REPORT ON

Phase Two Environmental Site Assessment
14245 Highway # 50
Caledon, Ontario

Prepared for:

Georgian Group Homes

Prepared By:

DS CONSULTANTS LTD.

DS Project No: 18-516-20
Date: April 26, 2018

DS CONSULTANTS LTD.
6221 Highway 7, Unit 16
Vaughan, Ontario, L4H 0K8
Telephone: (905) 264-9393
www.dsconsultants.ca

Table of Contents

TABLES:

FIGURES:

APPENDICES:

1. EXECUTIVE SUMMARY

DS Consultants Ltd. (DSCL) was retained by Georgian Group to complete a Phase Two Environmental Assessment (ESA) of the Property located at 14245 Highway # 50 (Hwy 50) located in Town of Caledon, Regional Municipality of Durham, Ontario" (Phase Two Property or the Property). The Phase Two Property covers an area of approximately 12.3 ha (30.4 acres) with a frontage of 223 m along Hwy 50.

DSCL understands that the Property will be developed for a mixed commercial/residential property use. 3.3 ha of the Property is reportedly zoned for commercial/retail use. The remainder of the property is proposed for a mixed low and high rise residential use. This Phase Two ESA was requested to facilitate development of the Property and for due diligence purposes.

The Phase Two ESA was completed to satisfy the intent of the requirements, methodology and practices for a Phase Two ESA as described in Ontario Regulation 153/04 (as amended).

DSCL recently conducted a Phase One ESA for the Property dated March 1, 2018. According to the Phase One ESA findings, the Property previously included a residential house with abasement. The building was demolished in the late 1990s or early 2000s. The potentially contaminating activities (PCAs) onsite included; historical heating system of the former dwelling (furnace oil), possible use of pesticides for agricultural purposes and present of fill materials at the location of former dwelling, for grading purposes.

The PCAs related to the offsite included; presence of Albion Auto Sales and Service (garage) located in the northwest corner of the Property.

In addition, according to the Ecolog Eris Report, the adjoining western property (Bolton Public Yard, located at 14220 Hwy 50) had been registered with the MOECC as a source for storage of variety liquid industrial wastes and a property located at Lot 13, Concession 7, to the southwest of the Property was occupied by Suny's Gas Bar on Hwy 50, at Queen with 100 L of gasoline spill to ground and storm in 1990. Based on the findings of the Phase One ESA, a subsurface soil and ground water investigation (Phase Two ESA) was recommended to confirm the quality of soil and ground water at the Property.

To investigate the above findings, a Phase Two ESA was conducted, which consisted of advancing boreholes and installing monitoring wells to collect soil and ground water samples at the Property.

Based upon the results of the Phase Two ESA, the following conclusions were presented:

- The Phase Two ESA consisted of drilling a total of four (4) boreholes on the Property. These boreholes were drilled to varying depths to maximum 9.2 m below ground surface (bgs) to investigate the soil and ground water condition at the Property.
- The stratigraphy beneath the investigated areas of the Property generally consisted of maximum of 300 mm of topsoil followed by native glacial till (primarily clayey silt to silty clay and sandy silt). Shale bedrock was not encountered at borehole locations to a maximum depth of 9.2 m.

- A total of eighteen (18) soil samples from the selected four (4) borehole locations including quality control (QC) duplicates were submitted for chemical analysis of petroleum hydrocarbons PHCs (F1-F4), volatile organic compounds (VOCs), organochlorine (OC) Pesticides and metals and inorganic parameters.
- An unnamed creek, a tributary of Humber River is located to the east of the Property. The results of the samples submitted for chemical analysis were compared to the generic site condition standards within 30 m of water body, in a potable ground water condition for coarse textured soil as contained in Table 8 of the Ministry of Environment and Climate Change (MOECC) publication "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" for industrial/commercial/community (ICC) and residential/parkland/institutional (RPI) Property Use, April 15, 2011.
- No exceedances of the applicable Standards (Table 8 ICC or RPI) for parameters analyzed in fine/medium or coarse textured soil were found in any of the soil samples analyzed. All samples met the MOECC Table 8 site condition standards.
- A total of eighteen (18) ground water samples from four (4) monitoring well locations including duplicated samples were analyzed for PHCs (F1-F4), VOCs, OC pesticides and metals and inorganic parameters.
- No exceedances of the applicable Standards for parameters analyzed were found in any of the ground water samples analyzed. All ground water samples met the MOECC Table 8 site condition standards.
- The measured pH values of soil and ground water samples were within the MOECC guideline.

Based on the available information, it is concluded that soil and ground water at the Property meet the MOECC Table 8 site condition standard within 30 m of water body in a potable ground water condition for residential/parkland/institutional (RPI) and industrial/commercial/ community (ICC) Property Use. Based on the findings of Phase Two ESA:

- No further investigation is required at this time.
- All wells installed during the subsurface investigation are required to be decommissioned in accordance with O.Reg. 903 when they are no longer needed for ground water observation.

2. INTRODUCTION

DS Consultants Ltd. (DSCL) was retained by Georgian Group to complete a Phase Two ESA of the Property located at 14245 Highway # 50 in The Town of Caledon, Regional Municipality of Peel, Ontario" (Phase Two Property or the Property).

DSCL understands that, the Property will be developed for mixed residential/commercial purposes and this Phase Two ESA was requested for due diligence purposes.

The Phase Two ESA was completed to satisfy the intent of the requirements, methodology and practices for a Phase Two ESA as described in Ontario Regulation 153/04 (as amended). It is reported that the intended use of the Phase Two ESA will be for due diligence purposes and not filing a Record of Site Condition.

The purpose of this Phase Two ESA was to determine the presence and/or extent of environmental impacts on, in or under the Phase Two Property resulting from the potentially contaminating activities (PCAs) identified during the previous investigations.

2.1 Site Description

The Property is an irregular shaped parcel of land that covers an area of approximately 12.3 ha (30.4 acres) with a frontage of approximately 223 m along Hwy 50.

