate sample were submitted for analysis of PHC fractions F1-F4.

There were no reported exceedances of the MOECC 2011 Table 2 Site Condition Standards for PHC fractions F1-F4 in any of the groundwater samples submitted for analysis.

PAHs

Four (4) groundwater samples, including one (1) blind duplicate sample were submitted for analysis of PAHs.

There were no reported exceedances of the MOECC 2011 Table 2 Site Condition Standards for PAHs in any of the groundwater samples submitted for analysis.

pH

Four (4) groundwater samples, including one (1) blind duplicate sample were submitted for analysis of pH.

There were no reported exceedances of the MOECC 2011 Table 2 Site Condition Standards for pH in any of the groundwater samples submitted for analysis.

6.8 Sediment Quality

There is no sediment on the Phase Two Property, therefore no media was available for sample collection.

6.9 Quality Assurance/Quality Control (QA/QC)

Laboratory Certificates of Analysis from all soil and groundwater samples analyzed are provided in **Appendix C**. ALS is accredited by the Canadian Association for Laboratory Accreditation (CALA), in accordance with ISO/IEC 17025:2005 for the analysis of all parameters and samples in the scope of work for which Site Condition Standards have been established under O. Reg. 153/04 (as amended). The laboratory reports meet the requirements of S.47 (2b) and (3) of O. Reg. 153/04 (as amended). ALS has indicated that all samples were received in good condition, within acceptable temperature range. There were no laboratory qualifiers with respect to holding time, preservation method or sample container.

A blind duplicate soil sample was collected from MW1 SA5, labeled MW10 SA1. A blind duplicate groundwater sample collected from MW3, and labeled MW10 was submitted for analysis of metals, VOCs, PHC fractions F1-F4, and PAHs. The samples were submitted for analysis of metals, VOCs, PHC fractions F1-F4, and PAHs. The results between the original samples and the duplicate samples were similar for all analysis completed. A blank vial of methanol was submitted for analysis of VOCs. All VOC

parameters analyzed were below their respective laboratory reported detection limit (RPL). A trip blank sample was submitted with the groundwater samples for analysis of VOCs. All VOC parameters analyzed were below their respective laboratory RDL.

The percent recovery for the surrogate standards, matrix spikes and spiked blanks were within the statistically-derived limits of variation that the laboratory had determined and deemed to be acceptable.

There were no concerns identified from the internal and external QA/QC sampling results which might compromise the overall quality of the data. The QP_{ESA} is satisfied that the overall objectives of the investigation were met and that the data set has allowed appropriate decisions to be made regarding the environmental conditions of the Phase Two Property.

The QA/QC data are summarized in the Laboratory Certificates of Analysis provided in **Appendix B**.

6.10 Phase Two Conceptual Site Model

6.9.1 Areas of Potentially Contaminating Activities

Potentially contaminating activities (PCA) associated with historical uses of neighbouring properties to the Phase Two Property included in the Phase One ESA (Trinity, 2017) are summarized in **Table 6.2**.

Table 6.2 – Summary of Areas of Potentially Contaminating Activities

PCAs as listed in *Schedule D* of *Ont. Reg. 153/04*	Location and Observations	Media
27 – **Garages** and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Formerly on-Site (in the south and central parts of the on-Site building)	Soil and Groundwater
28 - Gasoline and Associated Products Storage in Fixed Tanks	Formerly on-Site diesel fuel AST (northwest of the on-Site building)	Soil and Groundwater

6.9.2 Areas of Potential Environmental Concern

Areas of potential environmental concern on or adjacent to the Phase Two Property as identified in the Phase One ESA and which were investigated in the Phase Two ESA are provided in **Table 6.3**.

Table 6.3 – Summary of Areas of Potential Environmental Concern

APEC	Location of APEC	PCA	Location of PCA	Contaminants of Concern	Media	Comments
APEC #1 – Former Equipment and Vehicle Service Area of on-Site Building	South and central part of on-Site Building and west of on-Site building	#27 – **Garages** and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Formerly on-Site (south and central part of on-Site building)	PHCs and PAHs	Soil and Groundwater	A PCA is associated with the former use of the south and central part of the on-Site building for maintenance and repair of CVC vehicles.
APEC #2 – Former on-Site Diesel Fuel AST	Northwest of the on-Site Building	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Formerly on-Site (northwest of on-Site building)	PHCs, Solvents and Metals	Soil and Groundwater	A PCA is associated with the former diesel fuel AST.

6.9.3 Subsurface Structures and Utilities

Groundwater was measured ranging from 1.80 mbgs at MW3 to 6.60 mbgs at MW2 on November 10, 2017 at the Site. There were no environmental impacts noted in any of the soil or groundwater samples; therefore, in the absence of contaminants, subsurface utilities are unlikely to be of concern.

6.9.4 Physical and Hydrogeological Site Setting

The Phase Two Property as described in Section 2.1 is located in a residential area in the Region of Peel, City of Mississauga, Ontario (**Figure 1**). The Phase Two Property is bounded to the south by a residential dwelling, to the east by Old Mill Lane, to the west by woodland in a CVC greenspace, and to the north by a gravel walkway connecting the greenspace to Old Mill Lane.

No areas of natural significance were identified within 250 m of the Phase Two Property.

The local geology across the Phase Two Property generally consists of a layer of sand and gravel textured fill at locations MW2 and MW3, underlain by native soil consisting of silt and clayey silt till.

The depth of the water table beneath the Phase Two Property ranged from 1.80 mbgs at MW3 to 6.60 mbgs at MW2 on November 10, 2017. The water elevations ranged from 94.194 m at MW2 to 98.523 m at MW3.

6.9.5 Applicable Site Condition Standards

As described in Section 2.4, the QP_{ESA} has determined that there are no surface water bodies on or within 30 m of the property, therefore it is not in proximity to a waterbody. The property is not on or within an area of natural significance and, therefore it is not considered to be a "Sensitive Site" under Regulation 153/04 (as amended). The City of Mississauga obtains drinking water from Lake Ontario. Based on the observations of the soil encountered during the drilling and the results of a Particle Size Distribution sample, the majority of soil underlying the property is representative of medium to fine grained texture requirements of O. Reg. 153/04 (as amended).

In keeping with the intention of the Region of Peel, accordingly, analytical results for soil and groundwater were compared to Table 2 of the MOECC "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act," April 15, 2011 for Residential/Parkland/Institutional property use and medium to fine textured soil.

6.9.6 Location of Buildings

There is a one storey garage building located on the Phase Two Property, which was constructed during the site development in the early 1970s.

6.9.7 Environmental Conditions

The following site specific data and information has been collected during the Phase Two ESA to supplement the Phase One Conceptual Site Model (CSM) described in Section 4.3:

- The depth to groundwater ranged from 1.80 mbgs at MW3 to 6.60 mbgs at MW2 and ranged in elevation from 94.194 m at MW2 to 98.523 m at MW3.
- The shallow groundwater flows in a southwesterly direction towards the Credit River.
- The QP_{ESA} has determined that all soil samples meet the MOECC 2011 Table 2 Site Condition Standards.
- The QP_{ESA} has determined that all groundwater samples meet the MOECC 2011 Table 2 Site Condition Standards.

Based on the results of the soil and groundwater quality at the Phase Two Property, there are no concerns identified that would be a concern to workers or the change in use of the property for residential purposes.

6.9.7 Soil Vapour Intrusion

Vapour intrusion was not evaluated as part of the Phase Two ESA as there were no groundwater impacts noted and no VOC compounds elevated in any of the soil samples submitted for analysis. There were also no detectable concentrations of organic or combustible vapours noted in any of the screened soil samples.

7 Conclusions

The QP_{ESA} is satisfied that each APEC has been investigated and that sufficient samples have been collected, and analyzed for the contaminants of potential concern identified. Refer to Tables 2, 3, 4 and 5 (in Appendices) for a detailed summary of soil samples submitted for analysis and Tables 6, 7, 8 and 9 (in Appendices) for a detailed summary of groundwater samples submitted for analysis.

It should be noted that the soil and groundwater conditions between and beyond the sampled locations may differ from those encountered during this assessment.

The following sections summarize the results of the Phase Two ESA:

7.1 Environmental Conditions

7.1.1 Soil Quality

Based on the results from this investigation, all soil samples analyzed meet the MOECC 2011 Table 2 Site Condition Standards for Residential/Parkland/Institutional property use, medium to fine textured soil.

7.1.2 Groundwater Quality

There were no exceedances of the MOECC 2011 Table 2 Site Condition Standards noted in any of the groundwater samples analyzed.

7.2 Phase Two Property Certification

Based on the results of the Phase Two ESA, the Phase Two Property meets the applicable MOECC 2011 Table 2 Site Condition Standards, and no further work is required.

8 Recommendations

Based on the results of the Phase Two ESA, no further investigation work is warranted nor recommended.

Groundwater monitoring wells are regulated under the Ontario Water Resources Act (OWRA), Ontario Regulation 903, s.20, 21. A well owner is required to maintain the monitoring wells in good condition. If the monitoring well is no longer intended for use, it should be decommissioned in accordance with O. Reg. 903.

A record of site condition (RSC) may be submitted for filing with the MOECC on the basis of this report.

9 Signatures

This report was prepared by Mr. Brian Schuyler, C.E.T. under the supervision of the QP_{ESA}, Mr. Lou Locatelli, C.E.T., P.Geo.

As QP_{ESA}, I (Lou Locatelli) confirm that I have supervised the completion of the Phase Two ESA, findings and conclusions of this report.

Report Prepared By:

Brian J. Schuyler, C.E.T.
Senior Consultant

Report Supervised/Reviewed By:

Lou Locatelli, C.E.T., P.Geo., QP_{ESA}
Principal Consultant

10 References

Ministry of the Environment, 2011:
Rationale for the Development of Soil and Ground Water Standards for Use at Contaminated Sites in Ontario, April 15, 2011.

Ministry of the Environment, 2011:
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, O. Reg. 153/04 (as amended by O. Reg. 511/09), April 15, 2011.

Ministry of the Environment, 2004:
Ontario Regulation 153/04 (as amended).

Ministry of the Environment, 2004:
Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended July 1, 2011.

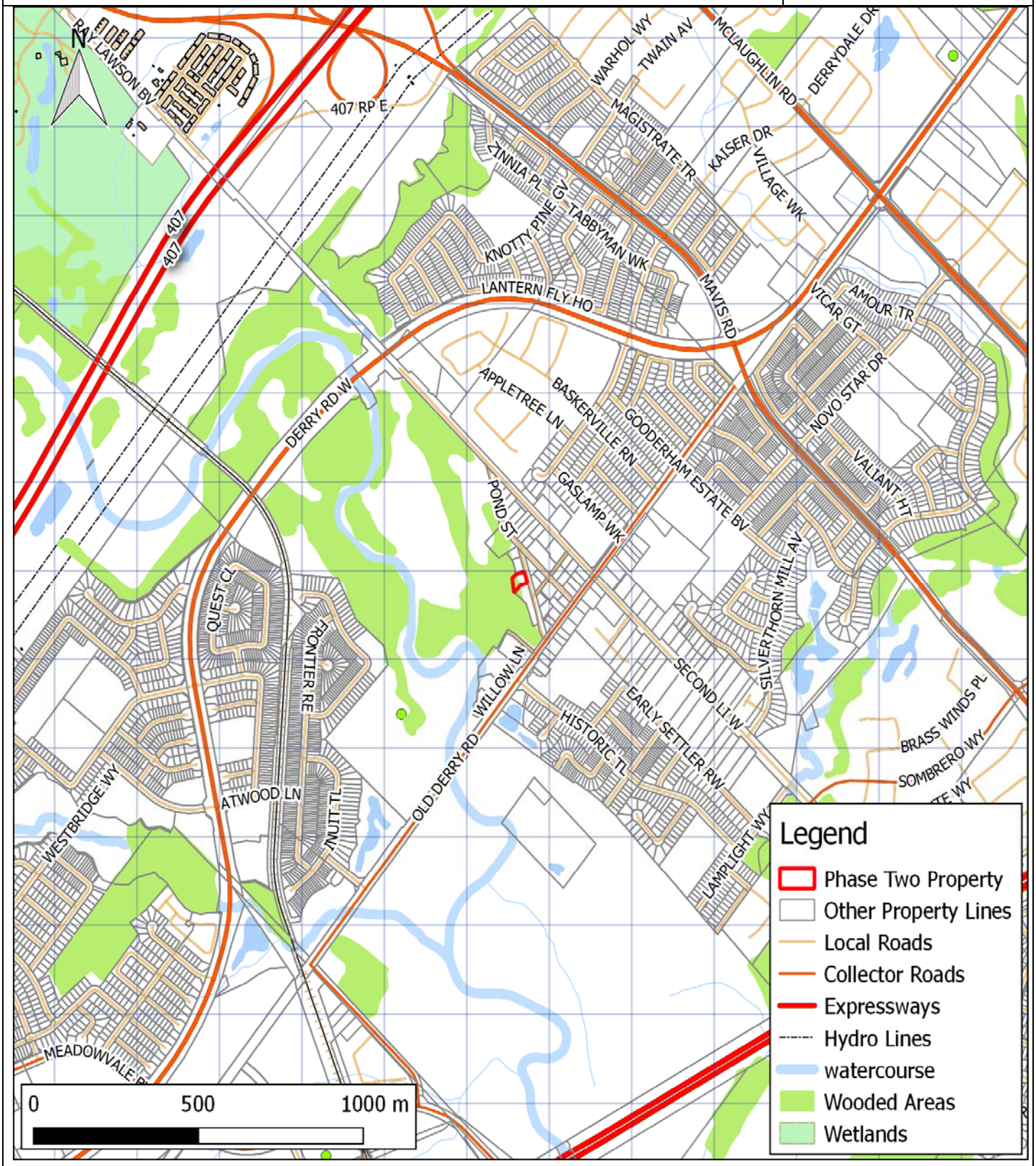
Ministry of the Environment, 1996:
Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario, December 1996.

Ontario Water Resources Act, 1990:
R. R. O. 1990, Regulation 903, Wells.

Trinity Consultants Ontario Inc., 2017:
Phase One Environmental Site Assessment, 7060 Old Mill Lane, Mississauga, Project 177201.0205, January 5, 2018.

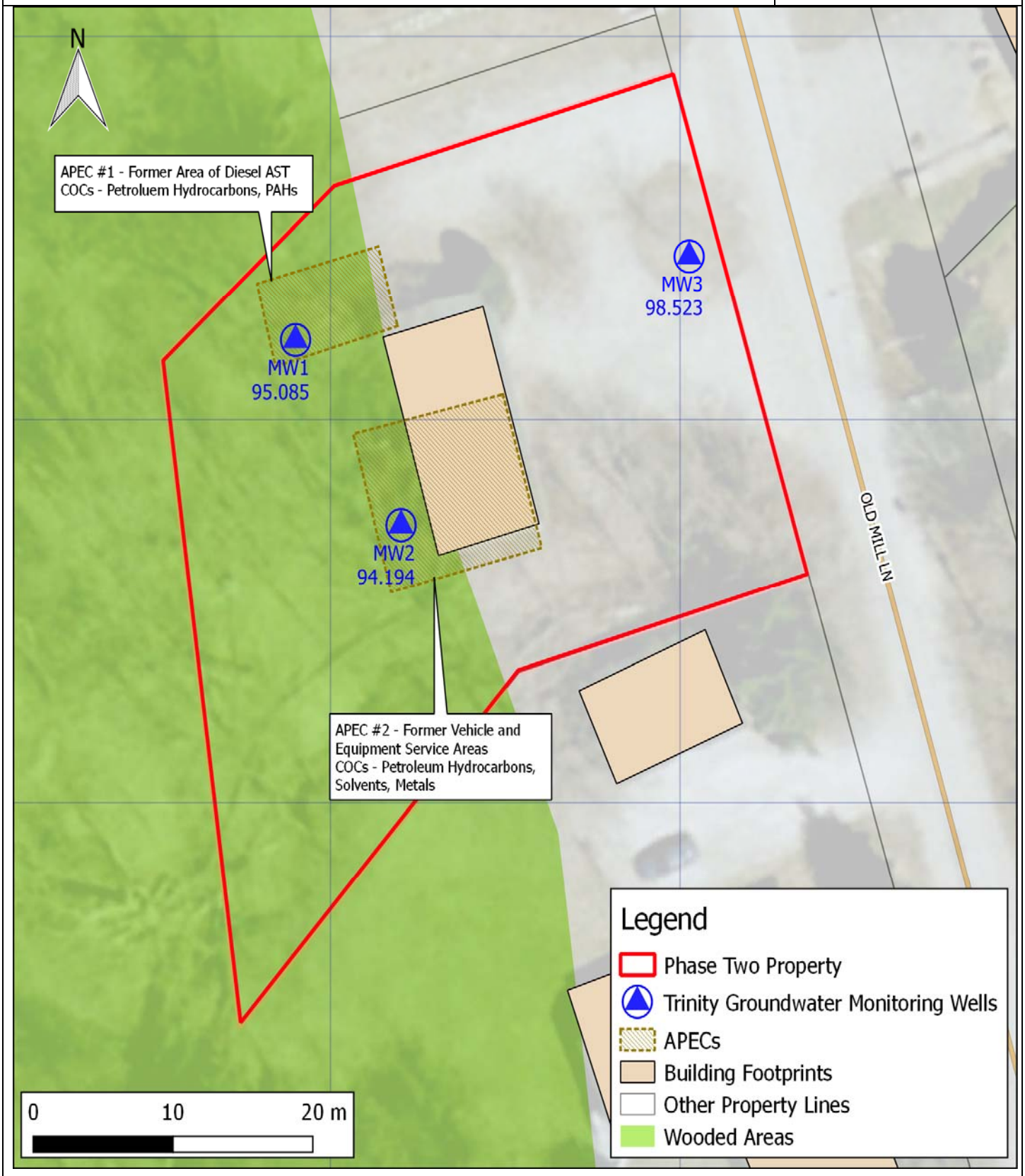
Figures

Figure 1	Site Location Map
Site Location: 7060 Old Mill Lane, Mississauga, ON	**Project 177201.0263**



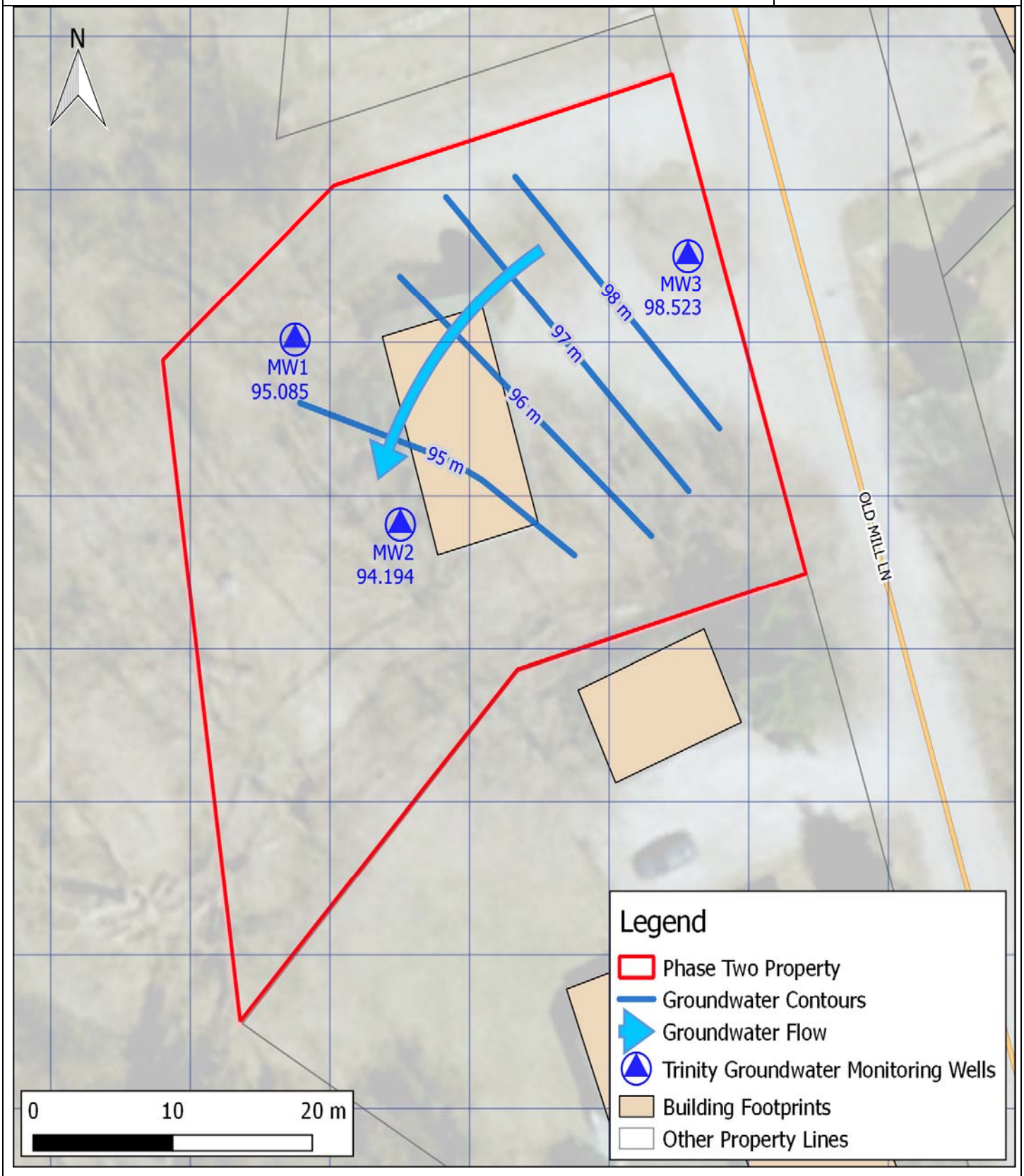
Trinity Consultants

Figure 2	**Borehole Location Map**
Site Location: 7060 Old Mill Lane, Mississauga, ON	**Project 177201.0263**



Trinity Consultants

Figure 3	**Shallow Groundwater Flow Map**
Site Location: 7060 Old Mill Lane, Mississauga, ON	**Project 177201.0263**



Trinity Consultants

Tables

Table 1
Phase Two Environmental Site Assessment
Monitoring Well Construction Details
7060 Old Mill Lane, Mississauga, Ontario

Location ID	Date	Depth of Borehole (mbgs)	Screened Interval (mbgs)	Sand Pack (mbgs)	Borehole Seal (mbgs)
MW1	26-Oct-17	6.10	3.05 - 6.10	2.59 - 6.10	0.00 - 2.59
MW2	26-Oct-17	6.10	3.05 - 6.10	2.74 - 6.10	0.00 - 2.74
MW3	26-Oct-17	6.10	2.13 - 5.18	1.83 - 6.10	0.00 - 1.83

Notes:
mbgs - metres below ground surface

Trinity Consultants

Table 2
Phase Two Environmental Site Assessment
Soil Analytical Results - Metals & pH
7060 Old Mill Lane, Mississauga, Ontario

Sample ID / **Date Sampled** / **Lab Sample ID** / **Depth (mbgs)**	**RDL**	**MOECC Table 2 Standards**	**MW1 SA1** 26-Oct-2017 L2013933-1 0.30 - 1.52	**MW1 SA5** 26-Oct-2017 L2013933-5 3.81 - 4.57	**MW10 SA1** 26-Oct-2017 L2013933-20 Duplicate of MW1 SA5	**MW2 SA1** 26-Oct-2017 L2013933-8 0.00 - 1.52	**MW2 SA4** 26-Oct-2017 L2013933-11 3.05 - 3.81	**MW3 SA1** 26-Oct-2017 L2013933-15 0.00 - 1.52	**MW3 SA3** 26-Oct-2017 L2013933-17 3.81 - 4.57
pH	0.10	5-9[1], 5-11[2]	7.32			7.89		7.64	
Antimony (Sb)	1	7.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic (As)	1	18	6.2	5.6	6.0	2.10	5.8	6.9	5.6
Barium (Ba)	1	390	116	35.4	41.5	14	62.1	69.9	34.3
Beryllium (Be)	0.5	5	0.7	<0.50	0.6	<0.50	0.7	0.6	0.6
Boron (B)	5	120	7.8	8.9	10.4	<5.0	9.8	10.5	10.7
Cadmium (Cd)	0.5	1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chromium (Cr)	1	160	22.2	20.3	21.1	5.7	20.5	15.8	18.6
Cobalt (Co)	1	22	9	10.7	11.0	2.5	12.5	7.8	9.9
Copper (Cu)	1	180	42.8	34.0	35.4	11.8	41.6	65.3	44.2
Lead (Pb)	1	120	17.6	11.7	6.8	4.2	10.8	13.4	7.2
Molybdenum (Mo)	1	7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Nickel (Ni)	1	130	20	24	25.1	5.1	26.5	15.3	22.4
Selenium (Se)	1	2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver (Ag)	0.2	25	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium (Tl)	0.5	1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Uranium (U)	1	23	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vanadium (V)	1	86	33.1	27.2	29	12.7	29	44.8	25.0
Zinc (Zn)	5	340	98.7	51.8	52.7	17.8	93.3	57.6	46.3

RDL - Analytical Reported Detection Limit
All Results are in µg/g
MOECC Standards - "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2 Standards (April 15, 2011)
Exceeds MOECC Table 2 Standards, Medium to Fine Textured Soil, Residential/Parkland/Institutional Property Use, Potable Groundwater
1 - pH standard for surface soil
2 - pH standard for subsurface soil
3 - Sample MW10 SA1 is a blind duplicate of sample MW1 SA5
< - Non-Detected Above Laboratory RDL
NA - Not Applicable
mbgs - metres below ground surface

Trinity Consultants

Table 3
Phase Two Environmental Site Assessment
Soil Analytical Results - Volatile Organic Compounds (VOCs)
7060 Old Mill Lane, Mississauga, Ontario

Sample ID **Date Sampled** **Lab Sample ID** **Depth (mbgs)**	**RDL**	**MOECC Table 2 Standards**	**MW1 SA1** 26-Oct-2017 L2013933-1 0.30 - 1.52	**MW1 SA5** 26-Oct-2017 L2013933-5 3.81 - 4.57	**MW10 SA1** 26-Oct-2017 L2013933-20 Duplicate of MW1 SA5	**MW2 SA1** 26-Oct-2017 L2013933-8 0.00 - 1.52	**MW2 SA4** 26-Oct-2017 L2013933-11 3.05 - 3.81	**MW3 SA1** 26-Oct-2017 L2013933-15 0.00 - 1.52	**MW3 SA3** 26-Oct-2017 L2013933-17 3.81 - 4.57	**BLANK** 26-Oct-2017 L2013933-21
Acetone	0.5	28	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	0.0068	0.17	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068
Bromodichloromethane	0.05	1.9	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromoform	0.05	0.26	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromomethane	0.05	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Carbon tetrachloride	0.05	0.12	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chlorobenzene	0.05	2.7	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibromochloromethane	0.05	2.9	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chloroform	0.05	0.17	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dibromoethane	0.05	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichlorobenzene	0.05	1.7	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-Dichlorobenzene	0.05	6	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,4-Dichlorobenzene	0.05	0.097	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dichlorodifluoromethane	0.1	25	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1-Dichloroethane	0.05	0.6	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloroethane	0.05	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1-Dichloroethylene	0.05	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
cis-1,2-Dichloroethylene	0.05	2.5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
trans-1,2-Dichloroethylene	0.05	0.75	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methylene Chloride	0.05	0.96	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloropropane	0.05	0.085	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
cis-1,3-Dichloropropene	0.03		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
trans-1,3-Dichloropropene	0.03		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
1,3-Dichloropropene (cis & trans)	0.042	0.081	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
Ethylbenzene	0.018	1.6	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018
n-Hexane	0.05	34	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methyl Ethyl Ketone	0.5	44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	0.5	4.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MTBE	0.05	1.4	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Styrene	0.05	2.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,1,2-Tetrachloroethane	0.05	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2,2-Tetrachloroethane	0.05	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Tetrachloroethylene	0.05	2.3	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	0.08	6	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1,1-Trichloroethane	0.05	3.4	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2-Trichloroethane	0.05	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Trichloroethylene	0.01	0.52	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane	0.05	5.8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Vinyl chloride	0.02	0.022	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
o-Xylene	0.02		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
m+p-Xylenes	0.03		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Xylenes (Total)	0.05	25	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

RDL - Analytical Reported Detection Limit
All Results are in µg/g
MOECC Standards - "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2 Standards (April 15, 2011)
Exceeds MOECC Table 2 Standards, Medium to Fine Textured Soil, Residential/Parkland/Institutional Propetty Use, Potable Groundwater
Sample MW10 SA1 is a blind duplicate of sample MW1 SA5
< - Non-Detected Above Laboratory RDL
mbgs - metres below ground surface

Trinity Consultants

Table 4
Phase Two Environmental Site Assessment
Soil Analytical Results - Petroleum Hydrocarbons (PHCs)
7060 Old Mill Lane, Mississauga, Ontario

Sample ID **Date Sampled** **Lab Sample ID** **Depth (mbgs)**	**RDL**	**MOECC Table 2 Standards**	**MW1 SA1** 26-Oct-2017 L2013933-1 0.30 - 1.52	**MW1 SA5** 26-Oct-2017 L2013933-5 3.81 - 4.57	**MW10 SA1** 26-Oct-2017 L2013933-20 Duplicate of MW1 SA5	**MW2 SA1** 26-Oct-2017 L2013933-8 0.00 - 1.52	**MW2 SA4** 26-Oct-2017 L2013933-11 3.05 - 3.81	**MW3 SA1** 26-Oct-2017 L2013933-15 0.00 - 1.52	**MW3 SA3** 26-Oct-2017 L2013933-17 3.81 - 4.57
F1 (C6-C10)	5	65	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F1-BTEX	5	65	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F2 (C10-C16)	10	150	<10	<10	<10	<10	<10	<10	<10
F3 (C16-C34)	50	1300	<50	<50	<50	<50	<50	<50	<50
F4 (C34-C50)	50	5600	<50	<50	<50	<50	<50	<50	<50
Total Hydrocarbons (C6-C50)	72		<72	<72	<72	<72	<72	<72	<72
Chrom. to baseline at nC50			YES	YES	YES	YES	YES	YES	YES

RDL - Analytical Reported Detection Limit
All Results are in µg/g
MOECC Standards - "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2 Standards (April 15, 2011)
Exceeds MOECC Table 2 Standards, Medium to Fine Textured Soil, Residential/Parkland/Institutional Property Use, Potable Groundwater
Sample MW1 SA1 is a blind duplicate of sample MW1 SA5
< - Non-Detected Above Laboratory RDL
NA - Not Applicable
mbgs - metres below ground surface

Trinity Consultants

Table 5
Phase Two Environmental Site Assessment
Soil Analytical Results - Polycyclic Aromatic Hydrocarbons (PAHs)
7060 Old Mill Lane, Mississauga, Ontario