The Property is located on the east side of Hwy 50 and north side of Columbia Way, in a mixed agricultural, residential, institutional and commercial area of the Town of Caledon. The Property is located an approximately 1 km to the north of King Street East and 0.7 km to the west of Mount Hope Road. For discussion purposes, Columbia Way at this location is assumed to be aligned in an east-west direction and Hwy 50 in a north-south direction. The Property location is presented in Figure 1.

2.3 Phase Two Property Information

The Property currently incudes no structures. The Property included a low rise residential house that was demolished in the late 1990s or early 2000s. The information for the Phase Two Property is provided in the following Table.

Phase One Property	Information	Source
Legal Description	Part of the Lots 11 and 12, Concession 7, Town of Caledon, Regional Municipality of Peel	Land Registry Office Survey Plan prepared by Krcmar, Ontario Land Surveyor Dated, April 17, 2009 (Appendix A)
Property Identification Number (PIN)	14331-0302 (LT)	Land Registry Office
Municipal Address	14245 Hwy 50, Caledon	Town of Caledon, online-information
Assessment Roll Number	212401000213501	Town of Caledon, online-information
Zoning	Vacant Residential/commercial/industrial land owned by a non-farmer with a portion being farmed	Town of Caledon, online-information

2.2 Property Ownership

The ownership information for the Phase Two Property is as follows:

Property Owner	Address	Contact Name	Source
Windcliffe Developments Inc.	1175 Meyerside Drive, Suite 2, Mississauga, ON, L5T 1H3	Anthony Maida, President and CEO 905-405-7270 amaida@georgiangroup.com	Land Registry Office Town of Caledon, online-information

2.3 Current and Proposed Future Uses

2.3.1 Current Use

The current use of the Property is agricultural.

2.3.2 Future Use

A mixed commercial /residential development is proposed for the Property. According to the owner, the 3.3 ha block of the Property is zoned for commercial/retail. The remainder of the property is proposed for low rise residential and some for high-rise residential apartments. This proposed property use does not represent a change to a more sensitive property use and therefore section 168.3.1 of the Environmental Protection Act would not require mandatory filing of a Record of Site Condition prior to the change in use of the Property.

2.4 Applicable Site Condition Standard

The applicable Site Condition Standards for the Phase Two Property were determined to be those contained in Table 8 of the April 15, 2011 Ontario Ministry of Environment and Climate Change (MOECC) "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" within 30 m of water body in a potable ground water condition. The selection of the Table 8 Standards is based on the following rationale:

a) *Location:*

The Property is located in the Town of Caledon. The property use in the area surrounding the Property is predominantly agricultural, institutional, commercial and residential.

b) *Property Use:*

The proposed use of the Phase Two property is for a mixed residential and commercial development which is not more stringent to the current property use.

c) *Coarse Textured Soil:*

For purpose of this report, coarse textured soil has been selected.

d) *Water body:*

The Property is located within 30 m of a surface water body. The Property included a water supply well installed in 1978.

e) Bedrock:

Bedrock across the Property is located at a depth of greater than 9 m.

f) Environmentally Sensitive:

The Property is not located in an area of environmentally sensitive.

Based on these considerations, the MOECC Table 8 Standards within 30 m of surface water for all property use [residential/parkland/institutional (RPI) and industrial/commercial/ community (ICC) property use] in a potable ground water condition for coarse textured soils contained in the Soil, Ground Water and Sediment Standards is to evaluate the environmental quality of the soil encountered at the.

3. BACKGROUND INFORMATION

3.1 Physical Setting

3.1.1 Water Bodies and Areas of Natural Significance

An unnamed creek, a tributary of Humber River is located to the east of the Property.

Environmentally Significant Areas are natural areas that have been identified as significant and worthy of protection on three criteria – ecology, hydrology and geology. Municipalities has developed policies to protect natural heritage features. The Region uses Environmentally Significant Areas as a means to protect natural areas like wetlands, fish habitat, woodlands, habitat of rare species, groundwater recharge and discharge areas, and Areas of Natural and Scientific Interest.

The Property includes an open field. According to the Town of Caledon, official plans, "Schedule S, The Greenbelt in Caledon" Greenbelt Plan Natural Heritage System areas are located to the east of the Property, west of Mount Hope Road and west of Hwy 50.

3.1.2 Topography and Geology

According the topographic map of 30 M/13 "Bolton Ontario", edition 6, which covers the subject Property, the ground surface in the vicinity of the Property is relatively flat and slopes in a southeasterly direction towards Humber River, located approximately 1.5 km to the southeast of the Property. An unnamed branch of the creek is located to the east. A tributary of Humber River is also located to the west of Hwy 50, west of the Property. The shallow groundwater flow on the Property is expected to be partially towards southwest and partially towards southeast.

According to the topographic map, the Property is located in an elevation of approximately 265 m above mean sea level and 195 m above sea level (Lake Ontario) located approximately 40 km to the south.

According to the geological map entitled "Quaternary Geology of Ontario-Southern Sheet" Map 2556, published by the Ministry of Northern Development and Mines, dated 1991, the overburden in the region of the Phase One Property consists of Halton Till from the Ontario-Erie lobe. This material is generally characterized as a silt to silty-clay till.

According to the bedrock geology map entitled "Bedrock Geology of Ontario-Southern Sheet" published by the Ministry of Northern Development and Mines, dated 1991, the bedrock in the area

consists of Upper Ordovician, Queenston Formation. The Queenston Formation consists of shale, limestone, dolostone and siltstone. It should be noted that the subsurface soil, rock and ground water conditions described above represent generalized conditions only and should not be considered site specific.

3.2 Past Investigations

3.2.1 Relevant Past Investigations

A geotechnical report was prepared by Engtec Consulting Inc., dated February 2018. The investigation included drilling 16 boreholes. No monitoring wells were installed. The logs were available to DSCL to review. Fill materials to a maximum depth of 2.5 m was reported at the Property along the western property boundary. According to the logs the Property included clayey silt till and sandy silt. No bedrock was observed at the location of boreholes that extended to a maximum depth of 6.5 m bgs.