Sample ID **Date Sampled** **Lab Sample ID** **Depth (mbgs)**	**RDL**	**MOECC Table 2 Standards**	**MW1 SA1** 26-Oct-2017 L2013933-1 0.30 - 1.52	**MW1 SA5** 26-Oct-2017 L2013933-5 3.81 - 4.57	**MW10 SA1** 26-Oct-2017 L2013933-20 Duplicate of MW1 SA5	**MW2 SA1** 26-Oct-2017 L2013933-8 0.00 - 1.52	**MW2 SA4** 26-Oct-2017 L2013933-11 3.05 - 3.81	**MW3 SA1** 26-Oct-2017 L2013933-15 0.00 - 1.52	**MW3 SA3** 26-Oct-2017 L2013933-17 3.81 - 4.57
Acenaphthene	0.05	29	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	0.05	0.17	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	0.05	0.74	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)anthracene	0.05	0.63	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	0.05	0.3	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(b)fluoranthene	0.05	0.78	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	0.05	7.8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	0.05	0.78	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chrysene	0.05	7.8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenzo(ah)anthracene	0.05	0.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluoranthene	0.05	0.69	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	0.05	69	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	0.05	0	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1+2-Methylnaphthalenes	0.04	3	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
1-Methylnaphthalene	0.03	3	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
2-Methylnaphthalene	0.03	3	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Naphthalene	0.05	1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phenanthrene	0.05	8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Pyrene	0.05	78	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

RDL - Analytical Reported Detection Limit
All Results are in µg/g
MOECC Standards - "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2 Standards (April 15, 2011)
Exceeds MOECC Table 2 Standards, Medium to Fine Textured Soil, Residential/Parkland/Institutional Property Use, Potable Groundwater
Sample MW10 SA1 is a blind duplicate of sample MW1 SA5
< - Non-Detected Above Laboratory RDL
NA - Not Applicable
mbgs - metres below ground surface

Trinity Consultants

Table 6
Phase Two Environmental Site Assessment
Groundwater Analytical Results - Metals & pH
7060 Old Mill Lane, Mississauga, Ontario

Sample ID **Date Sampled** **Lab Sample ID** **Parameter**	**RDL**	**MOECC Table 2 Standards**	**MW1** 2-Nov-2017 L2017630-1 Water	**MW2** 10-Nov-2017 L2021349-1 Water	**MW3** 2-Nov-2017 L2017630-2 Water	**MW10** 2-Nov-2017 L2017630-3 Water
pH	0.1	5 - 9	8.06	8.08	8.06	8.00
Antimony (Sb)-Dissolved	0.1	6	1.67	2.11	2.06	1.99
Arsenic (As)-Dissolved	0.1	25	2.69	3.55	3.41	3.41
Barium (Ba)-Dissolved	0.1	1000	85.9	95.9	128	133
Beryllium (Be)-Dissolved	0.1	4	<0.10	<0.10	<0.10	<0.10
Boron (B)-Dissolved	10	5000	466	403	324	329
Cadmium (Cd)-Dissolved	0.01	2.7	<0.010	<0.04	0.014	<0.020
Chromium (Cr)-Dissolved	0.5	50	<0.50	<0.5	<0.50	<0.50
Cobalt (Co)-Dissolved	0.1	3.8	<0.10	0.13	0.15	0.16
Copper (Cu)-Dissolved	0.2	87	0.63	1.93	0.75	0.76
Lead (Pb)-Dissolved	0.05	10	<0.050	0.096	<0.050	<0.050
Molybdenum (Mo)-Dissolved	0.05	70	26.1	56.2	57.9	60.9
Nickel (Ni)-Dissolved	0.5	100	<0.50	0.9	<0.50	<0.50
Selenium (Se)-Dissolved	0.05	10	0.429	1.86	0.73	0.726
Silver (Ag)-Dissolved	0.05	1.5	<0.050	<0.050	<0.050	<0.050
Sodium (Na)-Dissolved	500	490000	27400	33900	60300	56800
Thallium (Tl)-Dissolved	0.01	2	0.018	0.025	0.027	0.028
Uranium (U)-Dissolved	0.01	20	1.84	2.83	2.03	2.03
Vanadium (V)-Dissolved	0.5	6.2	2.14	2.3	1.95	1.92
Zinc (Zn)-Dissolved	1	1100	<1.0	9.7	<1.0	<1.0

RDL - Analytical Reported Detection Limit
All Results are in µg/L
MOECC Standards - "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2 Standards (April 15, 2011)
Exceeds MOECC Table 2 Standards, Medium to Fine Textured Soil, All Types of Property Use, Potable Groundwater
Sample MW10 is a blind duplicate of MW3
< - Non-Detected Above Laboratory RDL

Trinity Consultants

Table 7
Phase Two Environmental Site Assessment
Groundwater Analytical Results - Volatile Organic Compounds (VOCs)
7060 Old Mill Lane, Mississauga, Ontario

Sample ID	**RDL**	**MOECC Table 2 Standards**	**MW1**	**MW2**	**MW3**	**MW10**	**TRIP BLANK**
Date Sampled			2-Nov-2017	10-Nov-2017	2-Nov-2017	2-Nov-2017	2-Nov-2017
Lab Sample ID			L2017630-1	L2021349-1	L2017630-2	L2017630-3	L2017630-4
Parameter			Water	Water	Water	Water	Water
Acetone	30	2700	<30	<30	<30	<30	<30
Benzene	0.5	5	<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	2	16	<2.0	<2.0	<2.0	<2.0	<2.0
Bromoform	5	25	<5.0	<5.0	<5.0	<5.0	<5.0
Bromomethane	0.5	0.89	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon tetrachloride	0.2	5	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	0.5	30	<0.50	<0.50	<0.50	<0.50	<0.50
Dibromochloromethane	2	25	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	1	22	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	0.2	0.2	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichlorobenzene	0.5	3	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	0.5	59	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	0.5	1	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	2	590	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethane	0.5	5	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	0.5	5	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	0.5	14	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethylene	0.5	17	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethylene	0.5	17	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	5	50	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane	0.5	5	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,3-Dichloropropene	0.3		<0.30	<0.30	<0.30	<0.30	<0.30
trans-1,3-Dichloropropene	0.3		<0.30	<0.30	<0.30	<0.30	<0.30
1,3-Dichloropropene (cis & trans)	0.5	0.5	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	0.5	2.4	<0.50	<0.50	<0.50	<0.50	<0.50
n-Hexane	0.5	520	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Ethyl Ketone	20	1800	<20	<20	<20	<20	<20
Methyl Isobutyl Ketone	20	640	<20	<20	<20	<20	<20
MTBE	2	15	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	0.5	5.4	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	0.5	1.1	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	0.5	1	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	0.5	17	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	0.5	24	<0.50	0.61	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	0.5	200	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	0.5	5	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	0.5	5	<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane	5	150	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl chloride	0.5	1.7	<0.50	<0.50	<0.50	<0.50	<0.50
o-Xylene	0.3		<0.30	<0.30	<0.30	<0.30	<0.30
m+p-Xylenes	0.4		<0.40	<0.40	<0.40	<0.40	<0.40
Xylenes (Total)	0.5	300	<0.50	<0.50	<0.50	<0.50	<0.50

RDL - Analytical Reported Detection Limit
All Results are in µg/L
MOECC Standards - "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2 Standards (April 15, 2011)
Exceeds MOECC Table 2 Standards, Medium to Fine Textured Soil, All Types of Property Use, Potable Groundwater
Sample MW10 is a blind duplicate of sample MW3
< - Non-Detected Above Laboratory RDL

Trinity Consultants

Table 8
Phase Two Environmental Site Assessment
Groundwater Analytical Results - Petroleum Hydrocarbons (PHCs)
7060 Old Mill Lane, Mississauga, Ontario

Sample ID **Date Sampled** **Lab Sample ID** **Parameter**	**RDL**	**MOECC Table 2 Standards**	**MW1** 2-Nov-2017 L2017630-1 Water	**MW2** 10-Nov-2017 L2021349-1 Water	**MW3** 2-Nov-2017 L2017630-2 Water	**MW10** 2-Nov-2017 L2017630-3 Water
F1 (C6-C10)	25	750	<25	<25	<25	<25
F1-BTEX	25	750	<25	<25	<25	<25
F2 (C10-C16)	100	150	<100	<100	<100	<100
F3 (C16-C34)	250	500	<250	<250	<250	<250
F4 (C34-C50)	250	500	<250	<250	<250	<250
Total Hydrocarbons (C6-C50)	250		<370	<370	<370	<370
Chrom. to baseline at nC50	370		YES	YES	YES	YES

RDL - Analytical Reported Detection Limit
All Results are in µg/L
MOECC Standards - "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2 Standards (April 15, 2011)
Exceeds MOECC Table 2 Standards, Medium to Fine Textured Soil, All Types of Property Use, Potable Groundwater
Sample MW10 is a blind duplicate of sample MW3
< - Non-Detected Above Laboratory RDL
NA - Not Applicable

Trinity Consultants

Table 9
Phase Two Environmental Site Assessment
Groundwater Analytical Results - Petroleum Hydrocarbons (PHCs)
7060 Old Mill Lane, Mississauga, Ontario

Sample ID **Date Sampled** **Lab Sample ID** **Parameter**	**RDL**	**MOECC Table 2 Standards**	**MW1** 2-Nov-2017 L2017630-1 Water	**MW2** 10-Nov-2017 L2021349-1 Water	**MW3** 2-Nov-2017 L2017630-2 Water	**MW10** 2-Nov-2017 L2017630-3 Water
Acenaphthene	0.02	4.1	<0.020	<0.020	<0.020	<0.020
Acenaphthylene	0.02	1	<0.020	<0.020	<0.020	<0.020
Anthracene	0.02	2.4	<0.020	<0.020	<0.020	<0.020
Benzo(a)anthracene	0.02	1	<0.020	<0.020	<0.020	<0.020
Benzo(a)pyrene	0.01	0.01	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	0.02	0.1	<0.020	<0.020	<0.020	<0.020
Benzo(g,h,i)perylene	0.02	0.2	<0.020	<0.020	<0.020	<0.020
Benzo(k)fluoranthene	0.02	0.1	<0.020	<0.020	<0.020	<0.020
Chrysene	0.02	0.1	<0.020	<0.020	<0.020	<0.020
Dibenzo(ah)anthracene	0.02	0.2	<0.020	<0.020	<0.020	<0.020
Fluoranthene	0.02	0.41	0.021	<0.020	<0.020	<0.020
Fluorene	0.02	120	<0.020	<0.020	<0.020	<0.020
Indeno(1,2,3-cd)pyrene	0.02	0.2	<0.020	<0.020	<0.020	<0.020
1+2-Methylnaphthalenes	0.0283	3.2	<0.028	<0.028	0.053	0.028
1-Methylnaphthalene	0.02	3.2	<0.020	<0.020	0.021	<0.020
2-Methylnaphthalene	0.02	3.2	0.026	<0.020	0.032	0.028
Naphthalene	0.05	11	0.055	<0.050	<0.050	<0.050
Phenanthrene	0.02	1	0.026	<0.020	0.024	0.023
Pyrene	0.02	4.1	<0.020	<0.020	<0.020	<0.020

RDL - Analytical Reported Detection Limit
All Results are in µg/L
MOECC Standards - "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2 Standards (April 15, 2011)
Exceeds MOECC Table 2 Standards, Medium to Fine Textured Soil, All Types of Property Use, Potable Groundwater
Sample MW10 is a blind duplicate of sample MW3
< - Non-Detected Above Laboratory RDL
NA - Not Applicable

Trinity Consultants

Appendix A

Sampling and Analysis Plan

Trinity Consultants

SAMPLING AND ANALYSIS PLAN

Project Name: Phase Two Environmental Site Assessment

Location: 7060 Old Mill Lane, Mississauga, Ontario

Distribution: Brian J. Schuyler, C.E.T., Senior Consultant, Project Manager
Jeremy Hatt, Bs. (Env), EP, Senior Consultant
Lou Locatelli, C.E.T., P.Geo., Principal Consultant, Qualified Person (QP_{ESA})

Client: Ms. Suzie Losiak

Trinity Project 177201.0263
Date: September 25, 2017
Prepared By: Brian J. Schuyler
Reviewed By: Lou Locatelli

The purpose of the Sampling and Analysis Plan (SAP) is to identify and provide procedures for the Phase Two ESA field related activities: the sampling method, the sampling media, number of samples, sampling locations, field measurements required and samples to be submitted for laboratory analysis.

This plan includes consideration by the Qualified Person (QP_{ESA}) for potentially contaminating activities (PCAs), contaminants of potential concern (CoPC) and any matters relating to the environmental condition of the property. All CoPCs are to be sampled and analyzed to characterize the environmental condition of the property in order to make decisions regarding the property.

The SAP is a required component of a Phase Two ESA and applies to the property at 7060 Old Mill Lane in Mississauga, Ontario ("the Site").

1 Introduction

The SAP was prepared following a review of the information obtained during the Phase One ESA of the Site.

The results of the Phase One ESA have confirmed that the Phase Two Property is not on or located within 30 m of a surface water body or environmentally sensitive area, that the groundwater at the property is not used as a drinking water source and that there is more than 2 m of overburden present. The analytical results for soil and groundwater samples will be compared to Table 2 and 3 of the MOECC *"*Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*,"* April 15, 2011 for residential land use (MOECC 2011 Table 3 Standards).

2 Scope of Investigation

Proposed sampling locations will be distributed as follows to investigate the areas of potential environmental concern (APEC) identified by the Phase One ESA.

APEC	Location of APEC	PCA	Location of PCA	Contaminants of Concern	Media	Comments
APEC #1 – Former Equipment and Vehicle Service Area of on-Site Building	South and central part of on-Site Building and west of on-Site building	#27 – **Garages** and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Formerly on-Site (south and central part of on-Site building)	PHCs and PAHs	Soil and Groundwater	A PCA is associated with the former use of the south and central part of the on-Site building for maintenance and repair of CVC vehicles.
APEC #2 – Former on-Site Diesel Fuel AST	Northwest of the on-Site Building	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Formerly on-Site (northwest of on-Site building)	PHCs, Solvents and Metals	Soil and Groundwater	A PCA is associated with the former diesel fuel AST.

- Drill three (3) boreholes completed as permanent monitoring wells to investigate potential impacts to the Phase Two Property from the APEC's described above. Soil samples will be collected and submitted from each stratigraphic unit encountered for analysis of metals, petroleum hydrocarbon (PHC) fractions F1-F4, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs). Shallow soil samples will also be submitted for analysis of pH. Groundwater samples will be collected from each monitoring well and submitted for analysis of metals, PHC fractions F1-F4, VOCs, PAHs and pH;
- No surface water or sediment samples will be collected as there is none present on the Phase Two Property;
- Review site specific health and safety plan (HASP) including safety provisions for project members (protective gloves, hard hat, safety boots, safety glasses);
- Review Trinity Standard Operating Procedures for borehole and monitoring well installation, soil sampling, field screening and equipment calibration, field measurement of water quality parameters, groundwater sampling, disposal of soil cuttings and development water, and equipment decontamination;
- Complete and review Ontario One Call and private utility locates for all services at the Site prior to drilling;
- Log soil characteristics, and field screen samples from each borehole for the presence of environmental impacts;
- Submission of select soil samples for laboratory analysis of PHC F1-F4, VOCs, metals and Inorganic parameters;
- Measurement of water levels at each monitoring well for determination of groundwater flow and gradient;
- Survey the ground and top of pipe elevation at each monitoring well to determine the groundwater flow direction;

- Purge and field measurement of groundwater at each monitoring well using conventional purging and sampling methodology;
- Collection of groundwater samples from each monitoring well and submission for analysis of metals, PHC fractions F1-F4, VOCs, PAHs and pH; and
- Quality assurance/quality control (QA/QC) procedures for field activities and laboratory data, including blind duplicate soil and groundwater samples, blank soil sample and travel blank groundwater sample;

All samples shall be submitted to ALS Environmental in Richmond Hill, Ontario.

3 Health and Safety Program

Contaminants of potential concern in soil and groundwater identified by the Phase One ESA include:

- Metals
- PHC fractions F1-F4
- VOCs
- PAHs

At least two (2) soil and groundwater samples will also be submitted for analysis of pH. A representative soil sample will also be submitted for particle size distribution.

Personnel shall review and follow the HASP. Personal protective equipment will be worn by all workers in the work area during the Phase Two ESA.

4 Field Program

Equipment calibration will be performed by Maxim Environmental and Safety Inc. in Mississauga, Ontario and Trinity staff will perform calibration checks on the equipment to ensure proper operation in the field.

Soil cores shall be examined for visual and olfactory evidence of environmental impact. Soil samples will be field screened using an RKI Eagle 2 to measure the organic and combustible vapours.

Soil samples for VOC and PHC F1 analysis will be collected using Terracore samplers and soil plugs will be preserved in methanol vials prepared by the laboratory. Soil samples for non-volatile analysis will be collected in 120 mL jars provided by the laboratory.

Water levels will be measured in all wells prior to purging. Water level probe will be decontaminated between well locations. Field chemistry parameters of pH, conductivity and temperature will be measured during the purging activities. If a monitoring well doesn't yield sufficient water, then the well will be purged dry at least three times prior to sample collection.

Groundwater samples analyzed for VOCs will be placed into zero-headspace septum vials with Teflon® lined lids provided by the laboratory. The samples will be stored in coolers with ice to initiate cooling for sameday transportation to the laboratory.

Field logs will be maintained by staff to record data collection.

5 Field Changes

There are no known impediments to completing the scope of work, however should any situation arise that may require alteration and revision to the investigation arise, this should be discussed with the QP_{ESA} as soon as possible for clarification should the program need to be revised.

6 QA/QC

The quality of data depends upon planning, sampling, analysis and reporting. The SAP for this project requires data validation and acceptance greater than 90% of the sample results.

Based on the anticipated volume of soil samples, a minimum of one (1) duplicate soil sample will be collected and submitted for analysis of the contaminants of potential concern. One (1) field blank for soil will also be submitted for analysis of VOCs.

One (1) duplicate groundwater sample shall be collected for QA/QC purposes and submitted for analysis of the contaminants of potential concern. One (1) travel blank will also be submitted with the groundwater samples for analysis of VOCs.

Laboratory certificates of analysis will be obtained from the laboratory for all soil and groundwater samples analyzed. The reports shall meet the requirements of O. Reg. 153/04 (as amended) and be signed by the account manager.

The QP_{ESA} shall confirm with the lab that all samples were received in good condition, within acceptable temperature range and holding times, and that preservation and the proper number of sample containers were received.

The QP_{ESA} shall review the results of analysis and address all occurrences where the data has been qualified by the lab due to sample dilution, matrix interference, and reporting detection limits greater than the applicable MOECC Standard.

Appendix B

Finalized Borehole Logs

Trinity Consultants

GRAPHICS, SYMBOLS AND ABBREVIATIONS ON LOGS

SAMPLE TYPES and TESTS

	SS	Split Spoon Sample
	SN	Non-Standard Split Spoon Sample
	ST	Shelby Tube Sample : (unconfined compression or unconsolidated undrained test) - ◆
	DS	Denision Type Sample
	PS	Piston Type Sample
	CS	Continuous Sample
	GS	Grab Sample
	WS	Wash Sample
	BQ	BQ Core Sample
	HQ	HQ Core Sample
	NQ	NQ Core Sample
	DT	Dynamic Penetration Test
	VT	Field Vane Test (undisturbed) - ⊙
	VT	Field Vane Test (remoulded) - ⊕

PENETRATION RESISTANCES

Standard Penetration Resistance(N Value)

The number of blows by a 63.6 kg (140 lb) hammer dropped 760 mm (30 in.) required to drive a 50 mm (2 in.) Split Spoon Sampler for a distance of 300 mm (12 in.).

ABBREVIATIONS

DTPL: Drier Than Plastic Limit
APL: About Plastic Limit
WTPL: Wetter Than Plasic Limit
K: Hydraulic Conductivity (m/s)
C_u: Undrained Shear Strength (kPa)
% REC : Percentage of Sample Recovered
% RQD : Indirect Measure of the Number of Fractures and Soundness of Rock Mass
▼ Approximate Water Table

GRAIN SIZE CLASSIFICATION

	%
trace, "eg. trace sand"	1 - 10
some, "eg. some sand"	10 - 20
adjective, "eg. sandy"	20 - 35
and, "eg. and sand"	35 - 50
noun, "eg. sand"	>50

Note: Classification Divisions Based on Modified M.I.T. Grain Size Scale

SOIL DESCRIPTIONS

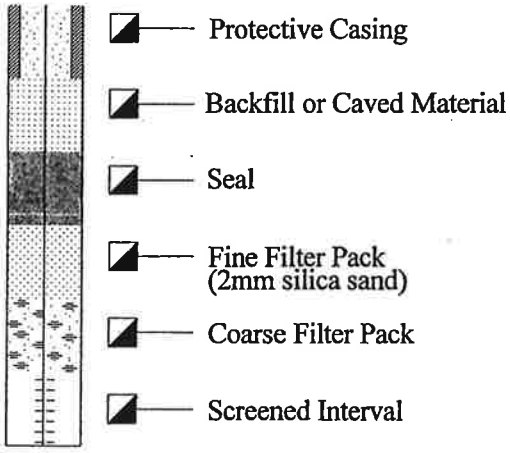
Cohesionless Soils

Relative Density	N Value
Very loose	0 to 4
Loose	4 to 10
Compact	10 to 30
Dense	30 to 50
Very Dense	over 50

Cohesive Soils

Consistency	C_u(kPa)	N Value
Very soft	0 to 12	0 to 2
Soft	12 to 25	2 to 4
Firm	25 to 50	4 to 8
Stiff	50 to 100	8 to 15
Very Stiff	100 to 200	15 to 30
Hard	over 200	over 30

MONITOR DETAILS



Trinity Consultants Ontario Inc.
885 Don Mills Road, Suite 106
Toronto, ON M3C 1V9
Telephone: (416) 391-2527
Fax: (416) 391-1931

WELL NUMBER MW1

CLIENT Credit Valley Conservation
PROJECT NAME PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
PROJECT NUMBER 177201.0263
PROJECT LOCATION 7060 Old Mill Lane, Mississauga, Ontario
DATE STARTED 26/10/17 **COMPLETED** 26/10/17
GROUND ELEVATION 99.459 m **HOLE SIZE**
DRILLING CONTRACTOR Landshark Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push/Hollow Stem Augers
AT TIME OF DRILLING ---
LOGGED BY BJS **CHECKED BY** LL
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (m)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
1	SS 1	50	SA1 - 0.30-1.52		**SILT** Medium and dark brown silt, some clay, trace leaves and wood, moist.	Vapor = 0	Bentonite Seal
1.52							
2	SS 2	100	SA2 - 1.52-2.29 SA3 - 2.29-3.05		**CLAYEY SILT TILL** Medium brown clayey silt till, trace medium sand and gravel, DTPL.	Vapor = 0 Vapor = 0	
3							Silica Sand Pack
4	SS 3	100	SA4 - 3.05-3.81 SA5 - 3.81-4.57		-becoming grey and WTPL below about 4.5 m	Vapor = 0 Vapor = 0	
5	SS 4	100	SA7 - 5.18-6.10 SA6 - 4.57-5.18			Vapor = 0 Vapor = 0	Screened Interval
6							
6.10							
93.36							

Bottom of hole at 6.10 m.

Trinity Consultants Ontario Inc.
885 Don Mills Road, Suite 106
Toronto, ON M3C 1V9
Telephone: (416) 391-2527
Fax: (416) 391-1931

WELL NUMBER MW2

CLIENT Credit Valley Conservation
PROJECT NAME PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
PROJECT NUMBER 177201.0263
PROJECT LOCATION 7060 Old Mill Lane, Mississauga, Ontario
DATE STARTED 26/10/17 **COMPLETED** 26/10/17
GROUND ELEVATION 99.871 m **HOLE SIZE**
DRILLING CONTRACTOR Landshark Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push/Hollow Stem Augers
AT TIME OF DRILLING ---
LOGGED BY BJS **CHECKED BY** LL
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (m)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
1	SS 1	50	SA1 - 0.00-1.52		**FILL** Medium brown fine to medium sand fill, trace gravel, wet.	Vapor = 0	Bentonite Seal
1.52						98.35	
2	SS 2	100	SA2 - 2.29-3.05		**CLAYEY SILT TILL** Medium brown clayey silt till, trace medium sand and gravel, DTPL.	Vapor = 0 Vapor = 0	
3							Silica Sand Pack
4	SS 3	100	SA3 - 3.81-4.57		-becoming grey and WTPL below about 4 m	Vapor = 0 Vapor = 0	
5	SS 4	100	SA5 - 5.18-6.10 SA4 - 4.57-5.18			Vapor = 0 Vapor = 0	Screened Interval
6							
6.10						93.77	

Bottom of hole at 6.10 m.

Trinity Consultants Ontario Inc.
885 Don Mills Road, Suite 106
Toronto, ON M3C 1V9
Telephone: (416) 391-2527
Fax: (416) 391-1931

WELL NUMBER MW3

CLIENT Credit Valley Conservation
PROJECT NAME PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
PROJECT NUMBER 177201.0263
PROJECT LOCATION 7060 Old Mill Lane, Mississauga, Ontario
DATE STARTED 26/10/17 **COMPLETED** 26/10/17
GROUND ELEVATION 100.387 m **HOLE SIZE**
DRILLING CONTRACTOR Landshark Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push/Hollow Stem Augers
AT TIME OF DRILLING ---
LOGGED BY BJS **CHECKED BY** LL
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (m)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
1	SS 1	50	SA1 - 0.00-1.52		**FILL** Medium brown fine to coarse sand and gravel fill, wet.	Vapor = 0	Flush-Mount Protective Casing
2	SS 2	80	SA2 - 2.29-3.05		2.20 / 98.19 **CLAYEY SILT TILL** Medium brown clayey silt till, trace medium sand and gravel, DTPL.	Vapor = 0 Vapor = 0	Bentonite Seal
3							
4	SS 3	80	SA3 - 3.81-4.57		-becoming grey and WTPL below about 4.5 m	Vapor = 0 Vapor = 0	Silica Sand Pack Screened Interval
5	SS 4	80	SA5 - 5.18-6.10 SA4 - 4.57-5.18			Vapor = 0 Vapor = 0	
6					6.10 / 94.29 Bottom of hole at 6.10 m.		

Appendix C

Laboratory Certificates of Analysis

TRINITY CONSULTANTS INC.
ATTN: BRIAN SCHUYLER
106-885 DON MILLS ROAD
TORONTO ON M3C1V9

Date Received: 26-OCT-17
Report Date: 09-NOV-17 14:35 (MT)
Version: FINAL REV. 2

Client Phone: 416-391-2527

Certificate of Analysis

Lab Work Order #: L2013933

Project P.O. #: NOT SUBMITTED
Job Reference: 177201.0263
C of C Numbers:
Legal Site Desc:

Mary-Lynn Pike
Client Services Supervisor

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2013933-1 MW1 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 08:00 Matrix: SOIL							
Physical Tests							
% Moisture	7.35		0.10	%	27-OCT-17	27-OCT-17	R3869025
pH	7.32		0.10	pH units		31-OCT-17	R3871045
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Arsenic (As)	6.2		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Barium (Ba)	116		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Beryllium (Be)	0.65		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Boron (B)	7.8		5.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Cadmium (Cd)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Chromium (Cr)	22.2		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Cobalt (Co)	8.5		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Copper (Cu)	42.8		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Lead (Pb)	17.6		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Molybdenum (Mo)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Nickel (Ni)	20.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Selenium (Se)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Silver (Ag)	<0.20		0.20	ug/g	01-NOV-17	01-NOV-17	R3873131
Thallium (Tl)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Uranium (U)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Vanadium (V)	33.1		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Zinc (Zn)	98.7		5.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Volatile Organic Compounds							
Acetone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Benzene	<0.0068		0.0068	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromodichloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromoform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromomethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Carbon tetrachloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dibromochloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chloroform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dibromoethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,4-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dichlorodifluoromethane	<0.10	RRR	0.10	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828

* 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
L2013933-1 MW1 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 08:00 Matrix: SOIL							
Volatile Organic Compounds							
Methylene Chloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloropropane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		31-OCT-17	
Ethylbenzene	<0.018		0.018	ug/g	27-OCT-17	31-OCT-17	R3870828
n-Hexane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Ethyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
MTBE	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Styrene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Tetrachloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Toluene	<0.080		0.080	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichloroethylene	<0.010		0.010	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichlorofluoromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Vinyl chloride	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828
o-Xylene	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828
m+p-Xylenes	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
Xylenes (Total)	<0.050		0.050	ug/g		31-OCT-17	
Surrogate: 4-Bromofluorobenzene	112.0		50-140	%	27-OCT-17	31-OCT-17	R3870828
Surrogate: 1,4-Difluorobenzene	106.2		50-140	%	27-OCT-17	31-OCT-17	R3870828
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	27-OCT-17	31-OCT-17	R3870828
F1-BTEX	<5.0		5.0	ug/g		02-NOV-17	
F2 (C10-C16)	<10		10	ug/g	28-OCT-17	01-NOV-17	R3871185
F2-Naphth	<10		10	ug/g		02-NOV-17	
F3 (C16-C34)	<50		50	ug/g	28-OCT-17	01-NOV-17	R3871185
F3-PAH	<50		50	ug/g		02-NOV-17	
F4 (C34-C50)	<50		50	ug/g	28-OCT-17	01-NOV-17	R3871185
Total Hydrocarbons (C6-C50)	<72		72	ug/g		02-NOV-17	
Chrom. to baseline at nC50	YES				28-OCT-17	01-NOV-17	R3871185
Surrogate: 2-Bromobenzotrifluoride	137.9		60-140	%	28-OCT-17	01-NOV-17	R3871185
Surrogate: 3,4-Dichlorotoluene	99.8		60-140	%	27-OCT-17	31-OCT-17	R3870828
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Acenaphthylene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685

* 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
L2013933-1 MW1 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 08:00 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(a)pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(b)fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(k)fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Chrysene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Fluorene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		02-NOV-17	
1-Methylnaphthalene	<0.030		0.030	ug/g	28-OCT-17	02-NOV-17	R3872685
2-Methylnaphthalene	<0.030		0.030	ug/g	28-OCT-17	02-NOV-17	R3872685
Naphthalene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Phenanthrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Surrogate: 2-Fluorobiphenyl	96.8		50-140	%	28-OCT-17	02-NOV-17	R3872685
Surrogate: p-Terphenyl d14	98.8		50-140	%	28-OCT-17	02-NOV-17	R3872685
Report Remarks : RRR-detection limit raised due to low LCS recovery.							
L2013933-5 MW1 SA5 Sampled By: B. SCHUYLER on 26-OCT-17 @ 08:00 Matrix: SOIL							
Physical Tests							
% Moisture	10.2		0.10	%	30-OCT-17	31-OCT-17	R3869504
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Arsenic (As)	5.6		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Barium (Ba)	35.4		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Beryllium (Be)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Boron (B)	8.9		5.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Cadmium (Cd)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Chromium (Cr)	20.3		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Cobalt (Co)	10.7		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Copper (Cu)	34.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Lead (Pb)	11.7		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Molybdenum (Mo)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Nickel (Ni)	24.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Selenium (Se)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Silver (Ag)	<0.20		0.20	ug/g	01-NOV-17	01-NOV-17	R3873131
Thallium (Tl)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Uranium (U)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Vanadium (V)	27.2		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131

* 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
L2013933-5 MW1 SA5 Sampled By: B. SCHUYLER on 26-OCT-17 @ 08:00 Matrix: SOIL							
Metals							
Zinc (Zn)	51.8		5.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Volatile Organic Compounds							
Acetone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Benzene	<0.0068		0.0068	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromodichloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromoform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromomethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Carbon tetrachloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dibromochloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chloroform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dibromoethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,4-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dichlorodifluoromethane	<0.10	RRR	0.10	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Methylene Chloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloropropane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		31-OCT-17	
Ethylbenzene	<0.018		0.018	ug/g	27-OCT-17	31-OCT-17	R3870828
n-Hexane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Ethyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
MTBE	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Styrene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Tetrachloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Toluene	<0.080		0.080	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichloroethylene	<0.010		0.010	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichlorofluoromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Vinyl chloride	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828

* 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
L2013933-5 MW1 SA5 Sampled By: B. SCHUYLER on 26-OCT-17 @ 08:00 Matrix: SOIL							
Volatile Organic Compounds							
o-Xylene	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828
m+p-Xylenes	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
Xylenes (Total)	<0.050		0.050	ug/g		31-OCT-17	
Surrogate: 4-Bromofluorobenzene	97.9		50-140	%	27-OCT-17	31-OCT-17	R3870828
Surrogate: 1,4-Difluorobenzene	100.5		50-140	%	27-OCT-17	31-OCT-17	R3870828
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	27-OCT-17	31-OCT-17	R3870828
F1-BTEX	<5.0		5.0	ug/g		02-NOV-17	
F2 (C10-C16)	<10		10	ug/g	28-OCT-17	01-NOV-17	R3871185
F2-Naphth	<10		10	ug/g		02-NOV-17	
F3 (C16-C34)	<50		50	ug/g	28-OCT-17	01-NOV-17	R3871185
F3-PAH	<50		50	ug/g		02-NOV-17	
F4 (C34-C50)	<50		50	ug/g	28-OCT-17	01-NOV-17	R3871185
Total Hydrocarbons (C6-C50)	<72		72	ug/g		02-NOV-17	
Chrom. to baseline at nC50	YES				28-OCT-17	01-NOV-17	R3871185
Surrogate: 2-Bromobenzotrifluoride	132.5		60-140	%	28-OCT-17	01-NOV-17	R3871185
Surrogate: 3,4-Dichlorotoluene	93.4		60-140	%	27-OCT-17	31-OCT-17	R3870828
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Acenaphthylene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(a)anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(a)pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(b)fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(k)fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Chrysene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Fluorene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		02-NOV-17	
1-Methylnaphthalene	<0.030		0.030	ug/g	28-OCT-17	02-NOV-17	R3872685
2-Methylnaphthalene	<0.030		0.030	ug/g	28-OCT-17	02-NOV-17	R3872685
Naphthalene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Phenanthrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Surrogate: 2-Fluorobiphenyl	97.7		50-140	%	28-OCT-17	02-NOV-17	R3872685
Surrogate: p-Terphenyl d14	98.7		50-140	%	28-OCT-17	02-NOV-17	R3872685
Report Remarks : RRR-detection limit raised due to low LCS recovery.							
L2013933-8 MW2 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 08:00							

* 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
L2013933-8 MW2 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 08:00 Matrix: SOIL							
Physical Tests							
% Moisture	5.80		0.10	%	30-OCT-17	31-OCT-17	R3869504
pH	7.89		0.10	pH units		31-OCT-17	R3871045
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Arsenic (As)	2.1		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Barium (Ba)	14.3		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Beryllium (Be)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Boron (B)	<5.0		5.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Cadmium (Cd)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Chromium (Cr)	5.7		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Cobalt (Co)	2.5		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Copper (Cu)	11.8		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Lead (Pb)	4.2		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Molybdenum (Mo)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Nickel (Ni)	5.1		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Selenium (Se)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Silver (Ag)	<0.20		0.20	ug/g	01-NOV-17	01-NOV-17	R3873131
Thallium (Tl)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Uranium (U)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Vanadium (V)	12.7		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Zinc (Zn)	17.8		5.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Volatile Organic Compounds							
Acetone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Benzene	<0.0068		0.0068	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromodichloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromoform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromomethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Carbon tetrachloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dibromochloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chloroform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dibromoethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,4-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dichlorodifluoromethane	<0.10	RRR	0.10	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828

* 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
L2013933-8 MW2 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 08:00 Matrix: SOIL							
Volatile Organic Compounds							
Methylene Chloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloropropane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		31-OCT-17	
Ethylbenzene	<0.018		0.018	ug/g	27-OCT-17	31-OCT-17	R3870828
n-Hexane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Ethyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
MTBE	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Styrene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Tetrachloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Toluene	<0.080		0.080	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichloroethylene	<0.010		0.010	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichlorofluoromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Vinyl chloride	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828
o-Xylene	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828
m+p-Xylenes	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
Xylenes (Total)	<0.050		0.050	ug/g		31-OCT-17	
Surrogate: 4-Bromofluorobenzene	103.0		50-140	%	27-OCT-17	31-OCT-17	R3870828
Surrogate: 1,4-Difluorobenzene	107.6		50-140	%	27-OCT-17	31-OCT-17	R3870828
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	27-OCT-17	31-OCT-17	R3870828
F1-BTEX	<5.0		5.0	ug/g		02-NOV-17	
F2 (C10-C16)	<10		10	ug/g	28-OCT-17	01-NOV-17	R3871185
F2-Naphth	<10		10	ug/g		02-NOV-17	
F3 (C16-C34)	<50		50	ug/g	28-OCT-17	01-NOV-17	R3871185
F3-PAH	<50		50	ug/g		02-NOV-17	
F4 (C34-C50)	<50		50	ug/g	28-OCT-17	01-NOV-17	R3871185
Total Hydrocarbons (C6-C50)	<72		72	ug/g		02-NOV-17	
Chrom. to baseline at nC50	YES				28-OCT-17	01-NOV-17	R3871185
Surrogate: 2-Bromobenzotrifluoride	115.1		60-140	%	28-OCT-17	01-NOV-17	R3871185
Surrogate: 3,4-Dichlorotoluene	102.9		60-140	%	27-OCT-17	31-OCT-17	R3870828
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Acenaphthylene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685

* 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
L2013933-8 MW2 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 08:00 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(a)pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(b)fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(k)fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Chrysene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Fluorene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		02-NOV-17	
1-Methylnaphthalene	<0.030		0.030	ug/g	28-OCT-17	02-NOV-17	R3872685
2-Methylnaphthalene	<0.030		0.030	ug/g	28-OCT-17	02-NOV-17	R3872685
Naphthalene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Phenanthrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Surrogate: 2-Fluorobiphenyl	107.3		50-140	%	28-OCT-17	02-NOV-17	R3872685
Surrogate: p-Terphenyl d14	105.7		50-140	%	28-OCT-17	02-NOV-17	R3872685
Report Remarks : RRR-detection limit raised due to low LCS recovery.							
L2013933-11 MW2 SA4 Sampled By: B. SCHUYLER on 26-OCT-17 @ 08:00 Matrix: SOIL							
Physical Tests							
% Moisture	11.2		0.10	%	30-OCT-17	31-OCT-17	R3869504
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Arsenic (As)	5.8		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Barium (Ba)	62.1		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Beryllium (Be)	0.65		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Boron (B)	9.8		5.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Cadmium (Cd)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Chromium (Cr)	20.5		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Cobalt (Co)	12.5		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Copper (Cu)	41.6		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Lead (Pb)	10.8		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Molybdenum (Mo)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Nickel (Ni)	26.5		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Selenium (Se)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Silver (Ag)	<0.20		0.20	ug/g	01-NOV-17	01-NOV-17	R3873131
Thallium (Tl)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Uranium (U)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Vanadium (V)	29.2		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131

* 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
L2013933-11 MW2 SA4 Sampled By: B. SCHUYLER on 26-OCT-17 @ 08:00 Matrix: SOIL							
Metals							
Zinc (Zn)	93.3		5.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Volatile Organic Compounds							
Acetone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Benzene	<0.0068		0.0068	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromodichloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromoform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromomethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Carbon tetrachloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dibromochloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chloroform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dibromoethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,4-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dichlorodifluoromethane	<0.10	RRR	0.10	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Methylene Chloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloropropane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		31-OCT-17	
Ethylbenzene	<0.018		0.018	ug/g	27-OCT-17	31-OCT-17	R3870828
n-Hexane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Ethyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
MTBE	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Styrene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Tetrachloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Toluene	<0.080		0.080	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichloroethylene	<0.010		0.010	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichlorofluoromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Vinyl chloride	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828

* 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
L2013933-11 MW2 SA4 Sampled By: B. SCHUYLER on 26-OCT-17 @ 08:00 Matrix: SOIL							
Volatile Organic Compounds							
o-Xylene	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828
m+p-Xylenes	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
Xylenes (Total)	<0.050		0.050	ug/g		31-OCT-17	
Surrogate: 4-Bromofluorobenzene	92.4		50-140	%	27-OCT-17	31-OCT-17	R3870828
Surrogate: 1,4-Difluorobenzene	97.0		50-140	%	27-OCT-17	31-OCT-17	R3870828
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	27-OCT-17	31-OCT-17	R3870828
F1-BTEX	<5.0		5.0	ug/g		02-NOV-17	
F2 (C10-C16)	<10		10	ug/g	28-OCT-17	01-NOV-17	R3871185
F2-Naphth	<10		10	ug/g		02-NOV-17	
F3 (C16-C34)	<50		50	ug/g	28-OCT-17	01-NOV-17	R3871185
F3-PAH	<50		50	ug/g		02-NOV-17	
F4 (C34-C50)	<50		50	ug/g	28-OCT-17	01-NOV-17	R3871185
Total Hydrocarbons (C6-C50)	<72		72	ug/g		02-NOV-17	
Chrom. to baseline at nC50	YES				28-OCT-17	01-NOV-17	R3871185
Surrogate: 2-Bromobenzotrifluoride	116.2		60-140	%	28-OCT-17	01-NOV-17	R3871185
Surrogate: 3,4-Dichlorotoluene	93.7		60-140	%	27-OCT-17	31-OCT-17	R3870828
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Acenaphthylene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(a)anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(a)pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(b)fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(k)fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Chrysene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Fluorene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		02-NOV-17	
1-Methylnaphthalene	<0.030		0.030	ug/g	28-OCT-17	02-NOV-17	R3872685
2-Methylnaphthalene	<0.030		0.030	ug/g	28-OCT-17	02-NOV-17	R3872685
Naphthalene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Phenanthrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Surrogate: 2-Fluorobiphenyl	103.0		50-140	%	28-OCT-17	02-NOV-17	R3872685
Surrogate: p-Terphenyl d14	103.2		50-140	%	28-OCT-17	02-NOV-17	R3872685
Report Remarks : RRR-detection limit raised due to low LCS recovery.							
L2013933-15 MW3 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 10:00							

* 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
L2013933-15 MW3 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 10:00 Matrix: SOIL							
Physical Tests							
% Moisture	5.19		0.10	%	30-OCT-17	31-OCT-17	R3869504
pH	7.64		0.10	pH units		31-OCT-17	R3871045
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Arsenic (As)	6.9		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Barium (Ba)	69.9		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Beryllium (Be)	0.56		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Boron (B)	10.5		5.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Cadmium (Cd)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Chromium (Cr)	15.8		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Cobalt (Co)	7.8		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Copper (Cu)	65.3		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Lead (Pb)	13.4		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Molybdenum (Mo)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Nickel (Ni)	15.3		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Selenium (Se)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Silver (Ag)	<0.20		0.20	ug/g	01-NOV-17	01-NOV-17	R3873131
Thallium (Tl)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Uranium (U)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Vanadium (V)	44.8		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Zinc (Zn)	57.6		5.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Volatile Organic Compounds							
Acetone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Benzene	<0.0068		0.0068	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromodichloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromoform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromomethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Carbon tetrachloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dibromochloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chloroform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dibromoethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,4-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dichlorodifluoromethane	<0.10	RRR	0.10	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828

* 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
L2013933-15 MW3 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 10:00 Matrix: SOIL							
Volatile Organic Compounds							
Methylene Chloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloropropane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		31-OCT-17	
Ethylbenzene	<0.018		0.018	ug/g	27-OCT-17	31-OCT-17	R3870828
n-Hexane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Ethyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
MTBE	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Styrene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Tetrachloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Toluene	<0.080		0.080	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichloroethylene	<0.010		0.010	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichlorofluoromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Vinyl chloride	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828
o-Xylene	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828
m+p-Xylenes	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
Xylenes (Total)	<0.050		0.050	ug/g		31-OCT-17	
Surrogate: 4-Bromofluorobenzene	102.0		50-140	%	27-OCT-17	31-OCT-17	R3870828
Surrogate: 1,4-Difluorobenzene	107.5		50-140	%	27-OCT-17	31-OCT-17	R3870828
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	27-OCT-17	31-OCT-17	R3870828
F1-BTEX	<5.0		5.0	ug/g		02-NOV-17	
F2 (C10-C16)	<10		10	ug/g	28-OCT-17	01-NOV-17	R3871185
F2-Naphth	<10		10	ug/g		02-NOV-17	
F3 (C16-C34)	<50		50	ug/g	28-OCT-17	01-NOV-17	R3871185
F3-PAH	<50		50	ug/g		02-NOV-17	
F4 (C34-C50)	<50		50	ug/g	28-OCT-17	01-NOV-17	R3871185
Total Hydrocarbons (C6-C50)	<72		72	ug/g		02-NOV-17	
Chrom. to baseline at nC50	YES				28-OCT-17	01-NOV-17	R3871185
Surrogate: 2-Bromobenzotrifluoride	116.1		60-140	%	28-OCT-17	01-NOV-17	R3871185
Surrogate: 3,4-Dichlorotoluene	102.9		60-140	%	27-OCT-17	31-OCT-17	R3870828
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Acenaphthylene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685

* 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
L2013933-15 MW3 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 10:00 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(a)pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(b)fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(k)fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Chrysene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Fluorene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		02-NOV-17	
1-Methylnaphthalene	<0.030		0.030	ug/g	28-OCT-17	02-NOV-17	R3872685
2-Methylnaphthalene	<0.030		0.030	ug/g	28-OCT-17	02-NOV-17	R3872685
Naphthalene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Phenanthrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Surrogate: 2-Fluorobiphenyl	104.0		50-140	%	28-OCT-17	02-NOV-17	R3872685
Surrogate: p-Terphenyl d14	104.7		50-140	%	28-OCT-17	02-NOV-17	R3872685
Report Remarks : RRR-detection limit raised due to low LCS recovery.							
L2013933-17 MW3 SA3 Sampled By: B. SCHUYLER on 26-OCT-17 @ 10:00 Matrix: SOIL							
Physical Tests							
% Moisture	10.1		0.10	%	30-OCT-17	31-OCT-17	R3869504
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Arsenic (As)	5.6		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Barium (Ba)	34.3		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Beryllium (Be)	0.57		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Boron (B)	10.7		5.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Cadmium (Cd)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Chromium (Cr)	18.6		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Cobalt (Co)	9.9		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Copper (Cu)	44.2		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Lead (Pb)	7.2		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Molybdenum (Mo)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Nickel (Ni)	22.4		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Selenium (Se)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Silver (Ag)	<0.20		0.20	ug/g	01-NOV-17	01-NOV-17	R3873131
Thallium (Tl)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Uranium (U)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Vanadium (V)	25.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131

* 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
L2013933-17 MW3 SA3 Sampled By: B. SCHUYLER on 26-OCT-17 @ 10:00 Matrix: SOIL							
Metals							
Zinc (Zn)	46.3		5.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Volatile Organic Compounds							
Acetone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Benzene	<0.0068		0.0068	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromodichloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromoform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromomethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Carbon tetrachloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dibromochloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chloroform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dibromoethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,4-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dichlorodifluoromethane	<0.10	RRR	0.10	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Methylene Chloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloropropane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		31-OCT-17	
Ethylbenzene	<0.018		0.018	ug/g	27-OCT-17	31-OCT-17	R3870828
n-Hexane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Ethyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
MTBE	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Styrene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Tetrachloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Toluene	<0.080		0.080	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichloroethylene	<0.010		0.010	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichlorofluoromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Vinyl chloride	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828

* 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
L2013933-17 MW3 SA3 Sampled By: B. SCHUYLER on 26-OCT-17 @ 10:00 Matrix: SOIL							
Volatile Organic Compounds							
o-Xylene	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828
m+p-Xylenes	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
Xylenes (Total)	<0.050		0.050	ug/g		31-OCT-17	
Surrogate: 4-Bromofluorobenzene	92.6		50-140	%	27-OCT-17	31-OCT-17	R3870828
Surrogate: 1,4-Difluorobenzene	97.9		50-140	%	27-OCT-17	31-OCT-17	R3870828
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	27-OCT-17	31-OCT-17	R3870828
F1-BTEX	<5.0		5.0	ug/g		02-NOV-17	
F2 (C10-C16)	<10		10	ug/g	28-OCT-17	01-NOV-17	R3871185
F2-Naphth	<10		10	ug/g		02-NOV-17	
F3 (C16-C34)	<50		50	ug/g	28-OCT-17	01-NOV-17	R3871185
F3-PAH	<50		50	ug/g		02-NOV-17	
F4 (C34-C50)	<50		50	ug/g	28-OCT-17	01-NOV-17	R3871185
Total Hydrocarbons (C6-C50)	<72		72	ug/g		02-NOV-17	
Chrom. to baseline at nC50	YES				28-OCT-17	01-NOV-17	R3871185
Surrogate: 2-Bromobenzotrifluoride	112.1		60-140	%	28-OCT-17	01-NOV-17	R3871185
Surrogate: 3,4-Dichlorotoluene	92.0		60-140	%	27-OCT-17	31-OCT-17	R3870828
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Acenaphthylene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(a)anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(a)pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(b)fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(k)fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Chrysene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Fluorene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		02-NOV-17	
1-Methylnaphthalene	<0.030		0.030	ug/g	28-OCT-17	02-NOV-17	R3872685
2-Methylnaphthalene	<0.030		0.030	ug/g	28-OCT-17	02-NOV-17	R3872685
Naphthalene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Phenanthrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Surrogate: 2-Fluorobiphenyl	106.1		50-140	%	28-OCT-17	02-NOV-17	R3872685
Surrogate: p-Terphenyl d14	107.0		50-140	%	28-OCT-17	02-NOV-17	R3872685
Report Remarks : RRR-detection limit raised due to low LCS recovery.							
L2013933-20 MW10 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 12:00							

* 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
L2013933-20 MW10 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 12:00 Matrix: SOIL							
Physical Tests							
% Moisture	10.0		0.10	%	30-OCT-17	31-OCT-17	R3869504
Metals							
Antimony (Sb)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Arsenic (As)	6.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Barium (Ba)	41.5		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Beryllium (Be)	0.55		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Boron (B)	10.4		5.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Cadmium (Cd)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Chromium (Cr)	21.1		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Cobalt (Co)	11.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Copper (Cu)	35.4		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Lead (Pb)	6.8		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Molybdenum (Mo)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Nickel (Ni)	25.1		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Selenium (Se)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Silver (Ag)	<0.20		0.20	ug/g	01-NOV-17	01-NOV-17	R3873131
Thallium (Tl)	<0.50		0.50	ug/g	01-NOV-17	01-NOV-17	R3873131
Uranium (U)	<1.0		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Vanadium (V)	28.9		1.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Zinc (Zn)	52.7		5.0	ug/g	01-NOV-17	01-NOV-17	R3873131
Volatile Organic Compounds							
Acetone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Benzene	<0.0068		0.0068	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromodichloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromoform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromomethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Carbon tetrachloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dibromochloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chloroform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dibromoethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,4-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dichlorodifluoromethane	<0.10	RRR	0.10	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Methylene Chloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828

* 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
L2013933-20 MW10 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 12:00 Matrix: SOIL							
Volatile Organic Compounds							
1,2-Dichloropropane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		31-OCT-17	
Ethylbenzene	<0.018		0.018	ug/g	27-OCT-17	31-OCT-17	R3870828
n-Hexane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Ethyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
MTBE	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Styrene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Tetrachloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Toluene	<0.080		0.080	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichloroethylene	<0.010		0.010	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichlorofluoromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Vinyl chloride	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828
o-Xylene	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828
m+p-Xylenes	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
Xylenes (Total)	<0.050		0.050	ug/g		31-OCT-17	
Surrogate: 4-Bromofluorobenzene	97.8		50-140	%	27-OCT-17	31-OCT-17	R3870828
Surrogate: 1,4-Difluorobenzene	103.6		50-140	%	27-OCT-17	31-OCT-17	R3870828
Hydrocarbons							
F1 (C6-C10)	<5.0		5.0	ug/g	27-OCT-17	31-OCT-17	R3870828
F1-BTEX	<5.0		5.0	ug/g		02-NOV-17	
F2 (C10-C16)	<10		10	ug/g	28-OCT-17	01-NOV-17	R3871185
F2-Naphth	<10		10	ug/g		02-NOV-17	
F3 (C16-C34)	<50		50	ug/g	28-OCT-17	01-NOV-17	R3871185
F3-PAH	<50		50	ug/g		02-NOV-17	
F4 (C34-C50)	<50		50	ug/g	28-OCT-17	01-NOV-17	R3871185
Total Hydrocarbons (C6-C50)	<72		72	ug/g		02-NOV-17	
Chrom. to baseline at nC50	YES				28-OCT-17	01-NOV-17	R3871185
Surrogate: 2-Bromobenzotrifluoride	118.3		60-140	%	28-OCT-17	01-NOV-17	R3871185
Surrogate: 3,4-Dichlorotoluene	101.0		60-140	%	27-OCT-17	31-OCT-17	R3870828
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Acenaphthylene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(a)anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685

* 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
L2013933-20 MW10 SA1 Sampled By: B. SCHUYLER on 26-OCT-17 @ 12:00 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(b)fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(g,h,i)perylene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Benzo(k)fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Chrysene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Dibenzo(ah)anthracene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Fluoranthene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Fluorene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
1+2-Methylnaphthalenes	<0.042		0.042	ug/g		02-NOV-17	
1-Methylnaphthalene	<0.030		0.030	ug/g	28-OCT-17	02-NOV-17	R3872685
2-Methylnaphthalene	<0.030		0.030	ug/g	28-OCT-17	02-NOV-17	R3872685
Naphthalene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Phenanthrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Pyrene	<0.050		0.050	ug/g	28-OCT-17	02-NOV-17	R3872685
Surrogate: 2-Fluorobiphenyl	103.1		50-140	%	28-OCT-17	02-NOV-17	R3872685
Surrogate: p-Terphenyl d14	104.1		50-140	%	28-OCT-17	02-NOV-17	R3872685
Report Remarks : RRR-detection limit raised due to low LCS recovery.							
L2013933-21 BLANK Sampled By: B. SCHUYLER on 26-OCT-17 @ 10:00 Matrix: SOIL							
Physical Tests							
% Moisture	<0.10		0.10	%	30-OCT-17	31-OCT-17	R3869504
Volatile Organic Compounds							
Acetone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Benzene	<0.0068		0.0068	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromodichloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromoform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Bromomethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Carbon tetrachloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dibromochloromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Chloroform	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dibromoethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,4-Dichlorobenzene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Dichlorodifluoromethane	<0.10	RRR	0.10	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828

* 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
L2013933-21 BLANK Sampled By: B. SCHUYLER on 26-OCT-17 @ 10:00 Matrix: SOIL							
Volatile Organic Compounds							
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Methylene Chloride	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,2-Dichloropropane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		31-OCT-17	
Ethylbenzene	<0.018		0.018	ug/g	27-OCT-17	31-OCT-17	R3870828
n-Hexane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Ethyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	27-OCT-17	31-OCT-17	R3870828
MTBE	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Styrene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Tetrachloroethylene	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Toluene	<0.080		0.080	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,1-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
1,1,2-Trichloroethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichloroethylene	<0.010		0.010	ug/g	27-OCT-17	31-OCT-17	R3870828
Trichlorofluoromethane	<0.050		0.050	ug/g	27-OCT-17	31-OCT-17	R3870828
Vinyl chloride	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828
o-Xylene	<0.020		0.020	ug/g	27-OCT-17	31-OCT-17	R3870828
m+p-Xylenes	<0.030		0.030	ug/g	27-OCT-17	31-OCT-17	R3870828
Xylenes (Total)	<0.050		0.050	ug/g		31-OCT-17	
Surrogate: 4-Bromofluorobenzene	98.0		50-140	%	27-OCT-17	31-OCT-17	R3870828
Surrogate: 1,4-Difluorobenzene	104.6		50-140	%	27-OCT-17	31-OCT-17	R3870828
Report Remarks : RRR-detection limit raised due to low LCS recovery.							
L2013933-22 MW2 SA5 Sampled By: B. SCHUYLER on 26-OCT-17 @ 10:00 Matrix: SOIL							
Particle Size							
% >75um	31.4		1.0	%	02-NOV-17	03-NOV-17	R3873603

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

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	F2 (C10-C16)	DUP-H	L2013933-1, -11, -15, -17, -20, -5, -8
Duplicate	F3 (C16-C34)	DUP-H	L2013933-1, -11, -15, -17, -20, -5, -8
Laboratory Control Sample	Dichlorodifluoromethane	RRQC	L2013933-1, -11, -15, -17, -20, -21, -5, -8
Comments:	RRQC-Recovery is below ALS DQO therefore detection limits have been raised accordingly.		
Matrix Spike	Dichlorodifluoromethane	RRQC	L2013933-1, -11, -15, -17, -20, -21, -5, -8
Comments:	RRCQ-detection limit raised due to low LCS recovery.		

Sample Parameter Qualifier key listed:

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
RRQC	Refer to report remarks for information regarding this QC result.
RRR	Refer to Report Remarks for issues regarding this analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S

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

Hydrocarbon results are expressed on a dry weight basis.

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

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

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

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

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

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

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

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

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

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

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

Reference Information

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

This method uses a heated strong acid digestion with HNO3 and HCl and is intended to liberate metals that may be environmentally available. Silicate minerals are not solubilized. Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. Analysis is by Collision/Reaction Cell ICPMS.

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

METHYLNAPS-CALC-WT	Soil	ABN-Calculated Parameters	SW846 8270
MOISTURE-WT	Soil	% Moisture	Gravimetric: Oven Dried
PAH-511-WT	Soil	PAH-O.Reg 153/04 (July 2011)	SW846 3510/8270

A representative sub-sample of soil is fortified with deuterium-labelled surrogates and a mechanical shaking techniqueis used to extract the sample with a mixture of methanol and toluene. The extracts are concentrated and analyzed by GC/MS. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

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

PH-WT	Soil	pH	MOEE E3137A

A minimum 10g portion of the sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil and then analyzed using a pH meter and electrode.

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

PSA-75UM-SIEVE-WT	Soil	% Particles>75um (Coarse/Fine)	ASTM D422-63-HYDROMETER/SIEVE

An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (Calgon solution). The sample is washed through a 200 mesh (75 µm) sieve. The retained mass of sample is used to determine % sand fraction. If the percentage of sand is >50%, the soil is considered to be coarse textured soil. If the percentage of sand is <50%, the soil is considered to be fine textured.