DSCL prepared a Phase One ESA for the Property. The report entitled:

- "Phase One ESA, 14254 Highway #50, Caledon, Ontario" dated March 1, 2018

According to the report:

- The Property was developed for residential purposes in 1970s and mainly been used for agricultural purposes. According to the aerial photograph dated 1976, the Property included a residential type building located to the northwest of the Property with an access road from Highway 50. The residential house was demolished in the late 1990s or early 2000s.
- Based on information obtained through the records review and chain of tile search, the Phase One Property was owned by Crown prior to 1831 and by private individuals from 1810 to 1968. Wyndcliffe Developments Inc. has owned the Property since 1985.
- The Property had an uneven surface that is mainly an open field that covered by long grass, bushes and some trees.
- Based upon a review of the conditions outlined in Part 1X Sections 41 and 43.1 of Ontario Regulation 153/04 the Property was considered to be a Sensitive Site since it is within 30 m of water body, includes a creek located to the east. The applicable site condition standards for the Property is Table 8 within 30 m of water body in a potable ground water condition.
- According to the Ecolog ERIS historical records search, the Property was listed in water well information system databases. A water supply well was installed in 1978 to a maximum depth of approximately 45 m (148 ft). No other information was available for the Property.
- The Property was surrounded by institutional, residential/open space, and commercial (garage, public works, garden centre) properties.

Based on the findings of the Phase One ESA, DSCL recommended a subsurface soil and ground water investigation (Phase Two ESA) at the Property to investigate the soil and ground water quality.

4. SCOPE OF THE INVESTIGATION

The scope of the Phase Two ESA was determined to assess the soil and ground water quality at the Property, based on the findings of the Phase One ESA completed at the Property.

4.1 Overview of Site Investigation

The Phase Two ESA included drilling four (4) boreholes and installation of a monitoring well in each borehole.

The Phase Two ESA for the Property included the following work at the Property:

- Request to the various utility providers through the Ontario One call network
- Preparing personnel and equipment to complete the work
- Private utility locate was carried out prior to the subsurface investigation in at the location of the investigation
- A preliminary Site visit and development of the Phase Two work plan
- Collection and analysis of soil samples for select potential contaminants of concern (COCs) including
    - Metals
    - Hydride Forming Metals (H-M)
    - Selected other regulated parameters (ORPs)
        - Boron-Hot Water Soluble (B-HWS)
        - Cyanide (CN-)
        - Electrical Conductivity (EC)
        - Mercury (HG)
        - pH
        - Sodium Adsorption Ratio (SAR)
    - Volatile organic compounds (VOCs)
    - Benzene, Toluene, Ethylbenzene, and Xylene (BTEX)
    - Petroleum hydrocarbons (PHCs)
    - OC Pesticides
    - Polycyclic aromatic hydrocarbons (PAHs)
- Measure ground water elevation within all the monitoring well and observed the well conditions
- Develop recently installed monitoring wells
- Survey the monitoring wells and measure the ground water levels in all wells for identification of the ground water flow direction
- Collection and analysis of Ground water samples for select potential contaminants of concern (COCs) including:
    - Metals
    - Hydride Forming Metals (H-M)

- Selected other regulated parameters (ORPs)
  - Boron-Hot Water Soluble (B-HWS)
  - Cyanide (CN-)
  - Electrical Conductivity (EC)
  - Mercury (HG)
  - pH
  - Sodium Adsorption Ratio (SAR)
- Volatile organic compounds (VOCs)
- Benzene, Toluene, Ethylbenzene, and Xylene (BTEX)
- Petroleum hydrocarbons (PHCs)
- Polycyclic aromatic hydrocarbons (PAHs)
- OC Pesticides

- Review the analytical results and compare with the current applicable MOECC Table 8 and
- Data interpretation and report preparation.

4.2 Media Investigated

4.2.1 Rationale for Inclusion or Exclusion of Media

Media	Included or Excluded	Rationale
Soil	Included	Soil at the Phase Two Property was identified as being a potentially contaminated medium due to the historical heating system, use of fill and pesticides at the Property. Albion auto repair shop is located to the northwest of the Property since 1970s. The records review revealed potential offsite contaminating activities.
Ground water	Included	Ground water at the Phase Two Property was identified as being a potentially contaminated medium as a result of historical activities on the Property and adjoining properties.
Sediment	Excluded	Sediment was not included for sampling and analysis.
Surface Water	Excluded	Surface water body was not included for sampling and analysis.

4.2.2 Overview of Field Investigation of Media

During the soil sampling, split spoon sampling device was used, and ground water was collected from all four (4) monitoring wells.

4.3 Phase One Conceptual Site Model

Based on the records review, the following Table summarizes areas of potential environmental concern (APECs) and potential contaminants of concern (CoCs) and media of potentially impacted.

APEC[1]	Location of APEC on Phase One Property	PCA	Location of PCA	Contaminants of Potential Concern	Media Potentially Impacted
APEC #1	Entire Property	40 (Pesticides)	On-Site	OC pesticides	Soil, Groundwater
APEC #2	Western portion of the Property	30 (Fill importation),	Off-Site	Metals & Inorganics	Soil,
APEC #3	Western portion of the Property	28 (Fuel Storage)	On-Site	PHC fractions F1-F4, BTEX	Soil, Groundwater
APEC #4	Western portion of the Property	10 (Body Shop),	Off-Site	PHC fractions F1-F4, VOCs, PAHs, metals and inorganics	Soil, Groundwater

Notes:
1 area of potential environmental concern (APEC) means the area on, in or under the Phase One Property where one or more contaminants are potentially present.

The rational for the selection of the boreholes for environmental purposes is shown on the following Table.

Sample ID	Location	Parameter Analysed (O.Reg. 153/04 as amended)
BH18-1	At the west portion of the Property to assess potential impacted to the property resulting from historical activity of the Property and adjoining properties.	Soil: PHCs (F1-F4), VOCs, PAHs, OC Pesticides, M & I
BH18-2	At the south side of the Albion garage to assess potential impacted to the Property resulting from historical activity of the adjoining northern property	Soil: PHCs (F1-F4), VOCs, PAHs, OC Pesticides, M & I
BH18-3	At the northern portion of the Property to assess potential impacted to the property resulting from historical activity of the Property.	Soil: PHCs (F1-F4), OC Pesticides, M & I
BH18-4	At the eastern portion of the Property to assess potential impacted to the Property resulting from historical activity of the Property and adjoining upgradient properties (northwestern and western) based on the inferred ground water flow direction towards the southeast.	Soil: PHCs (F1-F4), OC Pesticides, M & I

4.4 Deviations from Sampling and Analysis Plan

There were no deviations from the sampling and analysis plan.

4.5 Impediments

There were no physical impediments or denial of access with respect to the sampling and analysis plan developed for this Phase Two ESA

5. INVESTIGATION METHOD

5.1 General

The Phase Two ESA followed the methods outlined in the following documents:

- *Ontario Ministry of the Environment "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario" (December 1996)*
- Ontario Ministry of the Environment "Guide for Completing Phase Two Environmental Site Assessments under Ontario regulation 153/04" (June 2011)
- Ontario Ministry of the Environment "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act" (July 2011)
- The methods used in the Phase Two ESA investigation did not differ from the associated standard operating procedure.

The ESA was completed in accordance with the Sampling and Analysis Plan.

5.1.1 Utility Clearances

Utility clearances were undertaken prior to commencing the subsurface investigation. Various utility agencies were contacted to identify buried services on public land in the vicinity of the subject Property. A private locator was retained to survey the proposed borehole locations for buried services (Appendix D). No conflicts between the proposed borehole locations and underground utilities were encountered.

5.2 Drilling and Excavation

The subsurface soil and ground water investigation included advancing four (4) boreholes on April 9,2018. Drilling dates are provided in logs presented in Appendix B.

Boreholes were advanced to depth ranged from7 to 9.2 m (23 to 30 ft) m below ground surface to confirm soil and ground water condition at the Property. The location of boreholes is shown on attached Borehole Location Plan, Figure 2.

Monitoring wells were installed in each borehole. The drilling information by DSCL is provided in the following Table:

Date of Drilling	April 9, 2018
Name of Contractor	Terra Firma Environmental Servicies Ltd. (Terra Firma), Toronto, Ontario
Equipment Used	CME-55T Hallow and solid stem 2-inch split spoon soil sampling device
Decontamination Measures	The split spoon sampling device was washed between each sample to minimize potential cross-contamination
Sample Frequency	Please refer to the borehole logs in Appendix B for recovered soil samples

Information for drilling is provided in the logs attached to this report (Appendix B).

5.3 Soil Sampling

All soil samples were recovered from the boreholes using a washed split spoon sampling system and placed into laboratory prepared sample containers for transport back to our soils laboratory for

further soil classification, organic vapour screening, basic index property testing and short-term laboratory storage.

Measures were taken in the field and during transport to preserve sample integrity prior to chemical analysis. Recommended volumes of soil samples selected for chemical analysis were collected from the recovered cores into pre-cleaned, laboratory-supplied glass sample jars/vials identified for the specified analytical test group. Samples intended for VOC and the F1 fraction of petroleum hydrocarbons analysis were collected using a laboratory-supplied soil core sampler, placed into the vials containing methanol for preservation purposes and sealed using Teflon lined septa lids.

All soil samples were placed in clean coolers containing ice prior to and during transportation to the subcontract laboratory, ALS Environmental (ALS) of Mississauga, Ontario. The samples were transported/submitted to ALS following Chain of Custody (COC) protocols for chemical analysis.

Decontamination and other protocols were followed during sample collection and handling to minimize the potential for sample cross-contamination. New, dedicated disposable nitrile gloves were used for the handling and sampling of each retrieved soil core. The core barrel samplers were decontaminated between sampling intervals by the drilling contractor using a potable water/phosphate-free detergent solution followed by rinses with potable water and de-ionized water. Wash and rinse waters were collected in sealed, labeled containers.

The detailed stratigraphy encountered at each of the borehole locations is presented in the Borehole Logs, Appendix B. A detailed description of the subsurface conditions is presented in Section 6.1.

5.4 Field Screening Measurements

All retrieved soil samples were screened in the field for visual and olfactory observations. No obvious visual or olfactory evidence of potential contamination was noted. No aesthetic impacts (e.g. cinders, slag, hydrocarbon odours) were encountered during this investigation. The soil sample headspace vapour concentrations for all soil samples recovered during the investigation were screened using portable hydrocarbon vapour testing equipment in accordance with the procedure outlined in the MOECC's '*Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario'.*

The soil samples were inspected and examined to assess soil type, Ground water conditions, and possible chemical contamination by visual and olfactory observations or by organic vapour screening. Samples submitted for chemical analysis were collected from locations judged by the assessor to be most likely to exhibit the highest concentrations of contaminants based on several factors including (i) visual or olfactory observations, (ii) sample location, depth, and soil type (iii) Ground water conditions and headspace reading.

Samples were screened using an RKI Instruments Eagle 2 Monitor Type 5101-P2, Serial No. E2A292.

Field screening was conducted for selecting samples for petroleum hydrocarbon and volatile organic compounds laboratory analysis. The headspace reading is provided in the borehole logs, Appendix B.

5.5 Ground water: Monitoring Well Installation

Monitoring wells were installed in all four boreholes by Terra Firma under the supervision of a DSCL staff. The wells were constructed of 50-mm (2-in) ID PVC screens and risers. Filter sand was placed around the well screen to approximately 0.6 m above the top of the screen. The wells were then backfilled with bentonite to approximately 0.3 m below ground surface. All Ground water wells were installed by the licensed well drilling contractor in accordance with O. Reg. 903, as amended. The monitoring well BH18-4 was tagged (Well Tag no. A233647) by Terra Firma of Toronto, and well records were completed and filed with the Ontario Ministry of the Environment by drillers. The well depths, screen lengths, and elevations are shown on borehole logs in Appendix B.