Reference: ASTM D422-63

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

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

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

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

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

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

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

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

Chain of Custody Numbers:

Reference Information

GLOSSARY OF REPORT TERMS

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

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

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	**Soil**							
Batch R3870828								
WG2651006-2 LCS								
F1 (C6-C10)			109.5		%		80-120	31-OCT-17
WG2651006-1 MB								
F1 (C6-C10)			<5.0		ug/g		5	31-OCT-17
Surrogate: 3,4-Dichlorotoluene			102.1		%		60-140	31-OCT-17
F2-F4-511-WT	**Soil**							
Batch R3871185								
WG2651205-3 CRM		**ALS PHC2 IRM**						
F2 (C10-C16)			83.1		%		70-130	31-OCT-17
F3 (C16-C34)			75.9		%		70-130	31-OCT-17
F4 (C34-C50)			70.5		%		70-130	31-OCT-17
WG2651205-2 LCS								
F2 (C10-C16)			99.0		%		80-120	31-OCT-17
F3 (C16-C34)			95.2		%		80-120	31-OCT-17
F4 (C34-C50)			91.6		%		80-120	31-OCT-17
WG2651205-1 MB								
F2 (C10-C16)			<10		ug/g		10	31-OCT-17
F3 (C16-C34)			<50		ug/g		50	31-OCT-17
F4 (C34-C50)			<50		ug/g		50	31-OCT-17
Surrogate: 2-Bromobenzotrifluoride			N/A	MBS	%		-	31-OCT-17
MET-200.2-CCMS-WT	**Soil**							
Batch R3873131								
WG2653658-2 CRM		**WT-CANMET-TILL1**						
Antimony (Sb)			95.5		%		70-130	01-NOV-17
Arsenic (As)			99.6		%		70-130	01-NOV-17
Barium (Ba)			99.2		%		70-130	01-NOV-17
Beryllium (Be)			102.7		%		70-130	01-NOV-17
Boron (B)			3.5		mg/kg		0-8.2	01-NOV-17
Cadmium (Cd)			113.0		%		70-130	01-NOV-17
Chromium (Cr)			102.8		%		70-130	01-NOV-17
Cobalt (Co)			94.6		%		70-130	01-NOV-17
Copper (Cu)			99.8		%		70-130	01-NOV-17
Lead (Pb)			104.5		%		70-130	01-NOV-17
Molybdenum (Mo)			98.3		%		70-130	01-NOV-17
Nickel (Ni)			101.6		%		70-130	01-NOV-17
Selenium (Se)			0.31		mg/kg		0.11-0.51	01-NOV-17

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R3873131								
WG2653658-2 CRM		**WT-CANMET-TILL1**						
Silver (Ag)			0.22		mg/kg		0.13-0.33	01-NOV-17
Thallium (Tl)			0.120		mg/kg		0.077-0.18	01-NOV-17
Uranium (U)			93.8		%		70-130	01-NOV-17
Vanadium (V)			101.7		%		70-130	01-NOV-17
Zinc (Zn)			100.9		%		70-130	01-NOV-17
WG2653658-4 LCS		**1+2**						
Antimony (Sb)			96.6		%		80-120	01-NOV-17
Arsenic (As)			95.0		%		80-120	01-NOV-17
Barium (Ba)			85.4		%		80-120	01-NOV-17
Beryllium (Be)			95.3		%		80-120	01-NOV-17
Boron (B)			88.8		%		80-120	01-NOV-17
Cadmium (Cd)			95.3		%		80-120	01-NOV-17
Chromium (Cr)			94.1		%		80-120	01-NOV-17
Cobalt (Co)			87.8		%		80-120	01-NOV-17
Copper (Cu)			92.1		%		80-120	01-NOV-17
Lead (Pb)			91.7		%		80-120	01-NOV-17
Molybdenum (Mo)			91.4		%		80-120	01-NOV-17
Nickel (Ni)			92.8		%		80-120	01-NOV-17
Selenium (Se)			91.3		%		80-120	01-NOV-17
Silver (Ag)			91.1		%		80-120	01-NOV-17
Thallium (Tl)			90.6		%		80-120	01-NOV-17
Uranium (U)			84.1		%		80-120	01-NOV-17
Vanadium (V)			96.6		%		80-120	01-NOV-17
Zinc (Zn)			89.5		%		80-120	01-NOV-17
WG2653658-1 MB								
Antimony (Sb)			<0.10		mg/kg		0.1	01-NOV-17
Arsenic (As)			<0.10		mg/kg		0.1	01-NOV-17
Barium (Ba)			<0.50		mg/kg		0.5	01-NOV-17
Beryllium (Be)			<0.10		mg/kg		0.1	01-NOV-17
Boron (B)			<5.0		mg/kg		5	01-NOV-17
Cadmium (Cd)			<0.020		mg/kg		0.02	01-NOV-17
Chromium (Cr)			<0.50		mg/kg		0.5	01-NOV-17
Cobalt (Co)			<0.10		mg/kg		0.1	01-NOV-17
Copper (Cu)			<0.50		mg/kg		0.5	01-NOV-17
Lead (Pb)			<0.50		mg/kg		0.5	01-NOV-17

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R3873131								
WG2653658-1 MB								
Molybdenum (Mo)			<0.10		mg/kg		0.1	01-NOV-17
Nickel (Ni)			<0.50		mg/kg		0.5	01-NOV-17
Selenium (Se)			<0.20		mg/kg		0.2	01-NOV-17
Silver (Ag)			<0.10		mg/kg		0.1	01-NOV-17
Thallium (Tl)			<0.050		mg/kg		0.05	01-NOV-17
Uranium (U)			<0.050		mg/kg		0.05	01-NOV-17
Vanadium (V)			<0.20		mg/kg		0.2	01-NOV-17
Zinc (Zn)			<2.0		mg/kg		2	01-NOV-17
MOISTURE-WT	**Soil**							
Batch R3869025								
WG2650531-2 LCS								
% Moisture			97.6		%		90-110	27-OCT-17
WG2650531-1 MB								
% Moisture			<0.10		%		0.1	27-OCT-17
Batch R3869504								
WG2651797-2 LCS								
% Moisture			99.0		%		90-110	31-OCT-17
WG2651797-1 MB								
% Moisture			<0.10		%		0.1	31-OCT-17
PAH-511-WT	**Soil**							
Batch R3872685								
WG2651123-2 LCS								
1-Methylnaphthalene			81.3		%		50-140	02-NOV-17
2-Methylnaphthalene			80.2		%		50-140	02-NOV-17
Acenaphthene			81.7		%		50-140	02-NOV-17
Acenaphthylene			85.2		%		50-140	02-NOV-17
Anthracene			80.2		%		50-140	02-NOV-17
Benzo(a)anthracene			82.9		%		50-140	02-NOV-17
Benzo(a)pyrene			75.8		%		50-140	02-NOV-17
Benzo(b)fluoranthene			69.2		%		50-140	02-NOV-17
Benzo(g,h,i)perylene			65.3		%		50-140	02-NOV-17
Benzo(k)fluoranthene			84.0		%		50-140	02-NOV-17
Chrysene			84.8		%		50-140	02-NOV-17
Dibenzo(ah)anthracene			71.1		%		50-140	02-NOV-17
Fluoranthene			76.2		%		50-140	02-NOV-17

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R3872685								
WG2651123-2 LCS								
Fluorene			79.5		%		50-140	02-NOV-17
Indeno(1,2,3-cd)pyrene			67.4		%		50-140	02-NOV-17
Naphthalene			83.8		%		50-140	02-NOV-17
Phenanthrene			78.4		%		50-140	02-NOV-17
Pyrene			78.0		%		50-140	02-NOV-17
WG2651123-1 MB								
1-Methylnaphthalene			<0.030		ug/g		0.03	02-NOV-17
2-Methylnaphthalene			<0.030		ug/g		0.03	02-NOV-17
Acenaphthene			<0.050		ug/g		0.05	02-NOV-17
Acenaphthylene			<0.050		ug/g		0.05	02-NOV-17
Anthracene			<0.050		ug/g		0.05	02-NOV-17
Benzo(a)anthracene			<0.050		ug/g		0.05	02-NOV-17
Benzo(a)pyrene			<0.050		ug/g		0.05	02-NOV-17
Benzo(b)fluoranthene			<0.050		ug/g		0.05	02-NOV-17
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	02-NOV-17
Benzo(k)fluoranthene			<0.050		ug/g		0.05	02-NOV-17
Chrysene			<0.050		ug/g		0.05	02-NOV-17
Dibenzo(ah)anthracene			<0.050		ug/g		0.05	02-NOV-17
Fluoranthene			<0.050		ug/g		0.05	02-NOV-17
Fluorene			<0.050		ug/g		0.05	02-NOV-17
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	02-NOV-17
Naphthalene			<0.050		ug/g		0.05	02-NOV-17
Phenanthrene			<0.050		ug/g		0.05	02-NOV-17
Pyrene			<0.050		ug/g		0.05	02-NOV-17
Surrogate: 2-Fluorobiphenyl			102.2		%		50-140	02-NOV-17
Surrogate: p-Terphenyl d14			106.0		%		50-140	02-NOV-17
PH-WT	**Soil**							
Batch R3871045								
WG2652646-1 LCS								
pH			6.97		pH units		6.9-7.1	31-OCT-17
VOC-511-HS-WT	**Soil**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch	**R3870828**							
WG2651006-2	**LCS**							
1,1,1,2-Tetrachloroethane			96.4		%		60-130	31-OCT-17
1,1,2,2-Tetrachloroethane			94.4		%		60-130	31-OCT-17
1,1,1-Trichloroethane			96.4		%		60-130	31-OCT-17
1,1,2-Trichloroethane			96.3		%		60-130	31-OCT-17
1,1-Dichloroethane			89.1		%		60-130	31-OCT-17
1,1-Dichloroethylene			78.5		%		60-130	31-OCT-17
1,2-Dibromoethane			97.1		%		70-130	31-OCT-17
1,2-Dichlorobenzene			101.6		%		70-130	31-OCT-17
1,2-Dichloroethane			93.3		%		60-130	31-OCT-17
1,2-Dichloropropane			96.1		%		70-130	31-OCT-17
1,3-Dichlorobenzene			100.1		%		70-130	31-OCT-17
1,4-Dichlorobenzene			102.1		%		70-130	31-OCT-17
Acetone			93.5		%		60-140	31-OCT-17
Benzene			97.9		%		70-130	31-OCT-17
Bromodichloromethane			94.6		%		50-140	31-OCT-17
Bromoform			96.6		%		70-130	31-OCT-17
Bromomethane			84.7		%		50-140	31-OCT-17
Carbon tetrachloride			96.0		%		70-130	31-OCT-17
Chlorobenzene			98.5		%		70-130	31-OCT-17
Chloroform			97.4		%		70-130	31-OCT-17
cis-1,2-Dichloroethylene			99.2		%		70-130	31-OCT-17
cis-1,3-Dichloropropene			96.8		%		70-130	31-OCT-17
Dibromochloromethane			99.5		%		60-130	31-OCT-17
Dichlorodifluoromethane			34.2	RRQC	%		50-140	31-OCT-17
Ethylbenzene			92.0		%		70-130	31-OCT-17
n-Hexane			85.1		%		70-130	31-OCT-17
Methylene Chloride			96.3		%		70-130	31-OCT-17
MTBE			94.5		%		70-130	31-OCT-17
m+p-Xylenes			94.3		%		70-130	31-OCT-17
Methyl Ethyl Ketone			101.4		%		60-140	31-OCT-17
Methyl Isobutyl Ketone			91.3		%		60-140	31-OCT-17
o-Xylene			92.8		%		70-130	31-OCT-17
Styrene			103.8		%		70-130	31-OCT-17
Tetrachloroethylene			98.9		%		60-130	31-OCT-17

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch	**R3870828**							
WG2651006-2	**LCS**							
Toluene			91.7		%		70-130	31-OCT-17
trans-1,2-Dichloroethylene			90.2		%		60-130	31-OCT-17
trans-1,3-Dichloropropene			90.5		%		70-130	31-OCT-17
Trichloroethylene			103.0		%		60-130	31-OCT-17
Trichlorofluoromethane			86.6		%		50-140	31-OCT-17
Vinyl chloride			71.5		%		60-140	31-OCT-17
COMMENTS: RRQC-Recovery is below ALS DQO therefore detection limits have been raised accordingly.								
WG2651006-1	**MB**							
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	31-OCT-17
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	31-OCT-17
1,1,1-Trichloroethane			<0.050		ug/g		0.05	31-OCT-17
1,1,2-Trichloroethane			<0.050		ug/g		0.05	31-OCT-17
1,1-Dichloroethane			<0.050		ug/g		0.05	31-OCT-17
1,1-Dichloroethylene			<0.050		ug/g		0.05	31-OCT-17
1,2-Dibromoethane			<0.050		ug/g		0.05	31-OCT-17
1,2-Dichlorobenzene			<0.050		ug/g		0.05	31-OCT-17
1,2-Dichloroethane			<0.050		ug/g		0.05	31-OCT-17
1,2-Dichloropropane			<0.050		ug/g		0.05	31-OCT-17
1,3-Dichlorobenzene			<0.050		ug/g		0.05	31-OCT-17
1,4-Dichlorobenzene			<0.050		ug/g		0.05	31-OCT-17
Acetone			<0.50		ug/g		0.5	31-OCT-17
Benzene			<0.0068		ug/g		0.0068	31-OCT-17
Bromodichloromethane			<0.050		ug/g		0.05	31-OCT-17
Bromoform			<0.050		ug/g		0.05	31-OCT-17
Bromomethane			<0.050		ug/g		0.05	31-OCT-17
Carbon tetrachloride			<0.050		ug/g		0.05	31-OCT-17
Chlorobenzene			<0.050		ug/g		0.05	31-OCT-17
Chloroform			<0.050		ug/g		0.05	31-OCT-17
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	31-OCT-17
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	31-OCT-17
Dibromochloromethane			<0.050		ug/g		0.05	31-OCT-17
Dichlorodifluoromethane			<0.10		ug/g		0.1	31-OCT-17
Ethylbenzene			<0.018		ug/g		0.018	31-OCT-17
n-Hexane			<0.050		ug/g		0.05	31-OCT-17
Methylene Chloride			<0.050		ug/g		0.05	31-OCT-17

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch	**R3870828**							
WG2651006-1	**MB**							
MTBE			<0.050		ug/g		0.05	31-OCT-17
m+p-Xylenes			<0.030		ug/g		0.03	31-OCT-17
Methyl Ethyl Ketone			<0.50		ug/g		0.5	31-OCT-17
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	31-OCT-17
o-Xylene			<0.020		ug/g		0.02	31-OCT-17
Styrene			<0.050		ug/g		0.05	31-OCT-17
Tetrachloroethylene			<0.050		ug/g		0.05	31-OCT-17
Toluene			<0.080		ug/g		0.08	31-OCT-17
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	31-OCT-17
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	31-OCT-17
Trichloroethylene			<0.010		ug/g		0.01	31-OCT-17
Trichlorofluoromethane			<0.050		ug/g		0.05	31-OCT-17
Vinyl chloride			<0.020		ug/g		0.02	31-OCT-17
Surrogate: 1,4-Difluorobenzene			114.1		%		50-140	31-OCT-17
Surrogate: 4-Bromofluorobenzene			105.2		%		50-140	31-OCT-17

COMMENTS: RRQC-detection limit raised due to low LCS recovery.

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
MBS	Surrogate recovery in Method Blank was outside ALS DQO. Moderately low-biased results in the MB do not significantly affect its purpose.
RRQC	Refer to report remarks for information regarding this QC result.

Hold Time Exceedances:

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

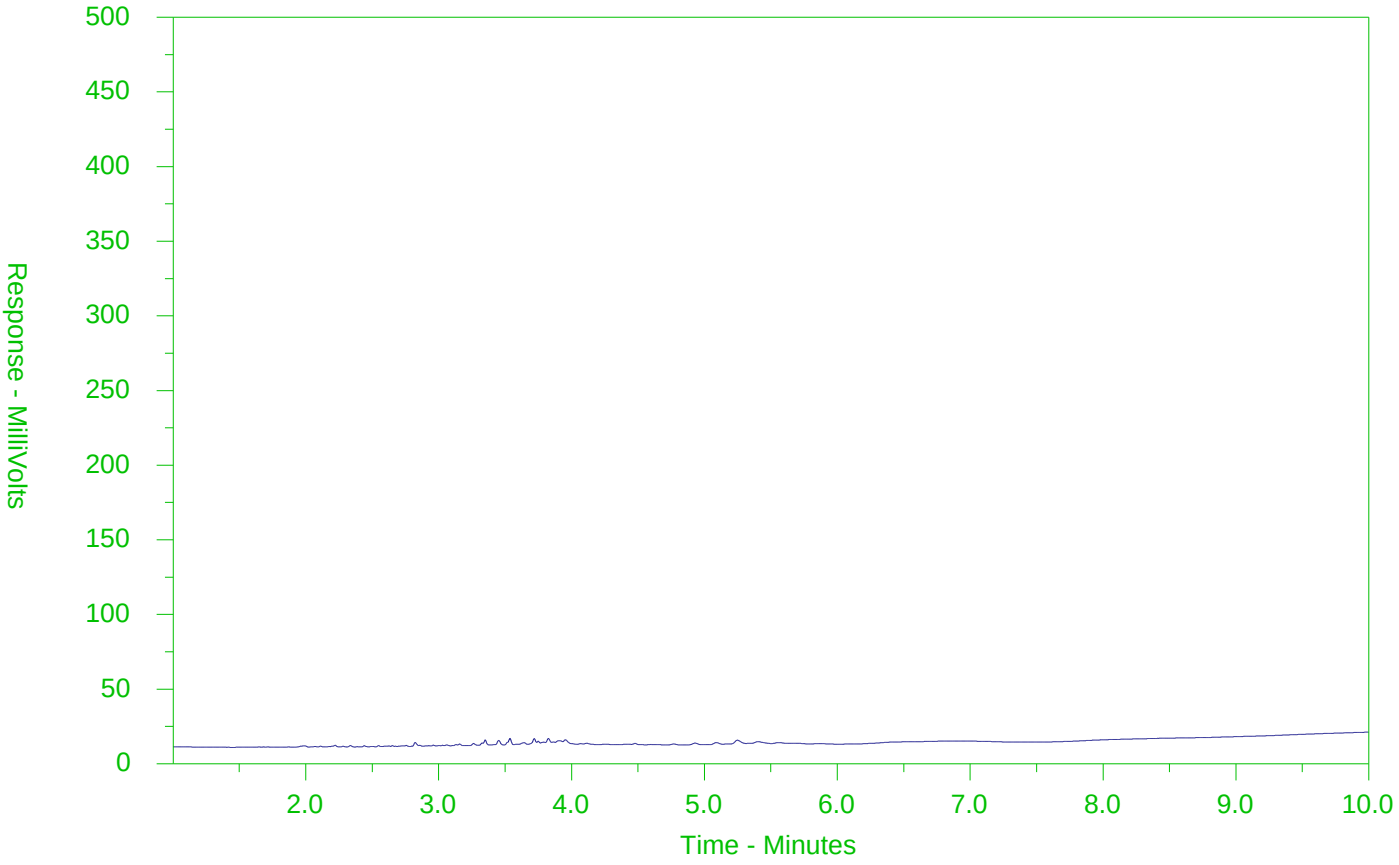
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where 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: L2013933-1
Client Sample ID: MW1 SA1



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

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

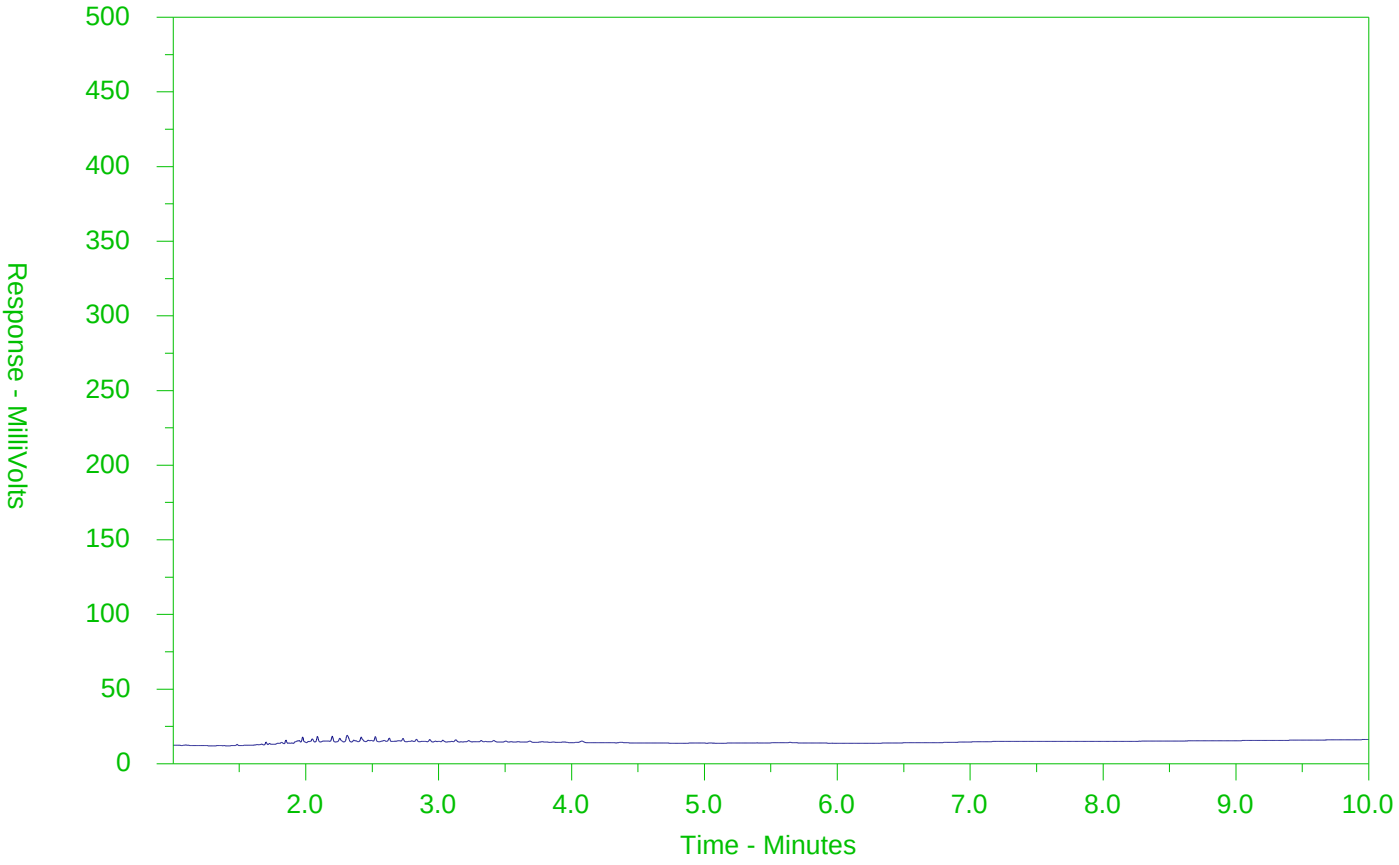
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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

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

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2013933-5
Client Sample ID: MW1 SA5



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

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

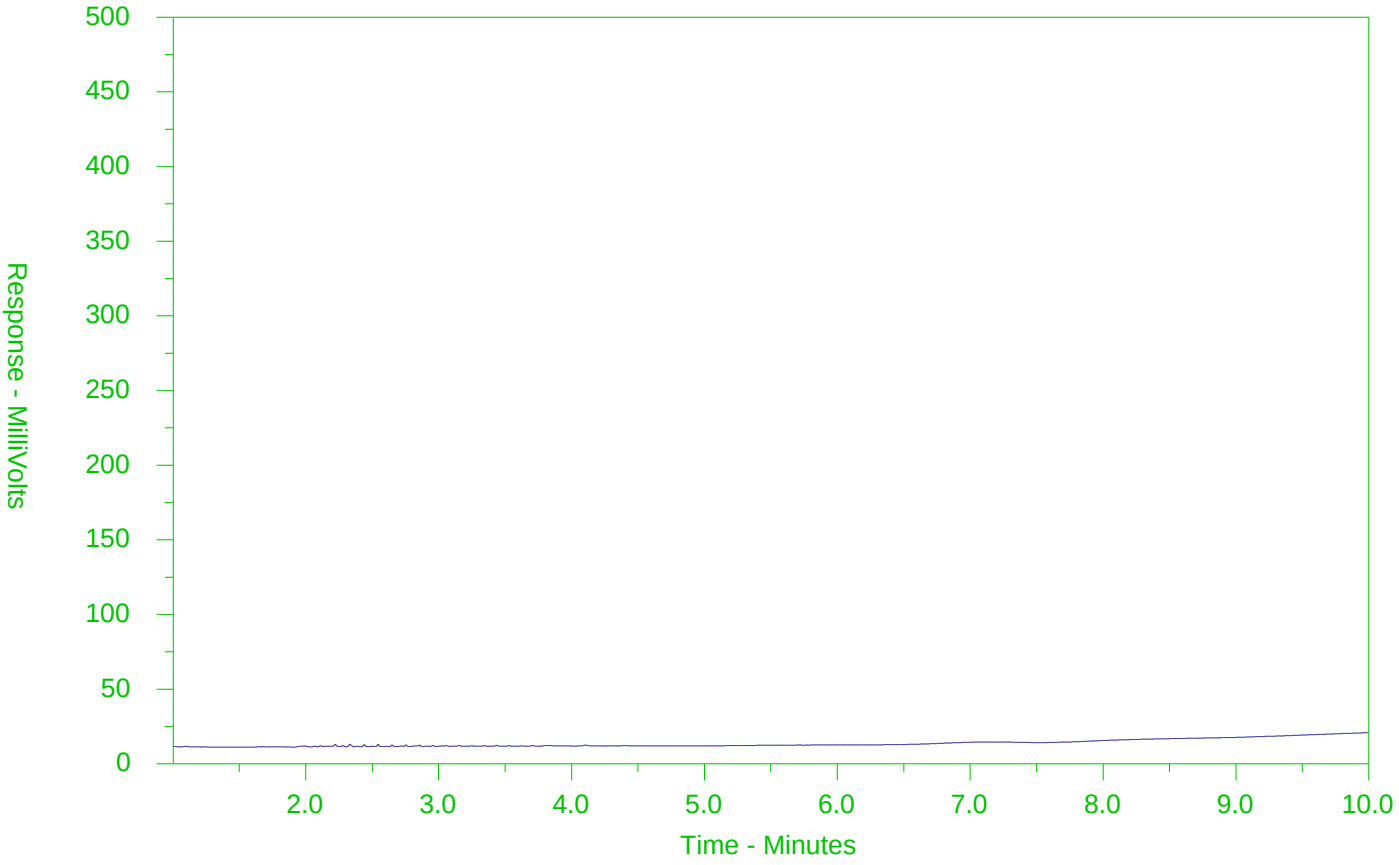
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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

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

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2013933-8
Client Sample ID: MW2 SA1



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

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

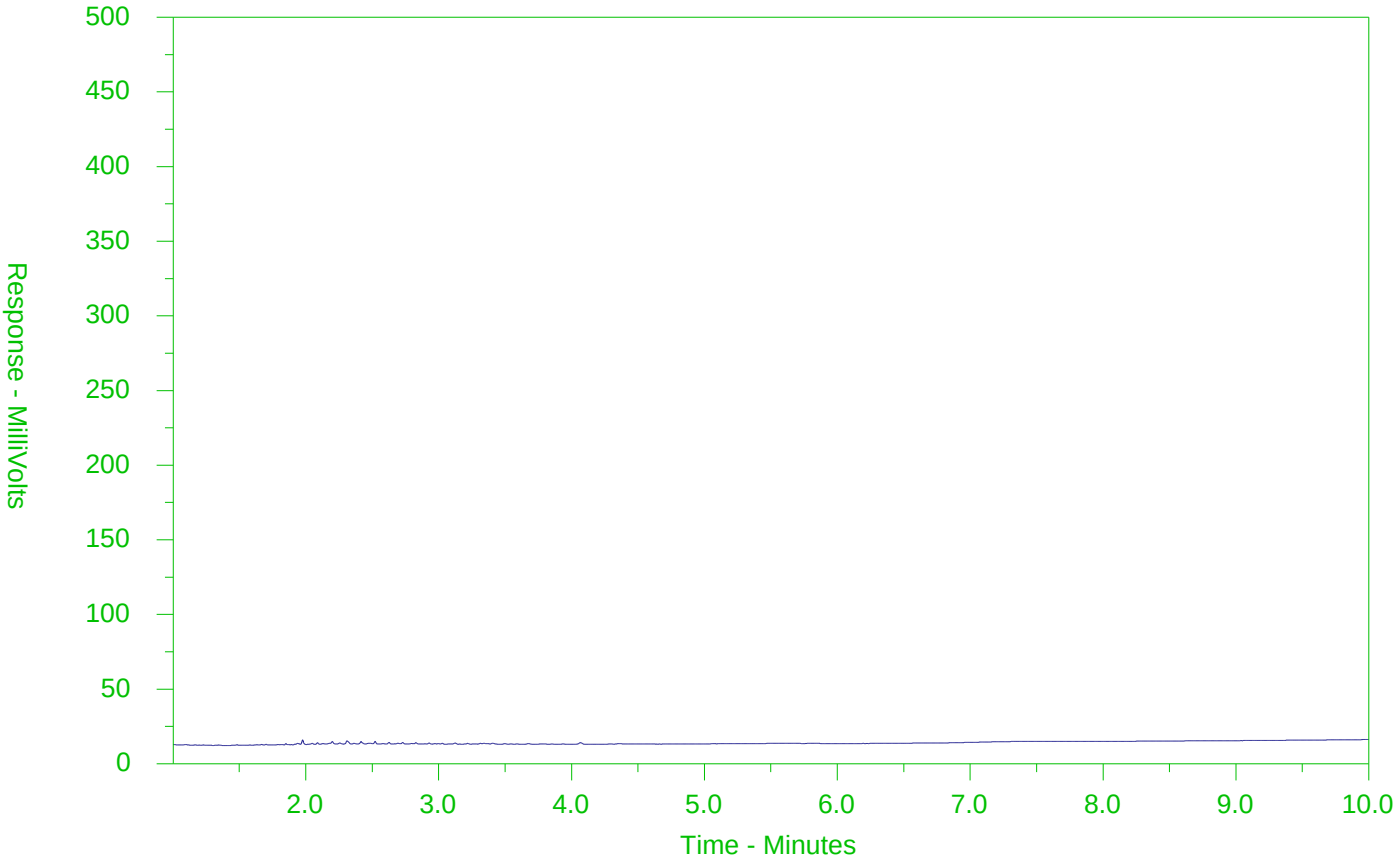
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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

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

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2013933-11
Client Sample ID: MW2 SA4



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

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

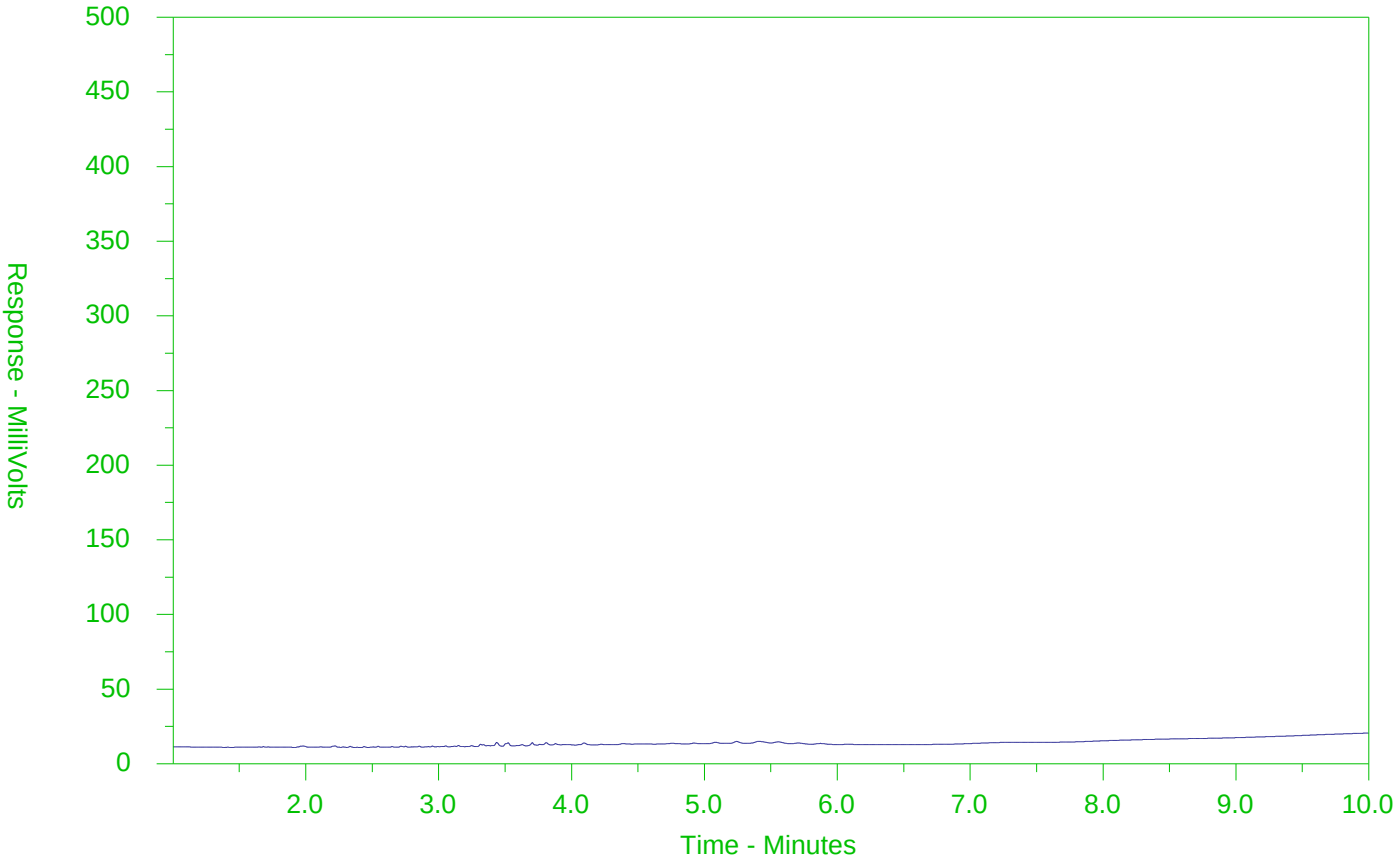
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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

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

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2013933-15
Client Sample ID: MW3 SA1



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

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

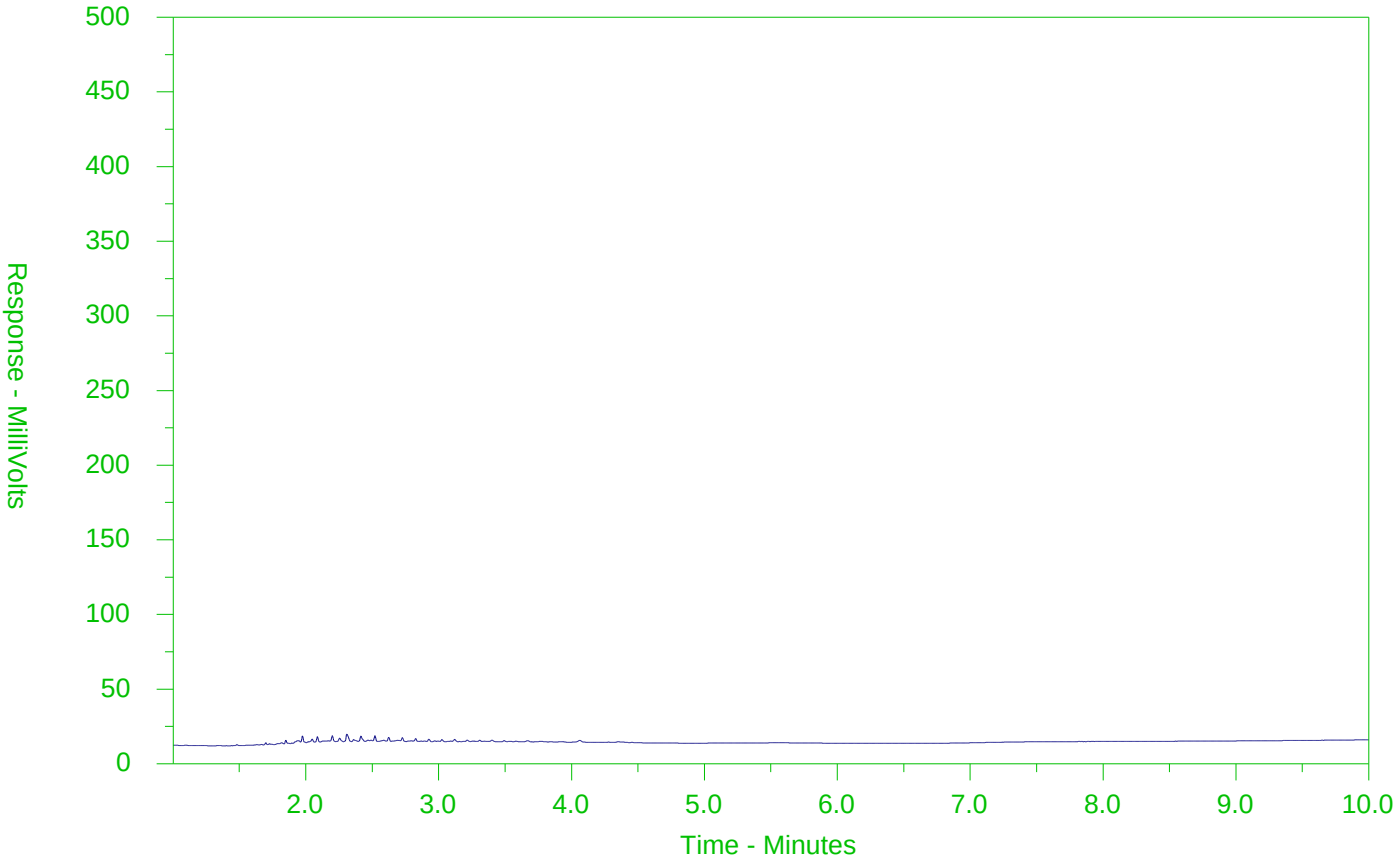
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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

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

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2013933-17
Client Sample ID: MW3 SA3



←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.