The details of the individual monitoring wells are shown on the borehole logs in Appendix B.

5.6 Ground water: Field Measurement of Water Quality Parameters

During purging water, ground water samples were visually screened for turbidity, suspended solids, odour, or sheen. No sheen or free products or odour were observed in the wells.

5.7 Ground water: Sampling

Ground water was sampled using a dedicated bailer in each well. Disposable latex gloves were worn at each sample site. The ground water samples were immediately placed into coolers packed with ice pending delivery to the analytical laboratory. The development and sampling of monitoring wells were conducted on April 13 and 17, 2018.

Sampling methodology from the Ontario Ministry of the Environment "*Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*" and Ontario Ministry of the Environment "*Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act*" were followed in the collection of the ground water samples.

5.8 Sediment: Sampling

Sediment is not present on the subject Property; therefore, sediment sampling is not applicable.

5.9 Analytical Testing

The soil and ground water analyses were completed by ALS Environmental ALS Laboratories (ALS) of Mississauga, Ontario. ALS is accredited by the Canadian Association for Laboratory Accreditation (CALA).

5.10 Residue Management Procedures

i. Soil Cuttings

Soil cuttings from borehole drilling were retained onsite for future offsite disposal pending the outcome of analytical testing.

ii. Well Purge Water

Water from development and purging of wells was collected and retained on the Property in sealed containers, for future offsite disposal, pending the outcome of analytical testing.

iii. Equipment Cleaning Fluids

The fluids from cleaning were removed from the Property and disposed of by the driller.

5.11 Elevation Surveying

The elevation of each monitoring well was established by our field staff using a calibrated Sokkia Magnet Field 1.0 survey instrument. The ground surface elevations at the borehole locations were referenced to onsite geodetic elevations.

5.12 Quality Assurance and Quality Control Measures

Soil samples were collected in laboratory prepared sample containers affixed with labels identifying project number, sample identification (borehole number, sample number), sampling date, type of preservative and analysis required. Samples were recorded on laboratory chain-of-custody forms.

All sample containers were labelled according to identify the sample location. Documentation related to sample location was recorded for each sample. The samples were immediately placed in coolers packed with ice.

Until delivery to the analytical laboratory, custody of the samples was maintained by DSCL. On completion of daily field activities, the samples were returned to DSCL office and stored in a refrigerator pending selection of samples for analytical testing. DSCL transferred custody of the samples that had been selected for analysis to ALS Laboratories within an adequate time frame to ensure 'hold times' would be within the acceptable criteria. Chain of Custody forms identifying the samples and analyses were submitted to the laboratory to document the transfer of custody.

Quality control samples included field duplicates. The following quality control measures were implemented for this investigation.

a. No quality control issues were identified in any of the QC samples.

b. There were no significant deviations from the sampling and analysis plan.

c. A clean pair of disposable latex gloves was used for each sample (soil and ground water) that was collected.

d. All sampling equipment including samplers and utensils were thoroughly cleaned between sampling. For ground water sampling, dedicated one-time PVC bailers were used for each well and for each sampling event.

e. Field quality control measures included the submission of split field duplicates for soil and split field duplicates, for ground water. The calibration of field instruments was checked against calibration fluids or gases.

f. There were no significant deviations from the procedures set out in the quality assurance and quality control plan.

g. All sample containers had the sample labels securely affixed to the container with clear packing tape.

h. Caps on the sample containers were checked to ensure they are properly sealed.

i. Laboratory supplied Chain-of-custody forms were completed with required sampling information.

j. QP reviewed or signed and dated chain-of-custody forms to document the sample custody transfer.

k. Sample containers were protected in bubble wrap or other cushioning material.

l. Sealed sample containers were placed in a cooler with ice during transferring to office.

There were no deviations from the procedures set out in the quality assurance and quality control program set out in the sampling and analysis plan.

6. REVIEW AND EVALUATION

6.1 Geology

Boundaries of soil indicated on the log sheets are intended to reflect transition zones for the purpose of environmental assessment and should not be interpreted as exact planes of geological change. The general stratigraphy at the Property, as observed in the boreholes, consists of clayey silt to silty clay till. No aesthetic impacts (e.g. cinders, slag, hydrocarbon odours) were encountered during this investigation. A brief description of the soil stratigraphy at the Property, in order of depth, is summarized in the following sections. Detail information for site stratigraphy is provided in Engtec geotechnical report (February 2018).

The detailed soil profiles encountered in each borehole are provided on the attached borehole logs (Appendix B).

Surficial Materials

All boreholes encountered a surficial layer of topsoil with maximum depth of 0.35 cm.

Fill

Fill materials were observed at drilled borehole locations to a maximum depth of 1.2 m.

Native Soil

Underlying the surficial materials, all boreholes encountered native undisturbed firmed to hard, very dense fine-grained clayey silt to silty clay till, sandy silt to silty sand to a maximum depth of 9 mbgs.

Bedrock

The bedrock was no encountered in borehole location that extended to 9 m bgs.

6.2 Ground water: Elevations and Flow Direction

6.2.1 Rationale for Monitoring Well Locations and Screen Intervals

The Property included 4 wells to provide full site coverage. The monitoring wells were screen within the glacial till.

6.2.2 Results of interface Probe Measurement

Ground water levels were measured as part of the investigation using a Solinst interface probe. There was no evidence of light non-aqueous phase liquid (LNAPL) in the monitoring wells.

6.2.3 Ground Water Elevation

Water levels were measured during April 2018. Based on the ground water levels measured in the onsite monitoring wells, the local ground water flow is generally in a southeasterly direction toward the tributary of Humber River is located approximately 1.5 km to the southeast of the Property. An unnamed branch of the river is located within eastern property boundary.

Ground water levels are anticipated to fluctuate with cyclical patterns of wetting and drying and these variations could result in short term changes to Ground water flow directions. The ground water levels are summarized in the following Table.

Well ID	Ground Elevation (mbgs)	Well Depth	Drilled Date	Water Level (mbgs)	Water Level (mbgs)	Well Depth (m)	Water Level (mbgs)	Water Elevation (mbgs)
				1st Reading April 9, 2018	**2nd Reading April 13, 2018**	**April 13, 2018**	**3rd Reading April 25, 2018**	**April 25, 2018**
BH18-1	263.55	7.6m	9/4/18	wet	0.77	7.03	0.77	262.8
BH18-2	264.4	7.6m	9/4/18	wet	0.56	7.64	0.65	263.7
BH18-3	263.41	9.2m	9/4/18	dry	8.97	9.31	8.94	254.5
BH18-4	261.71	7.6m	9/4/11	wet	6.68	7.64	6.56	255.2

Note:
- Ground water depth is meter below ground surface (mbgs)
- The ground surface elevations and elevations were referenced to a geodetic benchmark (Sokkia Magnet Field 1.0)

Ground water elevations in the monitoring wells was established using a water level probe with depth measurements referenced to geodetic top-of-casing elevations.

Based on the Ground water levels measured in the onsite monitoring wells, shallow ground water condition is present at the Property and it is subject to vary depend on seasonal weather condition.

Ground water levels are anticipated to fluctuate with cyclical patterns of wetting and drying and these variations could result in short term changes to Ground water flow directions.

The local Ground water flow is generally in a southeasterly direction toward the tributary of Humber River located to the east of the Property.

6.3 Ground water: Hydraulic Gradients and Hydraulic Conductivity

6.3.1 Horizontal Hydraulic Gradient

A hydraulic gradient based on the limited number of installed monitoring events (less than a month reading) and limited number of ground water level readings may be unreliable.

6.3.2 Hydraulic Conductivity

A hydraulic gradient based on the limited number of monitoring events (within 2 weeks reading) and limited number of ground water level readings may be unreliable, and thus one is not provided herein. According to Freeze and Cherry (1979), the typical hydraulic conductivity of the strata investigated at the Property are:

Native Soil (Sandy Silt) 10^{-4} m/s to 10^{-6} m/s

Native Soil (Silt) 10^{-6} m/s to 10^{-8} m/s

Native Soil (Clay) 10^{-8} m/s to 10^{-10} m/s

6.4 Fine Medium Soil Texture

The native soil deposits encountered at the Property were identified to generally consist of clayey silt till and sandy silt. Based on visual assessment of soil texture, the assessor determined that at least one-third of the Site soils by volume are comprised of clayey silt to silty clay (i.e. fine textured). However, for the determination of applicable soil standards, the Property is classified as coarse textured, as per O. Reg. 153/04 as amended (Appendix B).

6.5 Soil Field Screening

All soil samples were screened in the field for visual evidence of potential contamination. No obvious visual or olfactory evidence of potential contamination was noted.

All soil samples were screened in the field using portable hydrocarbon vapour testing equipment and following the procedure outlined in the “Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario” published by the Ministry of Environment and Climate Change.

Organic vapor monitoring (OVM) was carried out on soil samples using a calibrated RKI Model Eagle-2 Type 5101-P2, s/n E2A292. The headspace readings were generally in the range of 0 to 10 ppm.

These readings are considered to be generally low and do not indicate the presence of any significant or widespread contamination.

The OVM screening results are on the borehole logs.

6.6 Soil Quality

6.6.1 Locations and Depths of Samples

A summary of the soil samples, location and the depths of the samples analyzed during this Phase Two ESA are provided in following Table. Summaries of the chemical analyses are provided in Tables 1 – 5 and are discussed below. Copies of the laboratory certificates of analyses are provided in Appendix B.

Based on the scope of work and field screening DSCL submitted eighteen (18) soil samples including duplicate samples for quality control (QC) from 4 borehole locations for chemical analyses of PHCs (F1-F4), VOCs, OC pesticides, PAHs and metal and inorganics to ALS Environmental.

The following Table presents a summary of the soil samples and selected analyses.

Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)
BH18-1-SS-1	0-0.6 m	OC Pesticides
BH18-1-SS-2	0.6-1.2 m	PAHs
BH18-1-SS-3	1.2-1.8 m	M & I
BH18-1-SS-7	5.5-6.1 m	PHCs (F1-F4), VOCs
BH18-2-SS-1	0-0.6 m	M & I
BH18-2-SS-2	0.6-1.2 m	OC Pesticides
BH18-2-SS-3	1.2-1.8 m	PAHs, PHCs (F1-F4), VOCs
BH18-3-SS-2	0.6-1.2 m	M & I
BH18-3-SS-3	1.2-1.8 m	OC Pesticides
BH18-3-SS-5	3-3.6 m	PHCs (F1-F4)
Dup-1	(Duplicate of BH18-3-SS-5) 3-3.6 m	PHCs (F1-F4)
BH18-4-SS-1	0-0.6 m	OC Pesticides
BH18-4-SS-3	1.2-1.8 m	M & I
Dup-2	(Duplicate of BH18-4-SS-3) 1.2-1.8 m	M & I
BH18-4-SS-4	1.8-2.4m	PHCs (F1-F4),

Note :
OC Pesticides Organochlorine Pesticides
PHCs Petroleum Hydrocarbons
VOCs Volatile Organic Compounds
M & I Metals and Inorganics
PAHs Polycyclic Aromatic Hydrocarbons

6.6.2 Analytical Test Results

Metals and Inorganics in Soil

All the soil samples submitted for analysis of metals and inorganic parameters were reported to have no exceedances of the applicable MOECC Table 8 Site Condition Standards for RPI or ICC (all Property use).

Petroleum Hydrocarbons (PHCs) in Soil

None of the soil samples submitted for analysis of PHC parameters were reported to have exceedances of the applicable MOECC Table 8 Site Condition Standards for all property use.

Volatile Organic Compounds (VOCs) in Soil

None of the soil samples submitted for analysis of VOC parameters including; benzine, Toluene, ethylbenzene, xylene (BTEX), were reported to have exceedances of the applicable MOECC Table 8 Site Condition Standards for all property use.

Organochlorine Pesticides (OC Pesticides) in Soil

None of the soil samples submitted for analysis of OC pesticides were reported to have exceedances of the applicable MOECC Table 8 Site Condition Standards for all property use.