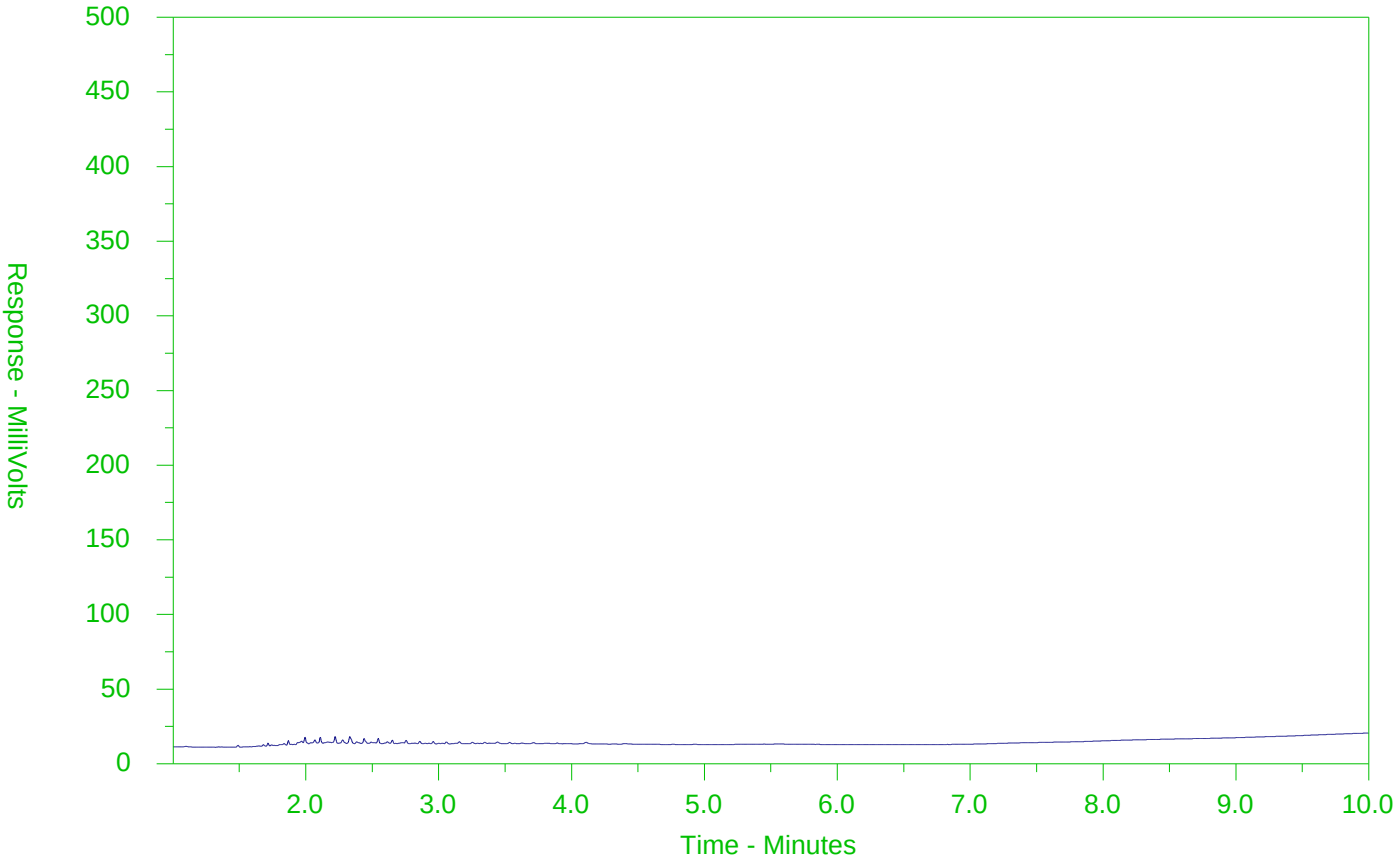
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2013933-20
Client Sample ID: MW10 SA1



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

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

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

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

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

Chain of Custody (COC) / Analytical Request Form

ALS Environmental
www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2013933-COFC

COC Number: 17 - 617028

Page 1 of 2

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:	Trinity Consultants Ontario Inc.	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:	Brian Schuyler	Quality Control (QC) Report with Report [X] YES [ ] NO	PRIORITY (Business Days): 4 day [P4-20%] [ ] / 3 day [P3-25%] [ ] / 2 day [P2-50%] [ ]
Phone:	(416) 391-2527 x60	[ ] 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: [ ] EMAIL [ ] MAIL [ ] FAX	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm
Street:	885 Don Mills Rd., Ste 106	Email 1 or Fax bschuyler@trinityconsultants.com	For tests that can not be performed according to the service level selected, you will be contacted.
City/Province:	Toronto, ON	Email 2	
Postal Code:	M3C 1V9	Email 3	
Invoice To	Same as Report To [X] YES [ ] NO	**Invoice Distribution**	**Analysis Request**
	Copy of Invoice with Report [X] YES [ ] NO	Select Invoice Distribution: [X] EMAIL [ ] MAIL [ ] FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
Company:	Same	Email 1 or Fax bschuyler@trinityconsultants.com	
Contact:		Email 2	

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:		AFE/Cost Center:	PO#
Job #:	177201.0263	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	

ALS Lab Work Order # (lab use only): L2013933 ALS Contact: Mary-Lynn Sampler: B. Schuyler

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	PHC F1-F4/VOCs	PAHs	ICPMS Metals	pH	Hg-LOW										SAMPLES ON HOLD	Sample is hazardous (please provide further details)	NUMBER OF CONTAINERS
1	MW1 SA1	26-10-17	8:00	SOIL	X	X	X	X													4
2	MW1 SA2								X												4
3	MW1 SA3								X												4
4	MW1 SA4								X												4
5	MW1 SA5				X	X	X														4
6	MW1 SA6								X												4
7	MW1 SA7								X												4
8	MW2 SA1				X	X	X	X													4
9	MW2 SA2								X												4
10	MW2 SA3								X												4
11	MW2 SA4				X	X	X														4
12	MW2 SA5		10:00						X												4

Drinking Water (DW) Samples' (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	MOECC Table 1 Res/Park/Inst/Ind/Com/Comm
Are samples for human consumption/ use? [ ] YES [ ] NO	This is for a RSC.

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			
2.6	1.6			3.3	2.3		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: Brian Schuyler	Date: Oct 26/17	Time: 13:25	Received by:	Date: 26/10/17	Time: 13:25	Received by:	Date: Oct 26/17	Time: 17:05

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JULY 2017 FRONT

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

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

ALS Environmental
www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

L2013933-COFC

COC Number: 15 - 613340

Page 2 of 2

Report To	Contact and company name below will appear on the final report
Company:	Trinity Consultants Ontario Inc.
Contact:	Brian Schuyler
Phone:	(416) 391-2827 x.60
	Company address below will appear on the final report
Street:	885 Don Mills Rd., Ste 106
City/Province:	Toronto, ON
Postal Code:	M3C 1V9
Invoice To	Same as Report To: YES NO
	Copy of invoice with Report: YES NO
Company:	Same
Contact:	

Report Format / Distribution	
Select Report Format:	PDF, EXCEL, EDD (DIGITAL)
Quality Control (QC) Report with Report	YES NO
Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	EMAIL, MAIL, FAX
Email 1 or Fax	bschuyler@trinityconsultants.com
Email 2	
Email 3	

Invoice Distribution	
Select Invoice Distribution:	EMAIL, MAIL, FAX
Email 1 or Fax	bschuyler@trinityconsultants.com
Email 2	

Project Information	
ALS Account # / Quote #:	
Job #:	177201.0263
PO / AFE:	
LSD:	

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

ALS Lab Work Order # (lab use only): L2013933

ALS Contact: Mary-Lynn Sampler: B. Schuyler

Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply

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

PRIORITY (Business Days): 4 day [P4]; 3 day [P3]; 2 day [P2]

EMERGENCY: 1 Business day [E1]; Same Day, Weekend or Statutory holiday [E0]

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

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

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	PHC F1-F4/VOCs	PAHs	ICPMS Metals	pH	Hold	VOCs	> 75µm Sieve	Number of Containers
13	MW2 SA6	26-10-17	10:00	SOIL					X			4
14	MW2 SA7								X			4
15	MW3 SA1				X	X	X	X				4
16	MW3 SA2								X			4
17	MW3 SA3				X	X	X					4
18	MW3 SA4								X			4
19	MW3 SA5								X			4
20	MW10 SA1		12:00		X	X	X					4
21	Blank			Methanol Blank						X		2 vials
22	MW2 SA5			SOIL							X	1 Bag

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	MoECC Table 1 Res/Park/Inst/Ind/Com/Coarse
Are samples for human drinking water use? YES NO	This is for a RSC.

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	
2.6	1.6	3.3	2.3

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: Brian Schuyler	Date: Oct.26/17	Time: 13:25	Received by:	Date: 26/10/17	Time: 13:25	Received by:	Date: 04/26/17	Time: 17:05

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

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

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

RW

TRINITY CONSULTANTS INC.
ATTN: BRIAN SCHUYLER
106-885 DON MILLS ROAD
TORONTO ON M3C1V9

Date Received: 03-NOV-17
Report Date: 09-NOV-17 15:10 (MT)
Version: FINAL

Client Phone: 416-391-2527

Certificate of Analysis

Lab Work Order #: L2017630

Project P.O. #: NOT SUBMITTED
Job Reference: 177201.0263
C of C Numbers: 15-613358
Legal Site Desc:

Mary-Lynn Pike
Client Services Supervisor

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits #1
L2017630-1 MW1						
Sampled By: B. SCHUYLER on 02-NOV-17 @ 1						
Matrix: WATER						
Physical Tests						
pH	8.06		0.10	pH units	03-NOV-17	
Dissolved Metals						
Dissolved Metals Filtration Location	FIELD			No Unit	06-NOV-17	
Antimony (Sb)-Dissolved	1.67		0.10	ug/L	06-NOV-17	*1.5
Arsenic (As)-Dissolved	2.69		0.10	ug/L	06-NOV-17	13
Barium (Ba)-Dissolved	85.9		0.10	ug/L	06-NOV-17	610
Beryllium (Be)-Dissolved	<0.10		0.10	ug/L	06-NOV-17	0.5
Boron (B)-Dissolved	466		10	ug/L	06-NOV-17	1700
Cadmium (Cd)-Dissolved	<0.010		0.010	ug/L	06-NOV-17	0.5
Chromium (Cr)-Dissolved	<0.50		0.50	ug/L	06-NOV-17	11
Cobalt (Co)-Dissolved	<0.10		0.10	ug/L	06-NOV-17	3.8
Copper (Cu)-Dissolved	0.63		0.20	ug/L	06-NOV-17	5
Lead (Pb)-Dissolved	<0.050		0.050	ug/L	06-NOV-17	1.9
Molybdenum (Mo)-Dissolved	26.1		0.050	ug/L	06-NOV-17	*23
Nickel (Ni)-Dissolved	<0.50		0.50	ug/L	06-NOV-17	14
Selenium (Se)-Dissolved	0.429		0.050	ug/L	06-NOV-17	5
Silver (Ag)-Dissolved	<0.050		0.050	ug/L	06-NOV-17	0.3
Sodium (Na)-Dissolved	27400		500	ug/L	06-NOV-17	490000
Thallium (Tl)-Dissolved	0.018		0.010	ug/L	06-NOV-17	0.5
Uranium (U)-Dissolved	1.84		0.010	ug/L	06-NOV-17	8.9
Vanadium (V)-Dissolved	2.14		0.50	ug/L	06-NOV-17	3.9
Zinc (Zn)-Dissolved	<1.0		1.0	ug/L	06-NOV-17	160
Volatile Organic Compounds						
Acetone	<30		30	ug/L	07-NOV-17	2700
Benzene	<0.50		0.50	ug/L	07-NOV-17	0.5
Bromodichloromethane	<2.0		2.0	ug/L	07-NOV-17	2
Bromoform	<5.0		5.0	ug/L	07-NOV-17	5
Bromomethane	<0.50		0.50	ug/L	07-NOV-17	0.89
Carbon tetrachloride	<0.20		0.20	ug/L	07-NOV-17	0.2
Chlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5
Dibromochloromethane	<2.0		2.0	ug/L	07-NOV-17	2
Chloroform	<1.0		1.0	ug/L	07-NOV-17	2
1,2-Dibromoethane	<0.20		0.20	ug/L	07-NOV-17	0.2
1,2-Dichlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5
1,3-Dichlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5
1,4-Dichlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5
Dichlorodifluoromethane	<2.0		2.0	ug/L	07-NOV-17	590
1,1-Dichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5
1,2-Dichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5
1,1-Dichloroethylene	<0.50		0.50	ug/L	07-NOV-17	0.5
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L	07-NOV-17	1.6
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L	07-NOV-17	1.6
Methylene Chloride	<5.0		5.0	ug/L	07-NOV-17	5
1,2-Dichloropropane	<0.50		0.50	ug/L	07-NOV-17	0.5
cis-1,3-Dichloropropene	<0.30		0.30	ug/L	07-NOV-17	
trans-1,3-Dichloropropene	<0.30		0.30	ug/L	07-NOV-17	

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T1-Ground Water-All Types of Property Uses

#1: T1-Ground Water-All Types of Property Uses

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits #1
L2017630-1 MW1						
Sampled By: B. SCHUYLER on 02-NOV-17 @ 1						
Matrix: WATER						
Volatile Organic Compounds						
1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L	07-NOV-17	0.5
Ethylbenzene	<0.50		0.50	ug/L	07-NOV-17	0.5
n-Hexane	<0.50		0.50	ug/L	07-NOV-17	5
Methyl Ethyl Ketone	<20		20	ug/L	07-NOV-17	400
Methyl Isobutyl Ketone	<20		20	ug/L	07-NOV-17	640
MTBE	<2.0		2.0	ug/L	07-NOV-17	15
Styrene	<0.50		0.50	ug/L	07-NOV-17	0.5
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L	07-NOV-17	1.1
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5
Tetrachloroethylene	<0.50		0.50	ug/L	07-NOV-17	0.5
Toluene	<0.50		0.50	ug/L	07-NOV-17	0.8
1,1,1-Trichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5
1,1,2-Trichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5
Trichloroethylene	<0.50		0.50	ug/L	07-NOV-17	0.5
Trichlorofluoromethane	<5.0		5.0	ug/L	07-NOV-17	150
Vinyl chloride	<0.50		0.50	ug/L	07-NOV-17	0.5
o-Xylene	<0.30		0.30	ug/L	07-NOV-17	
m+p-Xylenes	<0.40		0.40	ug/L	07-NOV-17	
Xylenes (Total)	<0.50		0.50	ug/L	07-NOV-17	72
Surrogate: 4-Bromofluorobenzene	92.9		70-130	%	07-NOV-17	
Surrogate: 1,4-Difluorobenzene	98.4		70-130	%	07-NOV-17	
Hydrocarbons						
F1 (C6-C10)	<25		25	ug/L	07-NOV-17	420
F1-BTEX	<25		25	ug/L	09-NOV-17	420
F2 (C10-C16)	<100		100	ug/L	08-NOV-17	150
F2-Naphth	<100		100	ug/L	09-NOV-17	
F3 (C16-C34)	<250		250	ug/L	08-NOV-17	500
F3-PAH	<250		250	ug/L	09-NOV-17	
F4 (C34-C50)	<250		250	ug/L	08-NOV-17	500
Total Hydrocarbons (C6-C50)	<370		370	ug/L	09-NOV-17	
Chrom. to baseline at nC50	YES			No Unit	08-NOV-17	
Surrogate: 2-Bromobenzotrifluoride	101.6		60-140	%	08-NOV-17	
Surrogate: 3,4-Dichlorotoluene	75.9		60-140	%	07-NOV-17	
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	<0.020		0.020	ug/L	09-NOV-17	4.1
Acenaphthylene	<0.020		0.020	ug/L	09-NOV-17	1
Anthracene	<0.020		0.020	ug/L	09-NOV-17	0.1
Benzo(a)anthracene	<0.020		0.020	ug/L	09-NOV-17	0.2
Benzo(a)pyrene	<0.010		0.010	ug/L	09-NOV-17	0.01
Benzo(b)fluoranthene	<0.020		0.020	ug/L	09-NOV-17	0.1
Benzo(g,h,i)perylene	<0.020		0.020	ug/L	09-NOV-17	0.2
Benzo(k)fluoranthene	<0.020		0.020	ug/L	09-NOV-17	0.1
Chrysene	<0.020		0.020	ug/L	09-NOV-17	0.1
Dibenzo(ah)anthracene	<0.020		0.020	ug/L	09-NOV-17	0.2
Fluoranthene	0.021		0.020	ug/L	09-NOV-17	0.4
Fluorene	<0.020		0.020	ug/L	09-NOV-17	120

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T1-Ground Water-All Types of Property Uses

#1: T1-Ground Water-All Types of Property Uses

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
L2017630-1	MW1						
Sampled By:	B. SCHUYLER on 02-NOV-17 @ 1						
Matrix:	WATER						#1
Polycyclic Aromatic Hydrocarbons							
	Indeno(1,2,3-cd)pyrene	<0.020		0.020	ug/L	09-NOV-17	0.2
	1+2-Methylnaphthalenes	<0.028		0.028	ug/L	09-NOV-17	2
	1-Methylnaphthalene	<0.020		0.020	ug/L	09-NOV-17	2
	2-Methylnaphthalene	0.026		0.020	ug/L	09-NOV-17	2
	Naphthalene	0.055		0.050	ug/L	09-NOV-17	7
	Phenanthrene	0.026		0.020	ug/L	09-NOV-17	0.1
	Pyrene	<0.020		0.020	ug/L	09-NOV-17	0.2
	Surrogate: d10-Acenaphthene	104.1		60-140	%	09-NOV-17	
	Surrogate: d12-Chrysene	104.2		60-140	%	09-NOV-17	
	Surrogate: d8-Naphthalene	104.6		60-140	%	09-NOV-17	
	Surrogate: d10-Phenanthrene	119.6		60-140	%	09-NOV-17	
L2017630-2	MW3						
Sampled By:	B. SCHUYLER on 02-NOV-17 @ 1						
Matrix:	WATER						#1
Physical Tests							
	pH	8.06		0.10	pH units	03-NOV-17	
Dissolved Metals							
	Dissolved Metals Filtration Location	FIELD			No Unit	06-NOV-17	
	Antimony (Sb)-Dissolved	2.06		0.10	ug/L	06-NOV-17	*1.5
	Arsenic (As)-Dissolved	3.41		0.10	ug/L	06-NOV-17	13
	Barium (Ba)-Dissolved	128		0.10	ug/L	06-NOV-17	610
	Beryllium (Be)-Dissolved	<0.10		0.10	ug/L	06-NOV-17	0.5
	Boron (B)-Dissolved	324		10	ug/L	06-NOV-17	1700
	Cadmium (Cd)-Dissolved	0.014		0.010	ug/L	06-NOV-17	0.5
	Chromium (Cr)-Dissolved	<0.50		0.50	ug/L	06-NOV-17	11
	Cobalt (Co)-Dissolved	0.15		0.10	ug/L	06-NOV-17	3.8
	Copper (Cu)-Dissolved	0.75		0.20	ug/L	06-NOV-17	5
	Lead (Pb)-Dissolved	<0.050		0.050	ug/L	06-NOV-17	1.9
	Molybdenum (Mo)-Dissolved	57.9		0.050	ug/L	06-NOV-17	*23
	Nickel (Ni)-Dissolved	<0.50		0.50	ug/L	06-NOV-17	14
	Selenium (Se)-Dissolved	0.730		0.050	ug/L	06-NOV-17	5
	Silver (Ag)-Dissolved	<0.050		0.050	ug/L	06-NOV-17	0.3
	Sodium (Na)-Dissolved	60300		500	ug/L	06-NOV-17	490000
	Thallium (Tl)-Dissolved	0.027		0.010	ug/L	06-NOV-17	0.5
	Uranium (U)-Dissolved	2.03		0.010	ug/L	06-NOV-17	8.9
	Vanadium (V)-Dissolved	1.95		0.50	ug/L	06-NOV-17	3.9
	Zinc (Zn)-Dissolved	<1.0		1.0	ug/L	06-NOV-17	160
Volatile Organic Compounds							
	Acetone	<30		30	ug/L	07-NOV-17	2700
	Benzene	<0.50		0.50	ug/L	07-NOV-17	0.5
	Bromodichloromethane	<2.0		2.0	ug/L	07-NOV-17	2
	Bromoform	<5.0		5.0	ug/L	07-NOV-17	5
	Bromomethane	<0.50		0.50	ug/L	07-NOV-17	0.89
	Carbon tetrachloride	<0.20		0.20	ug/L	07-NOV-17	0.2
	Chlorobenzene	<0.50		0.50	ug/L	07-NOV-17	

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T1-Ground Water-All Types of Property Uses

#1: T1-Ground Water-All Types of Property Uses

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
L2017630-2	MW3						
Sampled By:	B. SCHUYLER on 02-NOV-17 @ 1						
Matrix:	WATER						#1
Volatile Organic Compounds							
							0.5
	Dibromochloromethane	<2.0		2.0	ug/L	07-NOV-17	2
	Chloroform	<1.0		1.0	ug/L	07-NOV-17	2
	1,2-Dibromoethane	<0.20		0.20	ug/L	07-NOV-17	0.2
	1,2-Dichlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5
	1,3-Dichlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5
	1,4-Dichlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5
	Dichlorodifluoromethane	<2.0		2.0	ug/L	07-NOV-17	590
	1,1-Dichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5
	1,2-Dichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5
	1,1-Dichloroethylene	<0.50		0.50	ug/L	07-NOV-17	0.5
	cis-1,2-Dichloroethylene	<0.50		0.50	ug/L	07-NOV-17	1.6
	trans-1,2-Dichloroethylene	<0.50		0.50	ug/L	07-NOV-17	1.6
	Methylene Chloride	<5.0		5.0	ug/L	07-NOV-17	5
	1,2-Dichloropropane	<0.50		0.50	ug/L	07-NOV-17	0.5
	cis-1,3-Dichloropropene	<0.30		0.30	ug/L	07-NOV-17	
	trans-1,3-Dichloropropene	<0.30		0.30	ug/L	07-NOV-17	
	1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L	07-NOV-17	0.5
	Ethylbenzene	<0.50		0.50	ug/L	07-NOV-17	0.5
	n-Hexane	<0.50		0.50	ug/L	07-NOV-17	5
	Methyl Ethyl Ketone	<20		20	ug/L	07-NOV-17	400
	Methyl Isobutyl Ketone	<20		20	ug/L	07-NOV-17	640
	MTBE	<2.0		2.0	ug/L	07-NOV-17	15
	Styrene	<0.50		0.50	ug/L	07-NOV-17	0.5
	1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L	07-NOV-17	1.1
	1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5
	Tetrachloroethylene	<0.50		0.50	ug/L	07-NOV-17	0.5
	Toluene	<0.50		0.50	ug/L	07-NOV-17	0.8
	1,1,1-Trichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5
	1,1,2-Trichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5
	Trichloroethylene	<0.50		0.50	ug/L	07-NOV-17	0.5
	Trichlorofluoromethane	<5.0		5.0	ug/L	07-NOV-17	150
	Vinyl chloride	<0.50		0.50	ug/L	07-NOV-17	0.5
	o-Xylene	<0.30		0.30	ug/L	07-NOV-17	
	m+p-Xylenes	<0.40		0.40	ug/L	07-NOV-17	
	Xylenes (Total)	<0.50		0.50	ug/L	07-NOV-17	72
	Surrogate: 4-Bromofluorobenzene	92.3		70-130	%	07-NOV-17	
	Surrogate: 1,4-Difluorobenzene	98.1		70-130	%	07-NOV-17	
Hydrocarbons							
	F1 (C6-C10)	<25		25	ug/L	07-NOV-17	420
	F1-BTEX	<25		25	ug/L	09-NOV-17	420
	F2 (C10-C16)	<100		100	ug/L	08-NOV-17	150
	F2-Naphth	<100		100	ug/L	09-NOV-17	
	F3 (C16-C34)	<250		250	ug/L	08-NOV-17	500
	F3-PAH	<250		250	ug/L	09-NOV-17	
	F4 (C34-C50)	<250		250	ug/L	08-NOV-17	500

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T1-Ground Water-All Types of Property Uses

#1: T1-Ground Water-All Types of Property Uses

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
L2017630-2	MW3						
Sampled By:	B. SCHUYLER on 02-NOV-17 @ 1						
Matrix:	WATER						#1
Hydrocarbons							
	Total Hydrocarbons (C6-C50)	<370		370	ug/L	09-NOV-17	
	Chrom. to baseline at nC50	YES			No Unit	08-NOV-17	
	Surrogate: 2-Bromobenzotrifluoride	98.4		60-140	%	08-NOV-17	
	Surrogate: 3,4-Dichlorotoluene	81.0		60-140	%	07-NOV-17	
Polycyclic Aromatic Hydrocarbons							
	Acenaphthene	<0.020		0.020	ug/L	09-NOV-17	4.1
	Acenaphthylene	<0.020		0.020	ug/L	09-NOV-17	1
	Anthracene	<0.020		0.020	ug/L	09-NOV-17	0.1
	Benzo(a)anthracene	<0.020		0.020	ug/L	09-NOV-17	0.2
	Benzo(a)pyrene	<0.010		0.010	ug/L	09-NOV-17	0.01
	Benzo(b)fluoranthene	<0.020		0.020	ug/L	09-NOV-17	0.1
	Benzo(g,h,i)perylene	<0.020		0.020	ug/L	09-NOV-17	0.2
	Benzo(k)fluoranthene	<0.020		0.020	ug/L	09-NOV-17	0.1
	Chrysene	<0.020		0.020	ug/L	09-NOV-17	0.1
	Dibenzo(ah)anthracene	<0.020		0.020	ug/L	09-NOV-17	0.2
	Fluoranthene	<0.020		0.020	ug/L	09-NOV-17	0.4
	Fluorene	<0.020		0.020	ug/L	09-NOV-17	120
	Indeno(1,2,3-cd)pyrene	<0.020		0.020	ug/L	09-NOV-17	0.2
	1+2-Methylnaphthalenes	0.053		0.028	ug/L	09-NOV-17	2
	1-Methylnaphthalene	0.021		0.020	ug/L	09-NOV-17	2
	2-Methylnaphthalene	0.032		0.020	ug/L	09-NOV-17	2
	Naphthalene	<0.050		0.050	ug/L	09-NOV-17	7
	Phenanthrene	0.024		0.020	ug/L	09-NOV-17	0.1
	Pyrene	<0.020		0.020	ug/L	09-NOV-17	0.2
	Surrogate: d10-Acenaphthene	98.7		60-140	%	09-NOV-17	
	Surrogate: d12-Chrysene	102.3		60-140	%	09-NOV-17	
	Surrogate: d8-Naphthalene	111.8		60-140	%	09-NOV-17	
	Surrogate: d10-Phenanthrene	116.0		60-140	%	09-NOV-17	
L2017630-3	MW10						
Sampled By:	B. SCHUYLER on 02-NOV-17 @ 1						
Matrix:	WATER						#1
Physical Tests							
	pH	8.00		0.10	pH units	03-NOV-17	
Dissolved Metals							
	Dissolved Metals Filtration Location	FIELD			No Unit	06-NOV-17	
	Antimony (Sb)-Dissolved	1.99		0.10	ug/L	06-NOV-17	*1.5
	Arsenic (As)-Dissolved	3.41		0.10	ug/L	06-NOV-17	13
	Barium (Ba)-Dissolved	133		0.10	ug/L	06-NOV-17	610
	Beryllium (Be)-Dissolved	<0.10		0.10	ug/L	06-NOV-17	0.5
	Boron (B)-Dissolved	329		10	ug/L	06-NOV-17	1700
	Cadmium (Cd)-Dissolved	<0.020	DLM	0.020	ug/L	06-NOV-17	0.5
	Chromium (Cr)-Dissolved	<0.50		0.50	ug/L	06-NOV-17	11
	Cobalt (Co)-Dissolved	0.16		0.10	ug/L	06-NOV-17	3.8
	Copper (Cu)-Dissolved	0.76		0.20	ug/L	06-NOV-17	5
	Lead (Pb)-Dissolved	<0.050		0.050	ug/L	06-NOV-17	1.9