Polycyclic Aromatic Hydrocarbons (PAHs) in soil

None of the soil samples submitted for analysis of PAHs were reported to have exceedances of the applicable MOECC Table 8 Site Condition Standards for all property use.

The laboratory Certificates of Analysis are provided in Appendix B.

Soil pH

The following Table presents the pH values for the soil found across the Property.

CaCl2 Extraction pH Unit N/A 0 to 9 for surface soil (depth less than 1.5 m) 5.0 to 11 for sub-surface soil (depth more than 1.5 m)	Client Sample ID			BH18-1, SS3 1.2-1.8 m m	BH18-2, SS1 0-0.6 m	BH18-3, SS2 0.6-1.2 m	BH18-4, SS3 1.2-1.8 m	DUP-2 BH18-4-SS3 1.2-1.8 m
	Date Sampled			9-Apr-2018	9-Apr-2018	9-Apr-2018	9-Apr-2018	9-Apr-2018
	Time Sampled			12:00	12:00	12:00	12:00	12:00
	ALS Sample ID			L2078796-3	L2078796-5	L2078796-8	L2078796-12	L2078796-15
	Parameter	Guideline Limit	Lowest Detection Limit	Soil	Soil	Soil	Soil	Soil
	pH		**0.10**	**7.58**	**7.61**	**7.67**	**7.60**	**7.65**

Based on the above noted Table, the pH for the soil is within 7.58 to 7. 67 at the Property and does not exceed the MOECC applicable Standard. Complete laboratory results are provided in **Appendix C**.

6.6.3 Contaminants of Concern

On the basis of the analytical testing, no contaminant of concern has been identified at the Property.

6.6.4 Chemical and Biological Transformations

Based on the analytical results, there is no obvious evidence of Ground water contaminants related to chemical and/or biological transformations that have or may have occurred.

6.6.5 Soil to Ground Water Contaminant Transfer

There is no evidence to indicate soil to Ground water contaminant transfer.

6.6.6 Non-Aqueous Phase Liquids

Based on the Ground water interface meter measurements, organic vapour meter testing, Ground water sampling, and analytical testing, there is no observed or reported evidence of non-aqueous phase liquids (NAPLs).

6.7 Ground water Quality

6.7.1 Sample Locations and Depth Intervals

A total of eighteen (18) ground water samples, including one QC samples from total four (4) monitoring wells installed by DS on the Property, were analysed for metal and inorganics, petroleum hydrocarbons (PHCs), OC pesticides and volatile organic compounds (VOCs) as shown on the following Table.

Sample ID	Parameter Analysed
MW18-1	Metals and Inorganics, PHC (F1-F4), VOCs, OC pesticides
MW18-2	Metals and Inorganics, PHC (F1-F4), VOCs
MW18-3	Metals and Inorganics, PHC (F1-F4), VOCs, OC pesticides
MW18-18	Metals and Inorganics, PHC (F1-F4), VOCs, OC pesticides
QC-1 (MW18-1) (Dup)	Metals and Inorganics, PHC (F1-F4), VOCs

The laboratory Certificates of Analysis are provided in Appendix B.

6.7.2 Field Filtering

Ground water samples were filtered for all metal samples analyses that required field filtering as per the requirement of the Ontario Ministry of Environment and Climate Change *"Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act"* (July 2011). A 0.45 micron filter was used for field filtration.

6.7.3 Analytical Test Results

Summaries of the chemical analyses for ground water are provided in Tables 6 - 9 and are discussed below. Copies of the laboratory certificates of analyses are provided in Appendix B.

Petroleum Hydrocarbons (PHCs) in Ground Water

None of the ground water samples submitted for analysis of PHC parameters were reported to have exceedances of the applicable PHC Site condition standards (Table 8).

Volatile Organic Compounds (VOCs) in Ground Water

None of the Ground water samples submitted for analysis of VOCs parameters were reported to have exceedances of the applicable VOCs Site condition standards (Table 8).

Metals and Inorganics in Ground Water

No exceedances of the MOECC Table 8 Site Condition Standards (SCS) for ground water were observed for the parameters analysed for metals and inorganics. All samples met the MOECC Table 8 SCS.

Organochlorine Pesticides (OC Pesticides) in Ground Water

None of the Ground water samples submitted for analysis of VOCs parameters were reported to have exceedances of the applicable VOCs Site condition standards (Table 8).

According to the Certificate of Analysis, the pH of the ground water sample was within the acceptable values of the MOECC Standards of 5 to 9 (7.95-8.06).

6.7.4 Contaminants of Concern

On the basis of the analytical testing, no contaminants of concern are confirmed to be present in Ground water at concentrations exceeding the applicable Site condition standards.

6.7.5 Chemical and Biological Transformations

Based on the analytical results, there is no obvious evidence of ground water contaminants related to chemical and/or biological transformations that have or may have occurred.

6.7.6 Soil to Ground Water Contaminant Transfer

Based on ground water samples collected for chemical analyses, there is no evidence of soil to Ground water contaminant transport, onsite.

6.7.7 Non-Aqueous Phase Liquids

Based on the Ground water interface meter measurements, organic vapour meter testing, Ground water sampling, and analytical testing, there is no observed or reported evidence of non-aqueous phase liquids (NAPLs).

6.8 Sediment Quality

There are no sediments on the subject property and therefore no sediments were analyzed.

6.9 Quality Assurance and Quality Control Results

6.9.1 Quality Control Samples

QA/QC measures included the general collection of field duplicates of both soil and ground water samples submitted to the analytical laboratory under separate identifier labels to maintain the integrity of the sample. Field duplicates were submitted as part of quality control procedures and reviewed as to their variance from the associated companion sample. Field duplicate results are reported next to their companion duplicate in the attached laboratory results.

All reported analytical results for field duplicates were reviewed and found to have no variations from the reported results for the corresponding companion samples, and are deemed to be supportive of the usefulness, appropriateness and accuracy of the analytical data.