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T1-Ground Water-All Types of Property Uses

#1: T1-Ground Water-All Types of Property Uses

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits #1
L2017630-3	MW10						
Sampled By:	B. SCHUYLER on 02-NOV-17 @ 1						
Matrix:	WATER						
Dissolved Metals							
	Molybdenum (Mo)-Dissolved	60.9		0.050	ug/L	06-NOV-17	*23
	Nickel (Ni)-Dissolved	<0.50		0.50	ug/L	06-NOV-17	14
	Selenium (Se)-Dissolved	0.726		0.050	ug/L	06-NOV-17	5
	Silver (Ag)-Dissolved	<0.050		0.050	ug/L	06-NOV-17	0.3
	Sodium (Na)-Dissolved	56800		500	ug/L	06-NOV-17	490000
	Thallium (Tl)-Dissolved	0.028		0.010	ug/L	06-NOV-17	0.5
	Uranium (U)-Dissolved	2.03		0.010	ug/L	06-NOV-17	8.9
	Vanadium (V)-Dissolved	1.92		0.50	ug/L	06-NOV-17	3.9
	Zinc (Zn)-Dissolved	<1.0		1.0	ug/L	06-NOV-17	160
Volatile Organic Compounds							
	Acetone	<30		30	ug/L	07-NOV-17	2700
	Benzene	<0.50		0.50	ug/L	07-NOV-17	0.5
	Bromodichloromethane	<2.0		2.0	ug/L	07-NOV-17	2
	Bromoform	<5.0		5.0	ug/L	07-NOV-17	5
	Bromomethane	<0.50		0.50	ug/L	07-NOV-17	0.89
	Carbon tetrachloride	<0.20		0.20	ug/L	07-NOV-17	0.2
	Chlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5
	Dibromochloromethane	<2.0		2.0	ug/L	07-NOV-17	2
	Chloroform	<1.0		1.0	ug/L	07-NOV-17	2
	1,2-Dibromoethane	<0.20		0.20	ug/L	07-NOV-17	0.2
	1,2-Dichlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5
	1,3-Dichlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5
	1,4-Dichlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5
	Dichlorodifluoromethane	<2.0		2.0	ug/L	07-NOV-17	590
	1,1-Dichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5
	1,2-Dichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5
	1,1-Dichloroethylene	<0.50		0.50	ug/L	07-NOV-17	0.5
	cis-1,2-Dichloroethylene	<0.50		0.50	ug/L	07-NOV-17	1.6
	trans-1,2-Dichloroethylene	<0.50		0.50	ug/L	07-NOV-17	1.6
	Methylene Chloride	<5.0		5.0	ug/L	07-NOV-17	5
	1,2-Dichloropropane	<0.50		0.50	ug/L	07-NOV-17	0.5
	cis-1,3-Dichloropropene	<0.30		0.30	ug/L	07-NOV-17	
	trans-1,3-Dichloropropene	<0.30		0.30	ug/L	07-NOV-17	
	1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L	07-NOV-17	0.5
	Ethylbenzene	<0.50		0.50	ug/L	07-NOV-17	0.5
	n-Hexane	<0.50		0.50	ug/L	07-NOV-17	5
	Methyl Ethyl Ketone	<20		20	ug/L	07-NOV-17	400
	Methyl Isobutyl Ketone	<20		20	ug/L	07-NOV-17	640
	MTBE	<2.0		2.0	ug/L	07-NOV-17	15
	Styrene	<0.50		0.50	ug/L	07-NOV-17	0.5
	1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L	07-NOV-17	1.1
	1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5
	Tetrachloroethylene	<0.50		0.50	ug/L	07-NOV-17	0.5
	Toluene	<0.50		0.50	ug/L	07-NOV-17	0.8
	1,1,1-Trichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5
	1,1,2-Trichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T1-Ground Water-All Types of Property Uses

#1: T1-Ground Water-All Types of Property Uses

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits #1
L2017630-3 MW10						
Sampled By: B. SCHUYLER on 02-NOV-17 @ 1						
Matrix: WATER						
Volatile Organic Compounds						
Trichloroethylene	<0.50		0.50	ug/L	07-NOV-17	0.5
Trichlorofluoromethane	<5.0		5.0	ug/L	07-NOV-17	150
Vinyl chloride	<0.50		0.50	ug/L	07-NOV-17	0.5
o-Xylene	<0.30		0.30	ug/L	07-NOV-17	
m+p-Xylenes	<0.40		0.40	ug/L	07-NOV-17	
Xylenes (Total)	<0.50		0.50	ug/L	07-NOV-17	72
Surrogate: 4-Bromofluorobenzene	92.3		70-130	%	07-NOV-17	
Surrogate: 1,4-Difluorobenzene	98.2		70-130	%	07-NOV-17	
Hydrocarbons						
F1 (C6-C10)	<25		25	ug/L	07-NOV-17	420
F1-BTEX	<25		25	ug/L	09-NOV-17	420
F2 (C10-C16)	<100		100	ug/L	08-NOV-17	150
F2-Naphth	<100		100	ug/L	09-NOV-17	
F3 (C16-C34)	<250		250	ug/L	08-NOV-17	500
F3-PAH	<250		250	ug/L	09-NOV-17	
F4 (C34-C50)	<250		250	ug/L	08-NOV-17	500
Total Hydrocarbons (C6-C50)	<370		370	ug/L	09-NOV-17	
Chrom. to baseline at nC50	YES			No Unit	08-NOV-17	
Surrogate: 2-Bromobenzotrifluoride	101.3		60-140	%	08-NOV-17	
Surrogate: 3,4-Dichlorotoluene	77.1		60-140	%	07-NOV-17	
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	<0.020		0.020	ug/L	09-NOV-17	4.1
Acenaphthylene	<0.020		0.020	ug/L	09-NOV-17	1
Anthracene	<0.020		0.020	ug/L	09-NOV-17	0.1
Benzo(a)anthracene	<0.020		0.020	ug/L	09-NOV-17	0.2
Benzo(a)pyrene	<0.010		0.010	ug/L	09-NOV-17	0.01
Benzo(b)fluoranthene	<0.020		0.020	ug/L	09-NOV-17	0.1
Benzo(g,h,i)perylene	<0.020		0.020	ug/L	09-NOV-17	0.2
Benzo(k)fluoranthene	<0.020		0.020	ug/L	09-NOV-17	0.1
Chrysene	<0.020		0.020	ug/L	09-NOV-17	0.1
Dibenzo(ah)anthracene	<0.020		0.020	ug/L	09-NOV-17	0.2
Fluoranthene	<0.020		0.020	ug/L	09-NOV-17	0.4
Fluorene	<0.020		0.020	ug/L	09-NOV-17	120
Indeno(1,2,3-cd)pyrene	<0.020		0.020	ug/L	09-NOV-17	0.2
1+2-Methylnaphthalenes	0.028		0.028	ug/L	09-NOV-17	2
1-Methylnaphthalene	<0.020		0.020	ug/L	09-NOV-17	2
2-Methylnaphthalene	0.028		0.020	ug/L	09-NOV-17	2
Naphthalene	<0.050		0.050	ug/L	09-NOV-17	7
Phenanthrene	0.023		0.020	ug/L	09-NOV-17	0.1
Pyrene	<0.020		0.020	ug/L	09-NOV-17	0.2
Surrogate: d10-Acenaphthene	101.3		60-140	%	09-NOV-17	
Surrogate: d12-Chrysene	100.8		60-140	%	09-NOV-17	
Surrogate: d8-Naphthalene	95.7		60-140	%	09-NOV-17	
Surrogate: d10-Phenanthrene	119.2		60-140	%	09-NOV-17	

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T1-Ground Water-All Types of Property Uses

#1: T1-Ground Water-All Types of Property Uses

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits			
L2017630-4	TRIP BLANK									
Sampled By:	B. SCHUYLER on 02-NOV-17 @ 1									
Matrix:	WATER						#1			
Volatile Organic Compounds										
	Acetone	<30		30	ug/L	07-NOV-17	2700			
	Benzene	<0.50		0.50	ug/L	07-NOV-17	0.5			
	Bromodichloromethane	<2.0		2.0	ug/L	07-NOV-17	2			
	Bromoform	<5.0		5.0	ug/L	07-NOV-17	5			
	Bromomethane	<0.50		0.50	ug/L	07-NOV-17	0.89			
	Carbon tetrachloride	<0.20		0.20	ug/L	07-NOV-17	0.2			
	Chlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5			
	Dibromochloromethane	<2.0		2.0	ug/L	07-NOV-17	2			
	Chloroform	<1.0		1.0	ug/L	07-NOV-17	2			
	1,2-Dibromoethane	<0.20		0.20	ug/L	07-NOV-17	0.2			
	1,2-Dichlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5			
	1,3-Dichlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5			
	1,4-Dichlorobenzene	<0.50		0.50	ug/L	07-NOV-17	0.5			
	Dichlorodifluoromethane	<2.0		2.0	ug/L	07-NOV-17	590			
	1,1-Dichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5			
	1,2-Dichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5			
	1,1-Dichloroethylene	<0.50		0.50	ug/L	07-NOV-17	0.5			
	cis-1,2-Dichloroethylene	<0.50		0.50	ug/L	07-NOV-17	1.6			
	trans-1,2-Dichloroethylene	<0.50		0.50	ug/L	07-NOV-17	1.6			
	Methylene Chloride	<5.0		5.0	ug/L	07-NOV-17	5			
	1,2-Dichloropropane	<0.50		0.50	ug/L	07-NOV-17	0.5			
	cis-1,3-Dichloropropene	<0.30		0.30	ug/L	07-NOV-17				
	trans-1,3-Dichloropropene	<0.30		0.30	ug/L	07-NOV-17				
	1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L	07-NOV-17	0.5			
	Ethylbenzene	<0.50		0.50	ug/L	07-NOV-17	0.5			
	n-Hexane	<0.50		0.50	ug/L	07-NOV-17	5			
	Methyl Ethyl Ketone	<20		20	ug/L	07-NOV-17	400			
	Methyl Isobutyl Ketone	<20		20	ug/L	07-NOV-17	640			
	MTBE	<2.0		2.0	ug/L	07-NOV-17	15			
	Styrene	<0.50		0.50	ug/L	07-NOV-17	0.5			
	1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L	07-NOV-17	1.1			
	1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5			
	Tetrachloroethylene	<0.50		0.50	ug/L	07-NOV-17	0.5			
	Toluene	<0.50		0.50	ug/L	07-NOV-17	0.8			
	1,1,1-Trichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5			
	1,1,2-Trichloroethane	<0.50		0.50	ug/L	07-NOV-17	0.5			
	Trichloroethylene	<0.50		0.50	ug/L	07-NOV-17	0.5			
	Trichlorofluoromethane	<5.0		5.0	ug/L	07-NOV-17	150			
	Vinyl chloride	<0.50		0.50	ug/L	07-NOV-17	0.5			
	o-Xylene	<0.30		0.30	ug/L	07-NOV-17				
	m+p-Xylenes	<0.40		0.40	ug/L	07-NOV-17				
	Xylenes (Total)	<0.50		0.50	ug/L	07-NOV-17	72			
	Surrogate: 4-Bromofluorobenzene	93.1		70-130	%	07-NOV-17				
	Surrogate: 1,4-Difluorobenzene	98.5		70-130	%	07-NOV-17				

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T1-Ground Water-All Types of Property Uses

#1: T1-Ground Water-All Types of Property Uses

Reference Information

Sample Parameter Qualifier key listed:

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

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
F1-F4-511-CALC-WT	Water	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-L

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

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

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

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

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

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

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

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

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

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

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

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

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

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

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using GC/MS. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

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

PH-WT	Water	pH	APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011). Holdtime for samples under this regulation is 28 days

VOC-1,3-DCP-CALC-WT	Water	Regulation 153 VOCs	SW8260B/SW8270C

Reference Information

VOC-511-HS-WT	Water	VOC by GCMS HS O.Reg 153/04 (July 2011)	SW846 8260

Liquid samples are analyzed by headspace GC/MSD.

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

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

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

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

Chain of Custody numbers:

15-613358

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

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.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information.

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	**Water**							
Batch R3874862								
WG2655326-4 DUP		**WG2655326-3**						
F1 (C6-C10)		<25	<25	RPD-NA	ug/L	N/A	30	07-NOV-17
WG2655326-1 LCS								
F1 (C6-C10)			94.9		%		80-120	06-NOV-17
WG2655326-2 MB								
F1 (C6-C10)			<25		ug/L		25	06-NOV-17
Surrogate: 3,4-Dichlorotoluene			84.2		%		60-140	06-NOV-17
WG2655326-5 MS		**WG2655326-3**						
F1 (C6-C10)			90.5		%		60-140	07-NOV-17
F2-F4-511-WT	**Water**							
Batch R3879450								
WG2659125-2 LCS								
F2 (C10-C16)			99.2		%		70-130	08-NOV-17
F3 (C16-C34)			103.3		%		70-130	08-NOV-17
F4 (C34-C50)			103.9		%		70-130	08-NOV-17
WG2659125-3 LCSD		**WG2659125-2**						
F2 (C10-C16)		99.2	101.9		%	2.6	50	08-NOV-17
F3 (C16-C34)		103.3	109.0		%	5.3	50	08-NOV-17
F4 (C34-C50)		103.9	111.8		%	7.3	50	08-NOV-17
WG2659125-1 MB								
F2 (C10-C16)			<100		ug/L		100	08-NOV-17
F3 (C16-C34)			<250		ug/L		250	08-NOV-17
F4 (C34-C50)			<250		ug/L		250	08-NOV-17
Surrogate: 2-Bromobenzotrifluoride			101.1		%		60-140	08-NOV-17
MET-D-UG/L-MS-WT	**Water**							
Batch R3878040								
WG2657250-4 DUP		**WG2657250-3**						
Antimony (Sb)-Dissolved		1.67	1.66		ug/L	0.8	20	06-NOV-17
Arsenic (As)-Dissolved		2.69	2.69		ug/L	0.1	20	06-NOV-17
Barium (Ba)-Dissolved		85.9	93.1		ug/L	8.0	20	06-NOV-17
Beryllium (Be)-Dissolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	06-NOV-17
Boron (B)-Dissolved		466	461		ug/L	1.1	20	06-NOV-17
Cadmium (Cd)-Dissolved		<0.010	<0.010	RPD-NA	ug/L	N/A	20	06-NOV-17
Chromium (Cr)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	06-NOV-17
Cobalt (Co)-Dissolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	06-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	**Water**							
Batch R3878040								
WG2657250-4 DUP		**WG2657250-3**						
Copper (Cu)-Dissolved		0.63	0.64		ug/L	0.9	20	06-NOV-17
Lead (Pb)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	06-NOV-17
Molybdenum (Mo)-Dissolved		26.1	26.6		ug/L	2.1	20	06-NOV-17
Nickel (Ni)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	06-NOV-17
Selenium (Se)-Dissolved		0.429	0.467		ug/L	8.6	20	06-NOV-17
Silver (Ag)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	06-NOV-17
Sodium (Na)-Dissolved		27400	28200		ug/L	2.8	20	06-NOV-17
Thallium (Tl)-Dissolved		0.018	0.015		ug/L	14	20	06-NOV-17
Uranium (U)-Dissolved		1.84	1.89		ug/L	2.8	20	06-NOV-17
Vanadium (V)-Dissolved		2.14	2.12		ug/L	0.9	20	06-NOV-17
Zinc (Zn)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	06-NOV-17
WG2657250-2 LCS								
Antimony (Sb)-Dissolved			99.5		%		80-120	06-NOV-17
Arsenic (As)-Dissolved			102.0		%		80-120	06-NOV-17
Barium (Ba)-Dissolved			102.2		%		80-120	06-NOV-17
Beryllium (Be)-Dissolved			93.7		%		80-120	06-NOV-17
Boron (B)-Dissolved			92.7		%		80-120	06-NOV-17
Cadmium (Cd)-Dissolved			99.2		%		80-120	06-NOV-17
Chromium (Cr)-Dissolved			104.7		%		80-120	06-NOV-17
Cobalt (Co)-Dissolved			99.1		%		80-120	06-NOV-17
Copper (Cu)-Dissolved			101.9		%		80-120	06-NOV-17
Lead (Pb)-Dissolved			101.6		%		80-120	06-NOV-17
Molybdenum (Mo)-Dissolved			97.7		%		80-120	06-NOV-17
Nickel (Ni)-Dissolved			97.1		%		80-120	06-NOV-17
Selenium (Se)-Dissolved			98.4		%		80-120	06-NOV-17
Silver (Ag)-Dissolved			97.0		%		80-120	06-NOV-17
Sodium (Na)-Dissolved			100.4		%		80-120	06-NOV-17
Thallium (Tl)-Dissolved			96.0		%		80-120	06-NOV-17
Uranium (U)-Dissolved			102.5		%		80-120	06-NOV-17
Vanadium (V)-Dissolved			103.8		%		80-120	06-NOV-17
Zinc (Zn)-Dissolved			99.2		%		80-120	06-NOV-17
WG2657250-1 MB								
Antimony (Sb)-Dissolved			<0.10		ug/L		0.1	06-NOV-17
Arsenic (As)-Dissolved			<0.10		ug/L		0.1	

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	**Water**							
Batch	**R3878040**							
WG2657250-1	**MB**							
Arsenic (As)-Dissolved			<0.10		ug/L		0.1	06-NOV-17
Barium (Ba)-Dissolved			<0.10		ug/L		0.1	06-NOV-17
Beryllium (Be)-Dissolved			<0.10		ug/L		0.1	06-NOV-17
Boron (B)-Dissolved			<10		ug/L		10	06-NOV-17
Cadmium (Cd)-Dissolved			<0.010		ug/L		0.01	06-NOV-17
Chromium (Cr)-Dissolved			<0.50		ug/L		0.5	06-NOV-17
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	06-NOV-17
Copper (Cu)-Dissolved			<0.20		ug/L		0.2	06-NOV-17
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	06-NOV-17
Molybdenum (Mo)-Dissolved			<0.050		ug/L		0.05	06-NOV-17
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	06-NOV-17
Selenium (Se)-Dissolved			<0.050		ug/L		0.05	06-NOV-17
Silver (Ag)-Dissolved			<0.050		ug/L		0.05	06-NOV-17
Sodium (Na)-Dissolved			<500		ug/L		500	06-NOV-17
Thallium (Tl)-Dissolved			<0.010		ug/L		0.01	06-NOV-17
Uranium (U)-Dissolved			<0.010		ug/L		0.01	06-NOV-17
Vanadium (V)-Dissolved			<0.50		ug/L		0.5	06-NOV-17
Zinc (Zn)-Dissolved			<1.0		ug/L		1	06-NOV-17
WG2657250-5	**MS**	**WG2657250-3**						
Antimony (Sb)-Dissolved			94.9		%		70-130	06-NOV-17
Arsenic (As)-Dissolved			105.8		%		70-130	06-NOV-17
Barium (Ba)-Dissolved			N/A	MS-B	%		-	06-NOV-17
Beryllium (Be)-Dissolved			93.7		%		70-130	06-NOV-17
Boron (B)-Dissolved			N/A	MS-B	%		-	06-NOV-17
Cadmium (Cd)-Dissolved			97.7		%		70-130	06-NOV-17
Chromium (Cr)-Dissolved			101.7		%		70-130	06-NOV-17
Cobalt (Co)-Dissolved			98.3		%		70-130	06-NOV-17
Copper (Cu)-Dissolved			95.8		%		70-130	06-NOV-17
Lead (Pb)-Dissolved			97.3		%		70-130	06-NOV-17
Molybdenum (Mo)-Dissolved			N/A	MS-B	%		-	06-NOV-17
Nickel (Ni)-Dissolved			94.1		%		70-130	06-NOV-17
Selenium (Se)-Dissolved			104.7		%		70-130	06-NOV-17
Silver (Ag)-Dissolved			77.6		%		70-130	08-NOV-17
Sodium (Na)-Dissolved			N/A	MS-B	%		-	06-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	**Water**							
Batch R3878040								
WG2657250-5 MS		**WG2657250-3**						
Thallium (Tl)-Dissolved			96.9		%		70-130	06-NOV-17
Uranium (U)-Dissolved			N/A	MS-B	%		-	06-NOV-17
Vanadium (V)-Dissolved			100.8		%		70-130	06-NOV-17
Zinc (Zn)-Dissolved			98.8		%		70-130	06-NOV-17
PAH-511-WT	**Water**							
Batch R3879778								
WG2659125-2 LCS								
1-Methylnaphthalene			73.8		%		50-140	09-NOV-17
2-Methylnaphthalene			76.2		%		50-140	09-NOV-17
Acenaphthene			87.6		%		50-140	09-NOV-17
Acenaphthylene			89.1		%		50-140	09-NOV-17
Anthracene			92.0		%		50-140	09-NOV-17
Benzo(a)anthracene			93.9		%		50-140	09-NOV-17
Benzo(a)pyrene			90.5		%		50-140	09-NOV-17
Benzo(b)fluoranthene			76.6		%		50-140	09-NOV-17
Benzo(g,h,i)perylene			91.8		%		50-140	09-NOV-17
Benzo(k)fluoranthene			83.9		%		50-140	09-NOV-17
Chrysene			91.9		%		50-140	09-NOV-17
Dibenzo(ah)anthracene			91.6		%		50-140	09-NOV-17
Fluoranthene			98.4		%		50-140	09-NOV-17
Fluorene			93.1		%		50-140	09-NOV-17
Indeno(1,2,3-cd)pyrene			100.5		%		50-140	09-NOV-17
Naphthalene			79.7		%		50-140	09-NOV-17
Phenanthrene			96.1		%		50-140	09-NOV-17
Pyrene			97.0		%		50-140	09-NOV-17
WG2659125-3 LCSD		**WG2659125-2**						
1-Methylnaphthalene		73.8	76.9		%	4.0	50	09-NOV-17
2-Methylnaphthalene		76.2	81.2		%	6.3	50	09-NOV-17
Acenaphthene		87.6	86.2		%	1.7	50	09-NOV-17
Acenaphthylene		89.1	90.7		%	1.8	50	09-NOV-17
Anthracene		92.0	93.4		%	1.6	50	09-NOV-17
Benzo(a)anthracene		93.9	96.8		%	3.0	50	09-NOV-17
Benzo(a)pyrene		90.5	94.1		%	3.9	50	09-NOV-17
Benzo(b)fluoranthene		76.6	76.7		%	0.1	50	09-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Water**							
Batch R3879778								
WG2659125-3 LCSD		**WG2659125-2**						
Benzo(g,h,i)perylene		91.8	92.6		%	1.0	50	09-NOV-17
Benzo(k)fluoranthene		83.9	87.1		%	3.7	50	09-NOV-17
Chrysene		91.9	99.1		%	7.5	50	09-NOV-17
Dibenzo(ah)anthracene		91.6	98.1		%	6.8	50	09-NOV-17
Fluoranthene		98.4	93.3		%	5.3	50	09-NOV-17
Fluorene		93.1	95.5		%	2.5	50	09-NOV-17
Indeno(1,2,3-cd)pyrene		100.5	100.7		%	0.2	50	09-NOV-17
Naphthalene		79.7	79.6		%	0.1	50	09-NOV-17
Phenanthrene		96.1	94.3		%	1.8	50	09-NOV-17
Pyrene		97.0	93.5		%	3.6	50	09-NOV-17
WG2659125-1 MB								
1-Methylnaphthalene			<0.020		ug/L		0.02	09-NOV-17
2-Methylnaphthalene			<0.020		ug/L		0.02	09-NOV-17
Acenaphthene			<0.020		ug/L		0.02	09-NOV-17
Acenaphthylene			<0.020		ug/L		0.02	09-NOV-17
Anthracene			<0.020		ug/L		0.02	09-NOV-17
Benzo(a)anthracene			<0.020		ug/L		0.02	09-NOV-17
Benzo(a)pyrene			<0.010		ug/L		0.01	09-NOV-17
Benzo(b)fluoranthene			<0.020		ug/L		0.02	09-NOV-17
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	09-NOV-17
Benzo(k)fluoranthene			<0.020		ug/L		0.02	09-NOV-17
Chrysene			<0.020		ug/L		0.02	09-NOV-17
Dibenzo(ah)anthracene			<0.020		ug/L		0.02	09-NOV-17
Fluoranthene			<0.020		ug/L		0.02	09-NOV-17
Fluorene			<0.020		ug/L		0.02	09-NOV-17
Indeno(1,2,3-cd)pyrene			<0.020		ug/L		0.02	09-NOV-17
Naphthalene			<0.050		ug/L		0.05	09-NOV-17
Phenanthrene			<0.020		ug/L		0.02	09-NOV-17
Pyrene			<0.020		ug/L		0.02	09-NOV-17
Surrogate: d8-Naphthalene			108.5		%		60-140	09-NOV-17
Surrogate: d10-Phenanthrene			128.1		%		60-140	09-NOV-17
Surrogate: d12-Chrysene			113.9		%		60-140	09-NOV-17
Surrogate: d10-Acenaphthene			107.5		%		60-140	09-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-WT	**Water**							
Batch R3874201								
WG2656040-8 DUP		**WG2656040-7**						
pH		6.32	6.31	J	pH units	0.01	0.2	03-NOV-17
WG2656040-6 LCS								
pH			6.99		pH units		6.9-7.1	03-NOV-17
VOC-511-HS-WT	**Water**							
Batch R3874862								
WG2655326-4 DUP		**WG2655326-3**						
1,1,1,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
1,1,2,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	07-NOV-17
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	07-NOV-17
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	07-NOV-17
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	07-NOV-17
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	07-NOV-17
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	07-NOV-17
cis-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
cis-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	07-NOV-17
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	07-NOV-17
Dichlorodifluoromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	07-NOV-17
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	07-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R3874862								
WG2655326-4 DUP		**WG2655326-3**						
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	07-NOV-17
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	07-NOV-17
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	07-NOV-17
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	07-NOV-17
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	07-NOV-17
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
trans-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
trans-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	07-NOV-17
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	07-NOV-17
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-NOV-17
WG2655326-1 LCS								
1,1,1,2-Tetrachloroethane			99.4		%		70-130	06-NOV-17
1,1,2,2-Tetrachloroethane			79.0		%		70-130	06-NOV-17
1,1,1-Trichloroethane			106.5		%		70-130	06-NOV-17
1,1,2-Trichloroethane			92.6		%		70-130	06-NOV-17
1,1-Dichloroethane			104.1		%		70-130	06-NOV-17
1,1-Dichloroethylene			102.1		%		70-130	06-NOV-17
1,2-Dibromoethane			87.5		%		70-130	06-NOV-17
1,2-Dichlorobenzene			99.2		%		70-130	06-NOV-17
1,2-Dichloroethane			93.1		%		70-130	06-NOV-17
1,2-Dichloropropane			98.0		%		70-130	06-NOV-17
1,3-Dichlorobenzene			104.0		%		70-130	06-NOV-17
1,4-Dichlorobenzene			106.0		%		70-130	06-NOV-17
Acetone			95.5		%		60-140	06-NOV-17
Benzene			100.4		%		70-130	06-NOV-17
Bromodichloromethane			92.6		%		70-130	06-NOV-17
Bromoform			85.4		%		70-130	06-NOV-17
Bromomethane			103.4		%		60-140	06-NOV-17
Carbon tetrachloride			107.1		%		70-130	06-NOV-17
Chlorobenzene			100.6		%		70-130	06-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R3874862								
WG2655326-1 LCS								
Chloroform			101.3		%		70-130	06-NOV-17
cis-1,2-Dichloroethylene			90.1		%		70-130	06-NOV-17
cis-1,3-Dichloropropene			88.0		%		70-130	06-NOV-17
Dibromochloromethane			95.5		%		70-130	06-NOV-17
Dichlorodifluoromethane			108.6		%		50-140	06-NOV-17
Ethylbenzene			104.8		%		70-130	06-NOV-17
n-Hexane			122.1		%		70-130	06-NOV-17
m+p-Xylenes			107.7		%		70-130	06-NOV-17
Methyl Ethyl Ketone			83.0		%		60-140	06-NOV-17
Methyl Isobutyl Ketone			73.7		%		60-140	06-NOV-17
Methylene Chloride			101.3		%		70-130	06-NOV-17
MTBE			97.7		%		70-130	06-NOV-17
o-Xylene			100.8		%		70-130	06-NOV-17
Styrene			93.3		%		70-130	06-NOV-17
Tetrachloroethylene			109.0		%		70-130	06-NOV-17
Toluene			99.7		%		70-130	06-NOV-17
trans-1,2-Dichloroethylene			107.8		%		70-130	06-NOV-17
trans-1,3-Dichloropropene			87.9		%		70-130	06-NOV-17
Trichloroethylene			105.3		%		70-130	06-NOV-17
Trichlorofluoromethane			113.4		%		60-140	06-NOV-17
Vinyl chloride			109.8		%		60-140	06-NOV-17
WG2655326-2 MB								
1,1,1,2-Tetrachloroethane			<0.50		ug/L		0.5	06-NOV-17
1,1,2,2-Tetrachloroethane			<0.50		ug/L		0.5	06-NOV-17
1,1,1-Trichloroethane			<0.50		ug/L		0.5	06-NOV-17
1,1,2-Trichloroethane			<0.50		ug/L		0.5	06-NOV-17
1,1-Dichloroethane			<0.50		ug/L		0.5	06-NOV-17
1,1-Dichloroethylene			<0.50		ug/L		0.5	06-NOV-17
1,2-Dibromoethane			<0.20		ug/L		0.2	06-NOV-17
1,2-Dichlorobenzene			<0.50		ug/L		0.5	06-NOV-17
1,2-Dichloroethane			<0.50		ug/L		0.5	06-NOV-17
1,2-Dichloropropane			<0.50		ug/L		0.5	06-NOV-17
1,3-Dichlorobenzene			<0.50		ug/L		0.5	06-NOV-17
1,4-Dichlorobenzene			<0.50		ug/L		0.5	06-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R3874862								
WG2655326-2 MB								
Acetone			<30		ug/L		30	06-NOV-17
Benzene			<0.50		ug/L		0.5	06-NOV-17
Bromodichloromethane			<2.0		ug/L		2	06-NOV-17
Bromoform			<5.0		ug/L		5	06-NOV-17
Bromomethane			<0.50		ug/L		0.5	06-NOV-17
Carbon tetrachloride			<0.20		ug/L		0.2	06-NOV-17
Chlorobenzene			<0.50		ug/L		0.5	06-NOV-17
Chloroform			<1.0		ug/L		1	06-NOV-17
cis-1,2-Dichloroethylene			<0.50		ug/L		0.5	06-NOV-17
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	06-NOV-17
Dibromochloromethane			<2.0		ug/L		2	06-NOV-17
Dichlorodifluoromethane			<2.0		ug/L		2	06-NOV-17
Ethylbenzene			<0.50		ug/L		0.5	06-NOV-17
n-Hexane			<0.50		ug/L		0.5	06-NOV-17
m+p-Xylenes			<0.40		ug/L		0.4	06-NOV-17
Methyl Ethyl Ketone			<20		ug/L		20	06-NOV-17
Methyl Isobutyl Ketone			<20		ug/L		20	06-NOV-17
Methylene Chloride			<5.0		ug/L		5	06-NOV-17
MTBE			<2.0		ug/L		2	06-NOV-17
o-Xylene			<0.30		ug/L		0.3	06-NOV-17
Styrene			<0.50		ug/L		0.5	06-NOV-17
Tetrachloroethylene			<0.50		ug/L		0.5	06-NOV-17
Toluene			<0.50		ug/L		0.5	06-NOV-17
trans-1,2-Dichloroethylene			<0.50		ug/L		0.5	06-NOV-17
trans-1,3-Dichloropropene			<0.30		ug/L		0.3	06-NOV-17
Trichloroethylene			<0.50		ug/L		0.5	06-NOV-17
Trichlorofluoromethane			<5.0		ug/L		5	06-NOV-17
Vinyl chloride			<0.50		ug/L		0.5	06-NOV-17
Surrogate: 1,4-Difluorobenzene			98.6		%		70-130	06-NOV-17
Surrogate: 4-Bromofluorobenzene			92.1		%		70-130	06-NOV-17
WG2655326-5 MS		**WG2655326-3**						
1,1,1,2-Tetrachloroethane			100.4		%		50-140	07-NOV-17
1,1,2,2-Tetrachloroethane			94.9		%		50-140	07-NOV-17
1,1,1-Trichloroethane			101.9		%		50-140	07-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R3874862								
WG2655326-5 MS		**WG2655326-3**						
1,1,2-Trichloroethane			101.5		%		50-140	07-NOV-17
1,1-Dichloroethane			105.7		%		50-140	07-NOV-17
1,1-Dichloroethylene			93.1		%		50-140	07-NOV-17
1,2-Dibromoethane			96.9		%		50-140	07-NOV-17
1,2-Dichlorobenzene			96.0		%		50-140	07-NOV-17
1,2-Dichloroethane			104.0		%		50-140	07-NOV-17
1,2-Dichloropropane			103.2		%		50-140	07-NOV-17
1,3-Dichlorobenzene			93.2		%		50-140	07-NOV-17
1,4-Dichlorobenzene			95.7		%		50-140	07-NOV-17
Acetone			117.3		%		50-140	07-NOV-17
Benzene			99.7		%		50-140	07-NOV-17
Bromodichloromethane			99.0		%		50-140	07-NOV-17
Bromoform			96.1		%		50-140	07-NOV-17
Bromomethane			95.5		%		50-140	07-NOV-17
Carbon tetrachloride			100.4		%		50-140	07-NOV-17
Chlorobenzene			97.5		%		50-140	07-NOV-17
Chloroform			103.7		%		50-140	07-NOV-17
cis-1,2-Dichloroethylene			91.1		%		50-140	07-NOV-17
cis-1,3-Dichloropropene			85.6		%		50-140	07-NOV-17
Dibromochloromethane			102.2		%		50-140	07-NOV-17
Dichlorodifluoromethane			93.1		%		50-140	07-NOV-17
Ethylbenzene			92.8		%		50-140	07-NOV-17
n-Hexane			112.7		%		50-140	07-NOV-17
m+p-Xylenes			96.5		%		50-140	07-NOV-17
Methyl Ethyl Ketone			103.4		%		50-140	07-NOV-17
Methyl Isobutyl Ketone			89.2		%		50-140	07-NOV-17
Methylene Chloride			106.9		%		50-140	07-NOV-17
MTBE			94.9		%		50-140	07-NOV-17
o-Xylene			92.2		%		50-140	07-NOV-17
Styrene			88.3		%		50-140	07-NOV-17
Tetrachloroethylene			93.7		%		50-140	07-NOV-17
Toluene			93.9		%		50-140	07-NOV-17
trans-1,2-Dichloroethylene			98.6		%		50-140	07-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R3874862								
WG2655326-5 MS		**WG2655326-3**						
trans-1,3-Dichloropropene			83.0		%		50-140	07-NOV-17
Trichloroethylene			98.3		%		50-140	07-NOV-17
Trichlorofluoromethane			102.7		%		50-140	07-NOV-17
Vinyl chloride			96.7		%		50-140	07-NOV-17

Quality Control Report

Workorder: L2017630 Report Date: 09-NOV-17

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Legend:

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

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

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

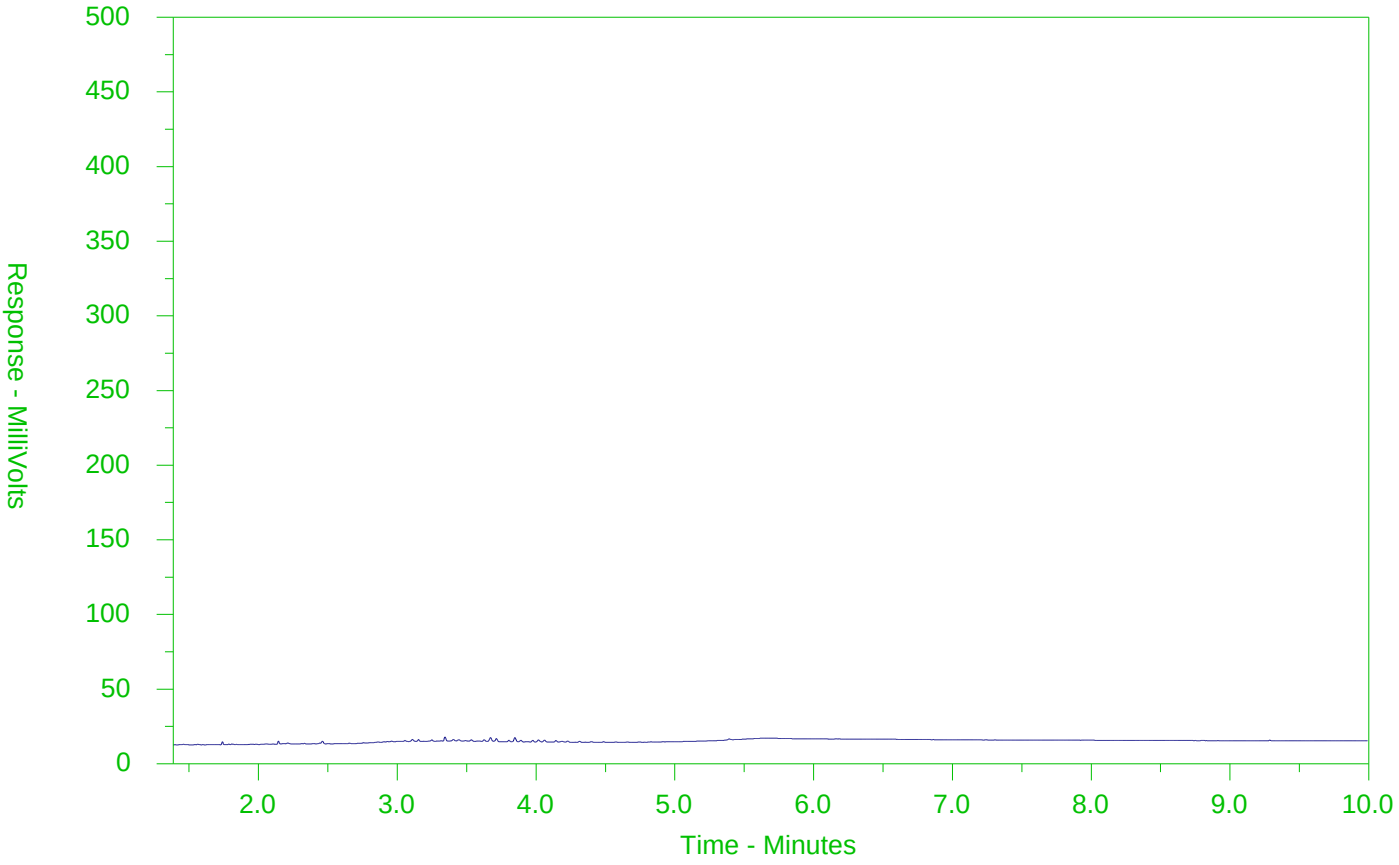
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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

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

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

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2017630-1
Client Sample ID: MW1



←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.

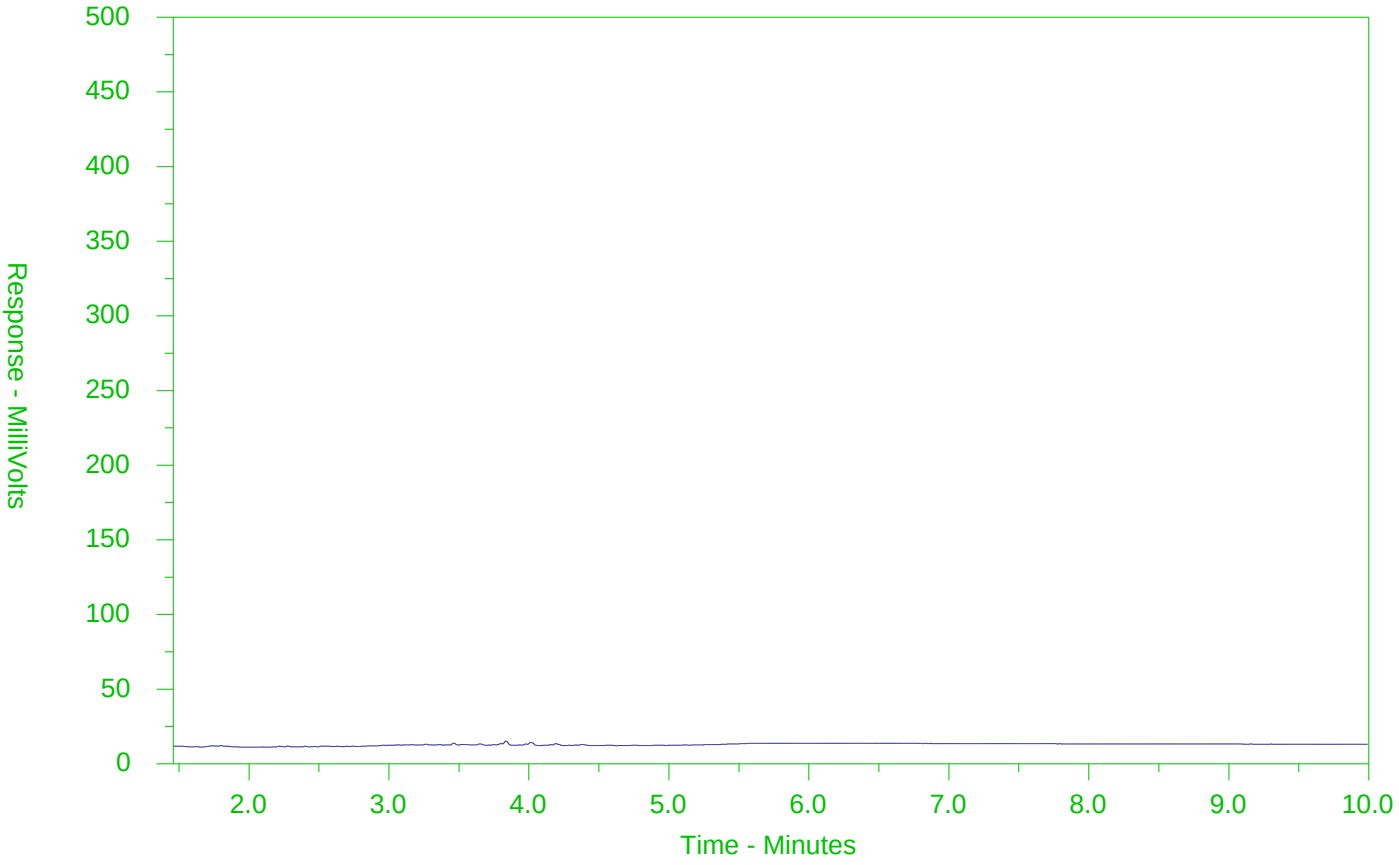
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2017630-2
Client Sample ID: MW3



←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.

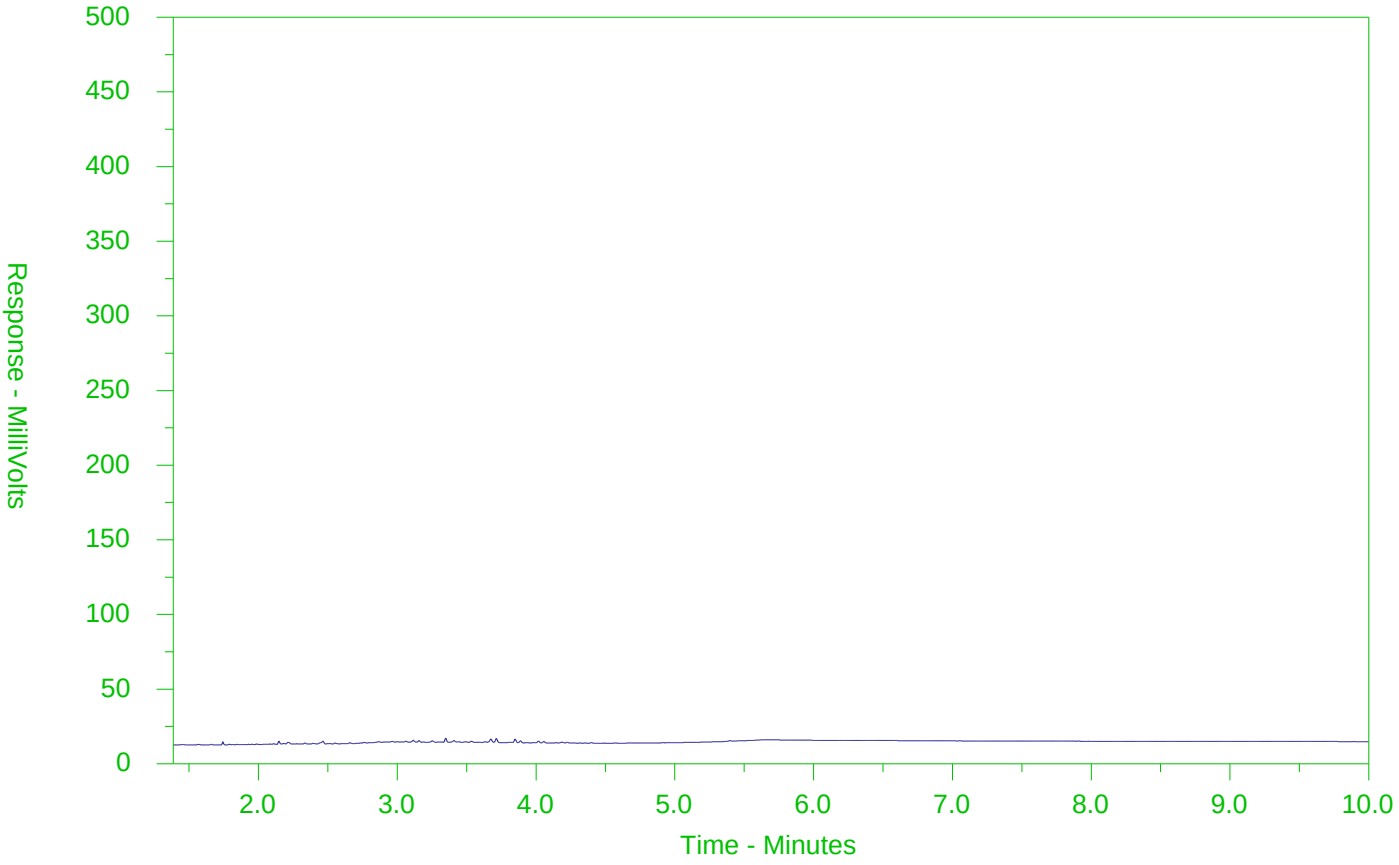
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2017630-3
Client Sample ID: MW10



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

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

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

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

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

Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2017630-COFC

COC Number: 15 - 613358

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Trinity Consultants Ontario Inc.
Contact:	Brian Schuyler
Phone:	(416) 391-2527 x.60
Company address below will appear on the final report	
Street:	33 Dr. Mills Rd. #106
City/Province:	Toronto ON
Postal Code:	M3C 1V9

Report Format / Distribution

Select Report Format: [X] PDF [X] EXCEL [ ] EDD (DIGITAL)

Quality Control (QC) Report with Report [X] YES [ ] NO

[ ] Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: [X] EMAIL [ ] MAIL [ ] FAX

Email 1 or Fax: bschuyler@trinityconsultants.com

Email 2

Email 3

Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply

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

PRIORITY (Business Days): 4 day [P4] [ ] 3 day [P3] [ ] 2 day [P2] [ ]

EMERGENCY: 1 Business day [E1] [ ] Same Day, Weekend or Statutory holiday [E0] [ ]

Date and Time Required for all E&P TATs:

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

Invoice To

Same as Report To [X] YES [ ] NO

Copy of Invoice with Report [X] YES [ ] NO

Company: Same

Contact:

Invoice Distribution

Select Invoice Distribution: [X] EMAIL [ ] MAIL [ ] FAX

Email 1 or Fax: bschuyler@trinityconsultants.com

Email 2

Project Information

ALS Account # / Quote #:

Job #: 1772.0263

PO / AFE:

LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: | PO#

Major/Minor Code: | Routing Code:

Requisitioner:

Location:

ALS Lab Work Order # (lab use only): L2017630 AR

ALS Contact: Mary-Lynn

Sampler: B.Schuyler

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	PHC F1-F4/VOCs	PAHs	ICPMS Metals	pH	VOCs	Number of Containers
1	MW1	02-11-17	3:00	GW	X	X	X	X		6
2	MW3	02-11-17	2:45	GW	X	X	X	X		6
3	MW10	02-11-17	2:10	GW	X	X	X	X		6
4	Trip Blank	02-11-17		GW					X	2

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

Are samples taken from a Regulated DW System? [ ] YES [ ] NO

Are samples for human drinking water use? [ ] YES [ ] NO

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

MOECC Table 1 Res/Park/Inst/Ind/Com/Comm

This is for a RSC.

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen [ ] SIF Observations Yes [ ] No [ ]

Ice Packs [X] Ice Cubes [X] Custody seal intact Yes [ ] No [ ]

Cooling Initiated [X]

INITIAL COOLER TEMPERATURES °C: 3.4

FINAL COOLER TEMPERATURES °C: 7.4

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: Brian Schuyler	Date: Nov 2/17	Time: 3:27	Received by: KR	Date: Nov 2/17	Time: 3:27	Received by: YLE	Date: NOV 02 17	Time: 18:10

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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

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

368

TRINITY CONSULTANTS INC.
ATTN: BRIAN SCHUYLER
106-885 DON MILLS ROAD
TORONTO ON M3C1V9

Date Received: 10-NOV-17
Report Date: 19-NOV-17 09:50 (MT)
Version: FINAL

Client Phone: 416-391-2527

Certificate of Analysis

Lab Work Order #: L2021349

Project P.O. #: NOT SUBMITTED
Job Reference: 177201.0263
C of C Numbers:
Legal Site Desc:

Mary-Lynn Pike
Client Services Supervisor

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits #1
L2021349-1 MW2						
Sampled By: B. SCHUYLER on 10-NOV-17 @ 1						
Matrix: WATER						
Physical Tests						
pH	8.08		0.10	pH units	11-NOV-17	
Dissolved Metals						
Dissolved Metals Filtration Location	FIELD			No Unit	13-NOV-17	
Antimony (Sb)-Dissolved	2.11		0.10	ug/L	14-NOV-17	*1.5
Arsenic (As)-Dissolved	3.55		0.10	ug/L	14-NOV-17	13
Barium (Ba)-Dissolved	95.9		0.10	ug/L	14-NOV-17	610
Beryllium (Be)-Dissolved	<0.10		0.10	ug/L	14-NOV-17	0.5
Boron (B)-Dissolved	403		10	ug/L	14-NOV-17	1700
Cadmium (Cd)-Dissolved	<0.040	DLUI	0.040	ug/L	14-NOV-17	0.5
Chromium (Cr)-Dissolved	<0.50		0.50	ug/L	14-NOV-17	11
Cobalt (Co)-Dissolved	0.13		0.10	ug/L	14-NOV-17	3.8
Copper (Cu)-Dissolved	1.93		0.20	ug/L	14-NOV-17	5
Lead (Pb)-Dissolved	0.096		0.050	ug/L	14-NOV-17	1.9
Molybdenum (Mo)-Dissolved	56.2		0.050	ug/L	14-NOV-17	*23
Nickel (Ni)-Dissolved	0.90		0.50	ug/L	14-NOV-17	14
Selenium (Se)-Dissolved	1.86		0.050	ug/L	14-NOV-17	5
Silver (Ag)-Dissolved	<0.050		0.050	ug/L	14-NOV-17	0.3
Sodium (Na)-Dissolved	33900		500	ug/L	14-NOV-17	490000
Thallium (Tl)-Dissolved	0.025		0.010	ug/L	14-NOV-17	0.5
Uranium (U)-Dissolved	2.83		0.010	ug/L	14-NOV-17	8.9
Vanadium (V)-Dissolved	2.30		0.50	ug/L	14-NOV-17	3.9
Zinc (Zn)-Dissolved	9.7		1.0	ug/L	14-NOV-17	160
Volatile Organic Compounds						
Acetone	<30		30	ug/L	15-NOV-17	2700
Benzene	<0.50		0.50	ug/L	15-NOV-17	0.5
Bromodichloromethane	<2.0		2.0	ug/L	15-NOV-17	2
Bromoform	<5.0		5.0	ug/L	15-NOV-17	5
Bromomethane	<0.50		0.50	ug/L	15-NOV-17	0.89
Carbon tetrachloride	<0.20		0.20	ug/L	15-NOV-17	0.2
Chlorobenzene	<0.50		0.50	ug/L	15-NOV-17	0.5
Dibromochloromethane	<2.0		2.0	ug/L	15-NOV-17	2
Chloroform	<1.0		1.0	ug/L	15-NOV-17	2
1,2-Dibromoethane	<0.20		0.20	ug/L	15-NOV-17	0.2
1,2-Dichlorobenzene	<0.50		0.50	ug/L	15-NOV-17	0.5
1,3-Dichlorobenzene	<0.50		0.50	ug/L	15-NOV-17	0.5
1,4-Dichlorobenzene	<0.50		0.50	ug/L	15-NOV-17	0.5
Dichlorodifluoromethane	<2.0		2.0	ug/L	15-NOV-17	590
1,1-Dichloroethane	<0.50		0.50	ug/L	15-NOV-17	0.5
1,2-Dichloroethane	<0.50		0.50	ug/L	15-NOV-17	0.5
1,1-Dichloroethylene	<0.50		0.50	ug/L	15-NOV-17	0.5
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L	15-NOV-17	1.6
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L	15-NOV-17	1.6
Methylene Chloride	<5.0		5.0	ug/L	15-NOV-17	5
1,2-Dichloropropane	<0.50		0.50	ug/L	15-NOV-17	0.5
cis-1,3-Dichloropropene	<0.30		0.30	ug/L	15-NOV-17	
trans-1,3-Dichloropropene	<0.30		0.30	ug/L	15-NOV-17	

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T1-Ground Water-All Types of Property Uses

#1: T1-Ground Water-All Types of Property Uses

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits #1
L2021349-1 MW2						
Sampled By: B. SCHUYLER on 10-NOV-17 @ 1						
Matrix: WATER						
Volatile Organic Compounds						
1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L	15-NOV-17	0.5
Ethylbenzene	<0.50		0.50	ug/L	15-NOV-17	0.5
n-Hexane	<0.50		0.50	ug/L	15-NOV-17	5
Methyl Ethyl Ketone	<20		20	ug/L	15-NOV-17	400
Methyl Isobutyl Ketone	<20		20	ug/L	15-NOV-17	640
MTBE	<2.0		2.0	ug/L	15-NOV-17	15
Styrene	<0.50		0.50	ug/L	15-NOV-17	0.5
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L	15-NOV-17	1.1
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L	15-NOV-17	0.5
Tetrachloroethylene	<0.50		0.50	ug/L	15-NOV-17	0.5
Toluene	0.61		0.50	ug/L	15-NOV-17	0.8
1,1,1-Trichloroethane	<0.50		0.50	ug/L	15-NOV-17	0.5
1,1,2-Trichloroethane	<0.50		0.50	ug/L	15-NOV-17	0.5
Trichloroethylene	<0.50		0.50	ug/L	15-NOV-17	0.5
Trichlorofluoromethane	<5.0		5.0	ug/L	15-NOV-17	150
Vinyl chloride	<0.50		0.50	ug/L	15-NOV-17	0.5
o-Xylene	<0.30		0.30	ug/L	15-NOV-17	
m+p-Xylenes	<0.40		0.40	ug/L	15-NOV-17	
Xylenes (Total)	<0.50		0.50	ug/L	15-NOV-17	72
Surrogate: 4-Bromofluorobenzene	96.2		70-130	%	15-NOV-17	
Surrogate: 1,4-Difluorobenzene	99.4		70-130	%	15-NOV-17	
Hydrocarbons						
F1 (C6-C10)	<25		25	ug/L	15-NOV-17	420
F1-BTEX	<25		25	ug/L	17-NOV-17	420
F2 (C10-C16)	<100		100	ug/L	16-NOV-17	150
F2-Naphth	<100		100	ug/L	17-NOV-17	
F3 (C16-C34)	<250		250	ug/L	16-NOV-17	500
F3-PAH	<250		250	ug/L	17-NOV-17	
F4 (C34-C50)	<250		250	ug/L	16-NOV-17	500
Total Hydrocarbons (C6-C50)	<370		370	ug/L	17-NOV-17	
Chrom. to baseline at nC50	YES			No Unit	16-NOV-17	
Surrogate: 2-Bromobenzotrifluoride	86.0		60-140	%	16-NOV-17	
Surrogate: 3,4-Dichlorotoluene	96.8		60-140	%	15-NOV-17	
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	<0.020		0.020	ug/L	17-NOV-17	4.1
Acenaphthylene	<0.020		0.020	ug/L	17-NOV-17	1
Anthracene	<0.020		0.020	ug/L	17-NOV-17	0.1
Benzo(a)anthracene	<0.020		0.020	ug/L	17-NOV-17	0.2
Benzo(a)pyrene	<0.010		0.010	ug/L	17-NOV-17	0.01
Benzo(b)fluoranthene	<0.020		0.020	ug/L	17-NOV-17	0.1
Benzo(g,h,i)perylene	<0.020		0.020	ug/L	17-NOV-17	0.2
Benzo(k)fluoranthene	<0.020		0.020	ug/L	17-NOV-17	0.1
Chrysene	<0.020		0.020	ug/L	17-NOV-17	0.1
Dibenzo(ah)anthracene	<0.020		0.020	ug/L	17-NOV-17	0.2
Fluoranthene	<0.020		0.020	ug/L	17-NOV-17	0.4
Fluorene	<0.020		0.020	ug/L	17-NOV-17	120

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T1-Ground Water-All Types of Property Uses

#1: T1-Ground Water-All Types of Property Uses

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits #1			
L2021349-1 MW2									
Sampled By: B. SCHUYLER on 10-NOV-17 @ 1									
Matrix: WATER									
Polycyclic Aromatic Hydrocarbons									
Indeno(1,2,3-cd)pyrene	<0.020		0.020	ug/L	17-NOV-17	0.2			
1+2-Methylnaphthalenes	<0.028		0.028	ug/L	17-NOV-17	2			
1-Methylnaphthalene	<0.020		0.020	ug/L	17-NOV-17	2			
2-Methylnaphthalene	<0.020		0.020	ug/L	17-NOV-17	2			
Naphthalene	<0.050		0.050	ug/L	17-NOV-17	7			
Phenanthrene	<0.020		0.020	ug/L	17-NOV-17	0.1			
Pyrene	<0.020		0.020	ug/L	17-NOV-17	0.2			
Surrogate: d10-Acenaphthene	90.6		60-140	%	17-NOV-17				
Surrogate: d12-Chrysene	104.6		60-140	%	17-NOV-17				
Surrogate: d8-Naphthalene	91.6		60-140	%	17-NOV-17				
Surrogate: d10-Phenanthrene	114.9		60-140	%	17-NOV-17				

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T1-Ground Water-All Types of Property Uses

#1: T1-Ground Water-All Types of Property Uses

Reference Information

Sample Parameter Qualifier key listed:

Qualifier	Description
DLUI	Detection Limit Raised: Unknown Interference generated an apparent false positive test result.

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
F1-F4-511-CALC-WT	Water	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-L

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

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

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

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

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

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

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

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

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

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

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

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

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

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

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using GC/MS. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

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

PH-WT	Water	pH	APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011). Holdtime for samples under this regulation is 28 days

VOC-1,3-DCP-CALC-WT	Water	Regulation 153 VOCs	SW8260B/SW8270C

Reference Information

VOC-511-HS-WT	Water	VOC by GCMS HS O.Reg 153/04 (July 2011)	SW846 8260

Liquid samples are analyzed by headspace GC/MSD.

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

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

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

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

Chain of Custody numbers:

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

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.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information.

Quality Control Report

Workorder: L2021349 Report Date: 19-NOV-17

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	**Water**							
Batch R3885252								
WG2662489-4 DUP		**WG2662489-3**						
F1 (C6-C10)		841	1110		ug/L	27	30	15-NOV-17
WG2662489-1 LCS								
F1 (C6-C10)			111.4		%		80-120	15-NOV-17
WG2662489-2 MB								
F1 (C6-C10)			<25		ug/L		25	15-NOV-17
Surrogate: 3,4-Dichlorotoluene			100.1		%		60-140	15-NOV-17
WG2662489-5 MS		**WG2662489-3**						
F1 (C6-C10)			65.2		%		60-140	15-NOV-17
F2-F4-511-WT	**Water**							
Batch R3887196								
WG2664715-2 LCS								
F2 (C10-C16)			94.2		%		70-130	16-NOV-17
F3 (C16-C34)			98.7		%		70-130	16-NOV-17
F4 (C34-C50)			98.5		%		70-130	16-NOV-17
WG2664715-3 LCSD		**WG2664715-2**						
F2 (C10-C16)		94.2	88.0		%	6.8	50	16-NOV-17
F3 (C16-C34)		98.7	94.9		%	3.9	50	16-NOV-17
F4 (C34-C50)		98.5	96.9		%	1.6	50	16-NOV-17
WG2664715-1 MB								
F2 (C10-C16)			<100		ug/L		100	16-NOV-17
F3 (C16-C34)			<250		ug/L		250	16-NOV-17
F4 (C34-C50)			<250		ug/L		250	16-NOV-17
Surrogate: 2-Bromobenzotrifluoride			103.2		%		60-140	16-NOV-17
MET-D-UG/L-MS-WT	**Water**							
Batch R3884110								
WG2662473-4 DUP		**WG2662473-3**						
Antimony (Sb)-Dissolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	13-NOV-17
Arsenic (As)-Dissolved		7.73	7.77		ug/L	0.5	20	13-NOV-17
Barium (Ba)-Dissolved		259	259		ug/L	0.1	20	13-NOV-17
Beryllium (Be)-Dissolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	13-NOV-17
Boron (B)-Dissolved		111	111		ug/L	0.2	20	13-NOV-17
Cadmium (Cd)-Dissolved		<0.010	<0.010	RPD-NA	ug/L	N/A	20	13-NOV-17
Chromium (Cr)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	13-NOV-17
Cobalt (Co)-Dissolved		0.19	0.19		ug/L	0.3	20	13-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	**Water**							
Batch R3884110								
WG2662473-4 DUP		**WG2662473-3**						
Copper (Cu)-Dissolved		0.25	0.26		ug/L	2.3	20	13-NOV-17
Lead (Pb)-Dissolved		0.093	0.090		ug/L	3.5	20	13-NOV-17
Molybdenum (Mo)-Dissolved		2.46	2.44		ug/L	0.7	20	13-NOV-17
Nickel (Ni)-Dissolved		0.57	0.58		ug/L	2.6	20	13-NOV-17
Selenium (Se)-Dissolved		0.091	0.067	J	ug/L	0.023	0.1	13-NOV-17
Silver (Ag)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	13-NOV-17
Sodium (Na)-Dissolved		59400	59400		ug/L	0.1	20	13-NOV-17
Thallium (Tl)-Dissolved		<0.010	<0.010	RPD-NA	ug/L	N/A	20	13-NOV-17
Uranium (U)-Dissolved		0.808	0.809		ug/L	0.1	20	13-NOV-17
Vanadium (V)-Dissolved		1.41	1.44		ug/L	2.5	20	13-NOV-17
Zinc (Zn)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	13-NOV-17
WG2662473-2 LCS								
Antimony (Sb)-Dissolved			95.8		%		80-120	13-NOV-17
Arsenic (As)-Dissolved			100.8		%		80-120	13-NOV-17
Barium (Ba)-Dissolved			104.2		%		80-120	13-NOV-17
Beryllium (Be)-Dissolved			92.0		%		80-120	13-NOV-17
Boron (B)-Dissolved			88.5		%		80-120	13-NOV-17
Cadmium (Cd)-Dissolved			99.4		%		80-120	13-NOV-17
Chromium (Cr)-Dissolved			99.0		%		80-120	13-NOV-17
Cobalt (Co)-Dissolved			97.9		%		80-120	13-NOV-17
Copper (Cu)-Dissolved			97.8		%		80-120	13-NOV-17
Lead (Pb)-Dissolved			99.0		%		80-120	13-NOV-17
Molybdenum (Mo)-Dissolved			101.0		%		80-120	13-NOV-17
Nickel (Ni)-Dissolved			96.9		%		80-120	13-NOV-17
Selenium (Se)-Dissolved			95.9		%		80-120	13-NOV-17
Silver (Ag)-Dissolved			95.8		%		80-120	13-NOV-17
Sodium (Na)-Dissolved			97.6		%		80-120	13-NOV-17
Thallium (Tl)-Dissolved			100.4		%		80-120	13-NOV-17
Uranium (U)-Dissolved			99.4		%		80-120	13-NOV-17
Vanadium (V)-Dissolved			99.0		%		80-120	13-NOV-17
Zinc (Zn)-Dissolved			95.6		%		80-120	13-NOV-17
WG2662473-1 MB								
Antimony (Sb)-Dissolved			<0.10		ug/L		0.1	13-NOV-17
Arsenic (As)-Dissolved			<0.10		ug/L		0.1	

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	**Water**							
Batch R3884110								
WG2662473-1 MB								
Arsenic (As)-Dissolved			<0.10		ug/L		0.1	13-NOV-17
Barium (Ba)-Dissolved			<0.10		ug/L		0.1	13-NOV-17
Beryllium (Be)-Dissolved			<0.10		ug/L		0.1	13-NOV-17
Boron (B)-Dissolved			<10		ug/L		10	13-NOV-17
Cadmium (Cd)-Dissolved			<0.010		ug/L		0.01	13-NOV-17
Chromium (Cr)-Dissolved			<0.50		ug/L		0.5	13-NOV-17
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	13-NOV-17
Copper (Cu)-Dissolved			<0.20		ug/L		0.2	13-NOV-17
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	13-NOV-17
Molybdenum (Mo)-Dissolved			<0.050		ug/L		0.05	13-NOV-17
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	13-NOV-17
Selenium (Se)-Dissolved			<0.050		ug/L		0.05	13-NOV-17
Silver (Ag)-Dissolved			<0.050		ug/L		0.05	13-NOV-17
Sodium (Na)-Dissolved			<500		ug/L		500	13-NOV-17
Thallium (Tl)-Dissolved			<0.010		ug/L		0.01	13-NOV-17
Uranium (U)-Dissolved			<0.010		ug/L		0.01	13-NOV-17
Vanadium (V)-Dissolved			<0.50		ug/L		0.5	13-NOV-17
Zinc (Zn)-Dissolved			<1.0		ug/L		1	13-NOV-17
WG2662473-5 MS		**WG2662473-3**						
Antimony (Sb)-Dissolved			97.0		%		70-130	13-NOV-17
Arsenic (As)-Dissolved			90.7		%		70-130	13-NOV-17
Barium (Ba)-Dissolved			N/A	MS-B	%		-	13-NOV-17
Beryllium (Be)-Dissolved			85.8		%		70-130	13-NOV-17
Boron (B)-Dissolved			N/A	MS-B	%		-	13-NOV-17
Cadmium (Cd)-Dissolved			95.2		%		70-130	13-NOV-17
Chromium (Cr)-Dissolved			94.2		%		70-130	13-NOV-17
Cobalt (Co)-Dissolved			94.2		%		70-130	13-NOV-17
Copper (Cu)-Dissolved			105.2		%		70-130	13-NOV-17
Lead (Pb)-Dissolved			89.6		%		70-130	13-NOV-17
Molybdenum (Mo)-Dissolved			124.7		%		70-130	13-NOV-17
Nickel (Ni)-Dissolved			95.2		%		70-130	13-NOV-17
Selenium (Se)-Dissolved			108.6		%		70-130	13-NOV-17
Silver (Ag)-Dissolved			81.2		%		70-130	14-NOV-17
Sodium (Na)-Dissolved			N/A	MS-B	%		-	13-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	**Water**							
Batch R3884110								
WG2662473-5 MS		**WG2662473-3**						
Thallium (Tl)-Dissolved			88.4		%		70-130	13-NOV-17
Uranium (U)-Dissolved			N/A	MS-B	%		-	13-NOV-17
Vanadium (V)-Dissolved			102.4		%		70-130	13-NOV-17
Zinc (Zn)-Dissolved			86.9		%		70-130	13-NOV-17
PAH-511-WT	**Water**							
Batch R3886896								
WG2664715-2 LCS								
1-Methylnaphthalene			71.2		%		50-140	17-NOV-17
2-Methylnaphthalene			72.4		%		50-140	17-NOV-17
Acenaphthene			73.2		%		50-140	17-NOV-17
Acenaphthylene			83.3		%		50-140	17-NOV-17
Anthracene			95.7		%		50-140	17-NOV-17
Benzo(a)anthracene			90.0		%		50-140	17-NOV-17
Benzo(a)pyrene			87.8		%		50-140	17-NOV-17
Benzo(b)fluoranthene			75.4		%		50-140	17-NOV-17
Benzo(g,h,i)perylene			92.0		%		50-140	17-NOV-17
Benzo(k)fluoranthene			84.2		%		50-140	17-NOV-17
Chrysene			75.7		%		50-140	17-NOV-17
Dibenzo(ah)anthracene			98.8		%		50-140	17-NOV-17
Fluoranthene			85.3		%		50-140	17-NOV-17
Fluorene			84.2		%		50-140	17-NOV-17
Indeno(1,2,3-cd)pyrene			103.1		%		50-140	17-NOV-17
Naphthalene			71.1		%		50-140	17-NOV-17
Phenanthrene			96.7		%		50-140	17-NOV-17
Pyrene			89.7		%		50-140	17-NOV-17
WG2664715-3 LCSD		**WG2664715-2**						
1-Methylnaphthalene		71.2	72.2		%	1.5	50	17-NOV-17
2-Methylnaphthalene		72.4	73.1		%	1.0	50	17-NOV-17
Acenaphthene		73.2	74.8		%	2.2	50	17-NOV-17
Acenaphthylene		83.3	85.0		%	2.1	50	17-NOV-17
Anthracene		95.7	104.9		%	9.2	50	17-NOV-17
Benzo(a)anthracene		90.0	96.4		%	6.9	50	17-NOV-17
Benzo(a)pyrene		87.8	89.8		%	2.3	50	17-NOV-17
Benzo(b)fluoranthene		75.4	73.5		%	2.6	50	17-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Water**							
Batch R3886896								
WG2664715-3 LCSD		**WG2664715-2**						
Benzo(g,h,i)perylene		92.0	93.3		%	1.4	50	17-NOV-17
Benzo(k)fluoranthene		84.2	88.1		%	4.6	50	17-NOV-17
Chrysene		75.7	82.4		%	8.5	50	17-NOV-17
Dibenzo(ah)anthracene		98.8	95.9		%	3.0	50	17-NOV-17
Fluoranthene		85.3	89.8		%	5.1	50	17-NOV-17
Fluorene		84.2	87.1		%	3.5	50	17-NOV-17
Indeno(1,2,3-cd)pyrene		103.1	103.8		%	0.7	50	17-NOV-17
Naphthalene		71.1	71.8		%	0.9	50	17-NOV-17
Phenanthrene		96.7	98.0		%	1.3	50	17-NOV-17
Pyrene		89.7	93.8		%	4.5	50	17-NOV-17
WG2664715-1 MB								
1-Methylnaphthalene			<0.020		ug/L		0.02	17-NOV-17
2-Methylnaphthalene			<0.020		ug/L		0.02	17-NOV-17
Acenaphthene			<0.020		ug/L		0.02	17-NOV-17
Acenaphthylene			<0.020		ug/L		0.02	17-NOV-17
Anthracene			<0.020		ug/L		0.02	17-NOV-17
Benzo(a)anthracene			<0.020		ug/L		0.02	17-NOV-17
Benzo(a)pyrene			<0.010		ug/L		0.01	17-NOV-17
Benzo(b)fluoranthene			<0.020		ug/L		0.02	17-NOV-17
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	17-NOV-17
Benzo(k)fluoranthene			<0.020		ug/L		0.02	17-NOV-17
Chrysene			<0.020		ug/L		0.02	17-NOV-17
Dibenzo(ah)anthracene			<0.020		ug/L		0.02	17-NOV-17
Fluoranthene			<0.020		ug/L		0.02	17-NOV-17
Fluorene			<0.020		ug/L		0.02	17-NOV-17
Indeno(1,2,3-cd)pyrene			<0.020		ug/L		0.02	17-NOV-17
Naphthalene			<0.050		ug/L		0.05	17-NOV-17
Phenanthrene			<0.020		ug/L		0.02	17-NOV-17
Pyrene			<0.020		ug/L		0.02	17-NOV-17
Surrogate: d8-Naphthalene			89.8		%		60-140	17-NOV-17
Surrogate: d10-Phenanthrene			122.5		%		60-140	17-NOV-17
Surrogate: d12-Chrysene			94.1		%		60-140	17-NOV-17
Surrogate: d10-Acenaphthene			93.5		%		60-140	17-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-WT	**Water**							
Batch R3884663								
WG2662141-20 DUP		**WG2662141-19**						
pH		8.10	8.06	J	pH units	0.04	0.2	11-NOV-17
WG2662141-18 LCS								
pH			7.00		pH units		6.9-7.1	11-NOV-17
VOC-511-HS-WT	**Water**							
Batch R3885252								
WG2662489-4 DUP		**WG2662489-3**						
1,1,1,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
1,1,2,2-Tetrachloroethane		<0.75	<1.8	RPD-NA	ug/L	N/A	30	15-NOV-17
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
1,1,2-Trichloroethane		<0.50	<0.65	RPD-NA	ug/L	N/A	30	15-NOV-17
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	15-NOV-17
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	15-NOV-17
Benzene		115	115		ug/L	0.2	30	15-NOV-17
Bromodichloromethane		<4.4	<5.4	RPD-NA	ug/L	N/A	30	15-NOV-17
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	15-NOV-17
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	15-NOV-17
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
Chloroform		<2.5	<2.5	RPD-NA	ug/L	N/A	30	15-NOV-17
cis-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
cis-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	15-NOV-17
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	15-NOV-17
Dichlorodifluoromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	15-NOV-17
Ethylbenzene		141	135		ug/L	4.0	30	15-NOV-17
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
m+p-Xylenes		60.5	57.8		ug/L	4.6	30	15-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R3885252								
WG2662489-4 DUP		**WG2662489-3**						
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	15-NOV-17
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	15-NOV-17
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	15-NOV-17
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	15-NOV-17
o-Xylene		38.6	38.4		ug/L	0.5	30	15-NOV-17
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
Toluene		12.3	11.8		ug/L	4.2	30	15-NOV-17
trans-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
trans-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	15-NOV-17
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	15-NOV-17
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-NOV-17
WG2662489-1 LCS								
1,1,1,2-Tetrachloroethane			99.9		%		70-130	15-NOV-17
1,1,2,2-Tetrachloroethane			97.1		%		70-130	15-NOV-17
1,1,1-Trichloroethane			100.4		%		70-130	15-NOV-17
1,1,2-Trichloroethane			100.1		%		70-130	15-NOV-17
1,1-Dichloroethane			103.9		%		70-130	15-NOV-17
1,1-Dichloroethylene			90.5		%		70-130	15-NOV-17
1,2-Dibromoethane			100.1		%		70-130	15-NOV-17
1,2-Dichlorobenzene			101.3		%		70-130	15-NOV-17
1,2-Dichloroethane			104.3		%		70-130	15-NOV-17
1,2-Dichloropropane			103.8		%		70-130	15-NOV-17
1,3-Dichlorobenzene			98.6		%		70-130	15-NOV-17
1,4-Dichlorobenzene			101.5		%		70-130	15-NOV-17
Acetone			101.1		%		60-140	15-NOV-17
Benzene			101.2		%		70-130	15-NOV-17
Bromodichloromethane			99.0		%		70-130	15-NOV-17
Bromoform			96.5		%		70-130	15-NOV-17
Bromomethane			99.5		%		60-140	15-NOV-17
Carbon tetrachloride			97.6		%		70-130	15-NOV-17
Chlorobenzene			100.4		%		70-130	15-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R3885252								
WG2662489-1 LCS								
Chloroform			101.7		%		70-130	15-NOV-17
cis-1,2-Dichloroethylene			92.7		%		70-130	15-NOV-17
cis-1,3-Dichloropropene			97.0		%		70-130	15-NOV-17
Dibromochloromethane			102.8		%		70-130	15-NOV-17
Dichlorodifluoromethane			102.5		%		50-140	15-NOV-17
Ethylbenzene			94.0		%		70-130	15-NOV-17
n-Hexane			108.0		%		70-130	15-NOV-17
m+p-Xylenes			96.1		%		70-130	15-NOV-17
Methyl Ethyl Ketone			96.2		%		60-140	15-NOV-17
Methyl Isobutyl Ketone			94.6		%		60-140	15-NOV-17
Methylene Chloride			102.0		%		70-130	15-NOV-17
MTBE			99.3		%		70-130	15-NOV-17
o-Xylene			95.3		%		70-130	15-NOV-17
Styrene			99.1		%		70-130	15-NOV-17
Tetrachloroethylene			94.9		%		70-130	15-NOV-17
Toluene			96.0		%		70-130	15-NOV-17
trans-1,2-Dichloroethylene			98.4		%		70-130	15-NOV-17
trans-1,3-Dichloropropene			94.4		%		70-130	15-NOV-17
Trichloroethylene			99.4		%		70-130	15-NOV-17
Trichlorofluoromethane			99.96		%		60-140	15-NOV-17
Vinyl chloride			101.1		%		60-140	15-NOV-17
WG2662489-2 MB								
1,1,1,2-Tetrachloroethane			<0.50		ug/L		0.5	15-NOV-17
1,1,2,2-Tetrachloroethane			<0.50		ug/L		0.5	15-NOV-17
1,1,1-Trichloroethane			<0.50		ug/L		0.5	15-NOV-17
1,1,2-Trichloroethane			<0.50		ug/L		0.5	15-NOV-17
1,1-Dichloroethane			<0.50		ug/L		0.5	15-NOV-17
1,1-Dichloroethylene			<0.50		ug/L		0.5	15-NOV-17
1,2-Dibromoethane			<0.20		ug/L		0.2	15-NOV-17
1,2-Dichlorobenzene			<0.50		ug/L		0.5	15-NOV-17
1,2-Dichloroethane			<0.50		ug/L		0.5	15-NOV-17
1,2-Dichloropropane			<0.50		ug/L		0.5	15-NOV-17
1,3-Dichlorobenzene			<0.50		ug/L		0.5	15-NOV-17
1,4-Dichlorobenzene			<0.50		ug/L		0.5	15-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R3885252								
WG2662489-2 MB								
Acetone			<30		ug/L		30	15-NOV-17
Benzene			<0.50		ug/L		0.5	15-NOV-17
Bromodichloromethane			<2.0		ug/L		2	15-NOV-17
Bromoform			<5.0		ug/L		5	15-NOV-17
Bromomethane			<0.50		ug/L		0.5	15-NOV-17
Carbon tetrachloride			<0.20		ug/L		0.2	15-NOV-17
Chlorobenzene			<0.50		ug/L		0.5	15-NOV-17
Chloroform			<1.0		ug/L		1	15-NOV-17
cis-1,2-Dichloroethylene			<0.50		ug/L		0.5	15-NOV-17
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	15-NOV-17
Dibromochloromethane			<2.0		ug/L		2	15-NOV-17
Dichlorodifluoromethane			<2.0		ug/L		2	15-NOV-17
Ethylbenzene			<0.50		ug/L		0.5	15-NOV-17
n-Hexane			<0.50		ug/L		0.5	15-NOV-17
m+p-Xylenes			<0.40		ug/L		0.4	15-NOV-17
Methyl Ethyl Ketone			<20		ug/L		20	15-NOV-17
Methyl Isobutyl Ketone			<20		ug/L		20	15-NOV-17
Methylene Chloride			<5.0		ug/L		5	15-NOV-17
MTBE			<2.0		ug/L		2	15-NOV-17
o-Xylene			<0.30		ug/L		0.3	15-NOV-17
Styrene			<0.50		ug/L		0.5	15-NOV-17
Tetrachloroethylene			<0.50		ug/L		0.5	15-NOV-17
Toluene			<0.50		ug/L		0.5	15-NOV-17
trans-1,2-Dichloroethylene			<0.50		ug/L		0.5	15-NOV-17
trans-1,3-Dichloropropene			<0.30		ug/L		0.3	15-NOV-17
Trichloroethylene			<0.50		ug/L		0.5	15-NOV-17
Trichlorofluoromethane			<5.0		ug/L		5	15-NOV-17
Vinyl chloride			<0.50		ug/L		0.5	15-NOV-17
Surrogate: 1,4-Difluorobenzene			99.1		%		70-130	15-NOV-17
Surrogate: 4-Bromofluorobenzene			95.1		%		70-130	15-NOV-17
WG2662489-5 MS		**WG2662489-3**						
1,1,1,2-Tetrachloroethane			101.1		%		50-140	15-NOV-17
1,1,2,2-Tetrachloroethane			102.3		%		50-140	15-NOV-17
1,1,1-Trichloroethane			95.5		%		50-140	15-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R3885252								
WG2662489-5 MS		**WG2662489-3**						
1,1,2-Trichloroethane			103.2		%		50-140	15-NOV-17
1,1-Dichloroethane			100.1		%		50-140	15-NOV-17
1,1-Dichloroethylene			80.6		%		50-140	15-NOV-17
1,2-Dibromoethane			103.3		%		50-140	15-NOV-17
1,2-Dichlorobenzene			71.2		%		50-140	15-NOV-17
1,2-Dichloroethane			100.2		%		50-140	15-NOV-17
1,2-Dichloropropane			101.4		%		50-140	15-NOV-17
1,3-Dichlorobenzene			67.8		%		50-140	15-NOV-17
1,4-Dichlorobenzene			67.8		%		50-140	15-NOV-17
Acetone			102.6		%		50-140	15-NOV-17
Benzene			N/A	MS-B	%		-	15-NOV-17
Bromodichloromethane			97.7		%		50-140	15-NOV-17
Bromoform			98.6		%		50-140	15-NOV-17
Bromomethane			81.2		%		50-140	15-NOV-17
Carbon tetrachloride			91.9		%		50-140	15-NOV-17
Chlorobenzene			102.1		%		50-140	15-NOV-17
Chloroform			98.4		%		50-140	15-NOV-17
cis-1,2-Dichloroethylene			93.8		%		50-140	15-NOV-17
cis-1,3-Dichloropropene			91.3		%		50-140	15-NOV-17
Dibromochloromethane			105.1		%		50-140	15-NOV-17
Dichlorodifluoromethane			53.4		%		50-140	15-NOV-17
Ethylbenzene			N/A	MS-B	%		-	15-NOV-17
n-Hexane			95.0		%		50-140	15-NOV-17
m+p-Xylenes			96.4		%		50-140	15-NOV-17
Methyl Ethyl Ketone			94.7		%		50-140	15-NOV-17
Methyl Isobutyl Ketone			94.0		%		50-140	15-NOV-17
Methylene Chloride			94.3		%		50-140	15-NOV-17
MTBE			99.3		%		50-140	15-NOV-17
o-Xylene			98.7		%		50-140	15-NOV-17
Styrene			99.9		%		50-140	15-NOV-17
Tetrachloroethylene			93.4		%		50-140	15-NOV-17
Toluene			97.8		%		50-140	15-NOV-17
trans-1,2-Dichloroethylene			89.1		%		50-140	15-NOV-17

Quality Control Report

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R3885252								
WG2662489-5 MS		**WG2662489-3**						
trans-1,3-Dichloropropene			93.9		%		50-140	15-NOV-17
Trichloroethylene			93.8		%		50-140	15-NOV-17
Trichlorofluoromethane			85.0		%		50-140	15-NOV-17
Vinyl chloride			75.7		%		50-140	15-NOV-17

Quality Control Report

Workorder: L2021349 Report Date: 19-NOV-17

Client: TRINITY CONSULTANTS INC.
106-885 DON MILLS ROAD
TORONTO ON M3C1V9
Contact: BRIAN SCHUYLER

Legend:

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

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

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

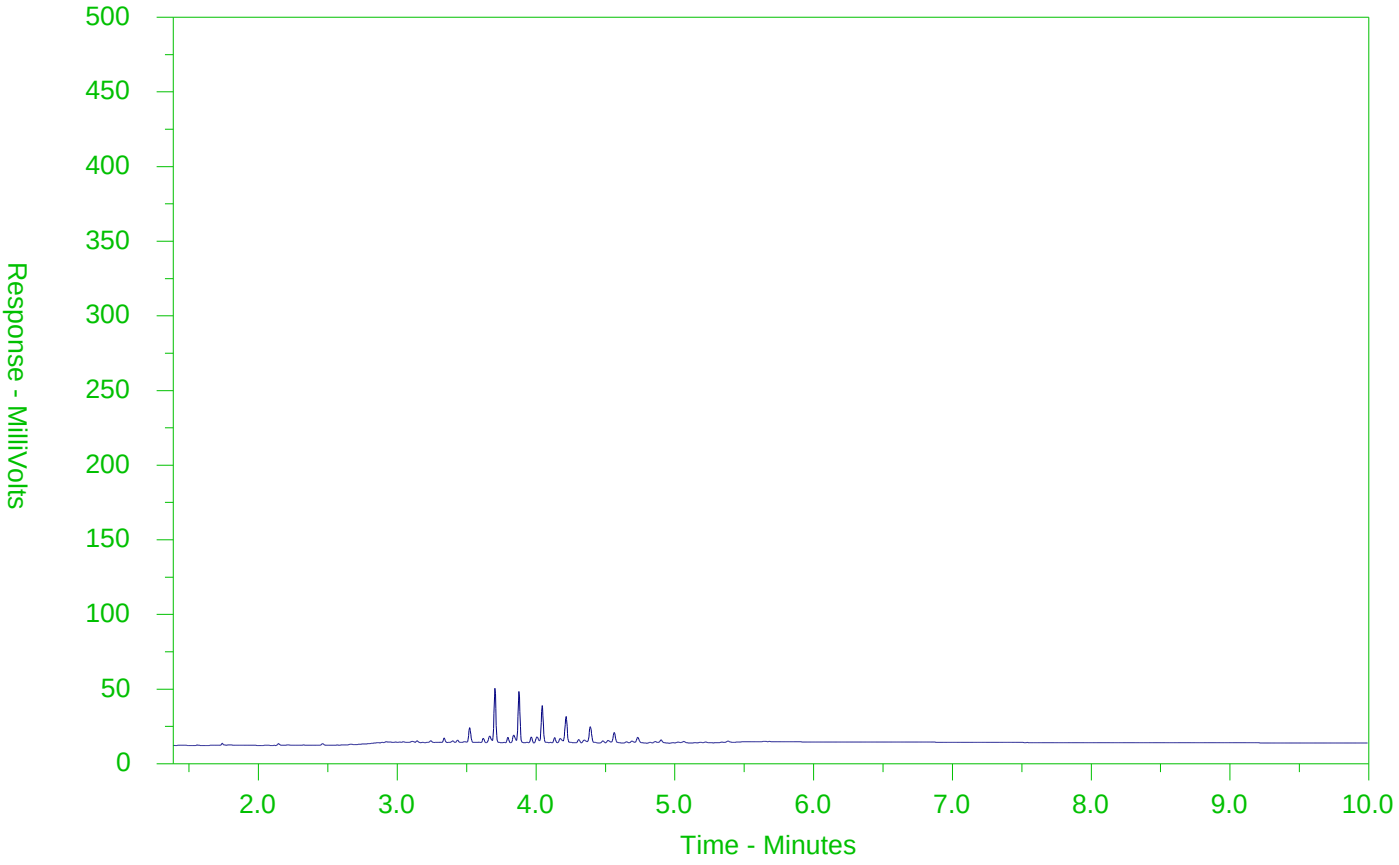
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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

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

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

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2021349-1
Client Sample ID: MW2



←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

L2021349-COFC

COC Number: 15 - 612812

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Trinity Consultants Ontario Inc.
Contact:	Brian Schuyler
Phone:	(416) 391-2577 x60
	Company address below will appear on the final report
Street:	895 Don Mills Rd. #106
City/Province:	Toronto, ON
Postal Code:	M3C 1W4

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

Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply

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

PRIORITY (Business Days): 4 day [P4] ☐ | 3 day [P3] ☐ | 2 day [P2] ☐

EMERGENCY: 1 Business day [E1] ☐ | Same Day, Weekend or Statutory holiday [E0] ☐

Date and Time Required for all E&P TATs:

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

Invoice To		
	Same as Report To	☑ YES ☐ NO
	Copy of Invoice with Report	☑ YES ☐ NO
Company:	Same	
Contact:		

Invoice Distribution	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	bschuyler@trinityconsultants.com
Email 2	

Project Information	
ALS Account # / Quote #	
Job #:	177201.0263
PO / AFE:	
LSD:	

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

ALS Lab Work Order # (lab use only): L2021349

ALS Contact: Mary-Lynn Sampler: B. Schuyler

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	PHC F1-F4/BTEX	PAHs	ICPMS Metals	pH	Number of Containers
	MW2	10-11-17	12:30	GW	✓	✓	✓	✓	6

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

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

Are samples for human drinking water use? ☐ YES ☐ NO

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

MOECC Table 1 Res/Park/Inst/Ind/Com/Comm

This is for a RSC.

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		
2.1°			3.8		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: B. Schuyler	Date: Nov. 10/17	Time: 13:30	Received by:	Date: NOV 10/17	Time: 1320 pm	Received by:	Date: 10/11/17	Time: 18:40

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

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

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

Appendix D

Site Survey

O.L.S. FILE # 16-32-4

I REQUIRE THIS PLAN TO BE DEPOSITED UNDER THE LAND TITLES ACT.

DATE: MARCH 20, 2017

THOMAS J. PACKOWSKI
ONTARIO LAND SURVEYOR

PLAN 43R-37578
RECEIVED AND DEPOSITED

DATE: March 22, 2017

"Jason West"
AS REPRESENTATIVE FOR LAND REGISTRAR FOR THE LAND TITLES DIVISION OF HALTON (NO. 43)

SCHEDULE

PART	LOT	PLAN/CONCESSION	AREA	PIN
1	PART OF 40 & 41 PART OF 11	R.P. TOR-5 CONCESSION 3 W.H.S.	0.157 HA	14085-2910 (LT)

PLAN OF SURVEY OF
PART OF LOT 11
CONCESSION 3
WEST OF HURONTARIO STREET
GEOGRAPHIC TOWNSHIP OF TORONTO, COUNTY OF PEEL
AND
PART OF LOTS 40 & 41
REGISTERED PLAN TOR-5
CITY OF MISSISSAUGA
REGIONAL MUNICIPALITY OF PEEL

SCALE 1:200

4 0 4 8 12 metres

GRAPHIC SCALE

CUNNINGHAM McCONNELL LIMITED
ONTARIO LAND SURVEYORS

METRIC NOTE
ALL DISTANCES SHOWN HEREON ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

LEGEND
- ■ DENOTES SURVEY MONUMENT FOUND
- □ " SURVEY MONUMENT SET
- SIB " STANDARD IRON BAR
- SSIB " SHORT STANDARD IRON BAR
- IB " IRON BAR
- IP " IRON PIPE
- WIT " WITNESS
- 950 " CUNNINGHAM McCONNELL LIMITED
- 1188 " SEXTON MCKAY LIMITED
- BJH " B.J. HAYNES O.L.S.
- (NI) " NO IDENTIFICATION
- PIN " PROPERTY IDENTIFIER NUMBER
- WHS " WEST OF HURONTARIO STREET
- P1 " PLAN 43R-13981
- P2 " PLAN 43R-28139
- P3 " PLAN 43R-36450

BEARINGS ARE UTM GRID, DERIVED FROM SPECIFIED CONTROL POINTS 0011663523 AND 075023003, UTM ZONE 17, NAD 83 (ORIGINAL).

COORDINATES ARE UTM ZONE 17, NAD 83 (ORIGINAL), TO URBAN ACCURACY PER SEC. 14 (2) OF O.REG. 216/10, AND CANNOT , IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

POINT ID	NORTHING	EASTING
0011663523	4831314.401	602688.747
075023003	4830144.015	601771.621

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.99972049.

FOR BEARING COMPARISONS, A ROTATION OF 0° 57' 15" COUNTERCLOCKWISE WAS APPLIED TO PLANS P1 AND P2.

SURVEYOR'S CERTIFICATE
I CERTIFY THAT:
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 22nd DAY OF FEBRUARY 2017.

DATE: MARCH 7, 2017

THOMAS J. PACKOWSKI
ONTARIO LAND SURVEYOR

CUNNINGHAM McCONNELL LIMITED
ONTARIO LAND SURVEYORS

205 MAIN STREET
MILTON, ONTARIO L9T 1N7
PHONE (905) 878-6672
FAX (905) 878-6672
EMAIL ADDRESS: cml@primus.ca

1200 SPEERS ROAD, UNIT 38
OAKVILLE, ONTARIO L6L 2X4
PHONE (905) 845-3497
FAX (905) 845-3519
EMAIL ADDRESS: cmlols@cogeco.net

O.L.S. FILE # 16-32-4
CLIENT: CREDIT VALLEY CONSERVATION AUTHORITY