All soil and Ground water analyses were carried out by ALS which holds Standards Council of Canada (SCC) and Canadian Association for Environmental and Analytical Laboratories (CAEAL) accreditation. Laboratory QA/QC data from the laboratory is included with the attached Certificates of Analyses.

6.9.2 Deviations from Analytical Protocols

There were no significant deviations from the applicable analytical protocols for any of the samples submitted with respect to holding time, preservation method, storage requirements or container type.

6.9.3 Certificates of Analyses

Certificates of analyses were received from ALS pursuant to clause 47 (2) (b) of the regulation and were found to comply with subsection 47 (3).

A certificate of analysis has been received for each sample submitted for analysis and all certificates of analyses received have been included in full in Appendix C of this report.

6.9.4 Laboratory Qualifications or Remarks

There were no instances where the analytical laboratory qualified any results or made remarks in the certificates of analysis or analytical report about a sample.

6.9.5 Quality of Field Data

The overall quality of the field data from the investigation was found to be acceptable with no significant deviations from the sampling plan, sampling protocols or analytical protocols.

6.10 Phase Two Conceptual Site Model

The Phase Two Conceptual Site Model consists of this text and the following Figures:

- Figure 1 – Site Location Plan
    - Identifies the location of the subject site
- Figure 2 – Borehole Location Plan
    - Identifies the soil and Ground water testing locations on the Property
- Figure 3 – Soil Characterization
    - Identifies soil results pass or fail the MOECC SCS
- Figure 4 – Ground water Characterization
    - Identifies Ground water results pass or fail the MOECC SCS

6.10.1 Potentially Contaminating Activities and Areas of Potential Environmental Concern

The stratigraphy of the site is discussed in Section 6.1. The approximate depth to bedrock based on the investigation is over 9 mbgs. The depth to the shallow water table is within 0.5 m to 8.9 m bgs at the Property.

The Property is located within 30 m of water body.

The Phase Two Conceptual Site Model was developed based on the findings of Phase One ESA.

As supported by the analytical laboratory results presented in Appendix C, all analytical sample results met the MOECC Table 8 residential/parkland/ institutional property use or industrial/commercial/community Property Use for the soil and ground water sampled analyzed at the Property.

6.10.2 Physical Setting of the Phase Two Property

Stratigraphy

The detailed stratigraphy at the Phase Two Property is presented on the Borehole Logs, Appendix B.

The general stratigraphy at the Phase Two property is as discussed in Section 6.1 and is generally comprised of silty clay to clayey silt till and sandy silt.

Below the native soil, no bedrock shale was observed. All boreholes terminated in native soil.

Ground water

One aquifer was identified in this investigation. Ground water levels were measured on April 13 and April 25, 2018 and found to range between 0.65 mbgs and 8.94 mbgs. Based on the ground water levels observed during this investigation and topography of the area, the direction of Ground water flow is expected to be in a southeasterly direction.

Bedrock

Shale bedrock was observed beneath 12.2-15.2 m.

Depth to Ground Water Table

Based on the short-term ground water level monitoring the Ground water table is located at a depth of approximately 0.6 to 8.9 m below ground surface.

Imported Fill

The Site investigation identified fill materials at the location of boreholes.

Proposed Buildings

The proposed use of the Property is to be mixed residential/commercial use

6.10.3 Exceedances of Applicable Site Condition Standards

Contaminant Locations and Distribution

Soil and Ground water analyses on the Property were compared to the Table 8 Standards with coarse grained soils as presented in the Ontario Ministry of the Environment and Climate Change (MOECC) document “Soil, Ground Water and Sediments Standards for Use Under Part XV.1 of the Environmental Protection Act” (2011).

Chemical analyses were conducted by ALS Laboratories. ALS is a member of the Canadian Association for Laboratory Accreditation (CALA) and meets the requirement of Section 47 of O.Reg. 153/04

certifying that the analytical laboratory be accredited in accordance with the International Standards ISO/IEC 17025 and with standards developed by the Standards Council of Canada.

The Phase Two ESA identified the no exceedance from the MOECC Table 8 site condition for soil or ground water for residential/parkland/institutional (RPI) or industrial/commercial/ community (ICC) property use.

Source of Contaminants

There is no source of contamination.

Contaminant Migration

There are no indications of the migration of any of the contaminants of concern.

Climatic and Meteorological Conditions

There are no significant climatic or meteorological conditions that are likely to have influenced the distribution of any contaminants of concern.

Soil Vapour Intrusion

The Property includes no building and source of vapour intrusion.

6.10.4 Contaminant Distribution

All soil and ground water samples meet the MOECC Table 8 SCS.

7. CONCLUSIONS

7.1 Summary

Based upon the results of the Phase Two ESA, the following conclusions were presented:

- The Phase Two ESA consisted of drilling a total of four (4) boreholes on the Property. These boreholes were drilled to varying depths to maximum 9.2 m below ground surface (bgs) to investigate the soil and ground water condition at the Property.
- The stratigraphy beneath the investigated areas of the Property generally consisted of maximum of 350 mm of topsoil followed by fill materials to a maximum depth of 1.2m and native glacial till (primarily clayey silt to silty clay and sandy silt). Shale bedrock was not encountered at borehole locations to a maximum depth of 9.2 m.
- A total of eighteen (18) soil samples from the selected four (4) borehole locations including quality control (QC) duplicates were submitted for chemical analysis of petroleum hydrocarbons PHCs (F1-F4), volatile organic compounds (VOCs), organochlorine (OC) Pesticides and metals and inorganic parameters
- An unnamed creek, a tributary of Humber River is located to the east of the Property. The results of the samples submitted for chemical analysis were compared to the generic site condition standards within 30 m of water body, in a potable ground water condition for coarse textured soil as contained in Table 8 of the Ministry of Environment and Climate Change (MOECC) publication "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" for potable Ground water condition for industrial/commercial/community (ICC) and residential/parkland/institutional (RPI) Property Use, April 15, 2011.
- No exceedances of the applicable Standards (Table 8 ICC or RPI) for parameters analyzed in fine/medium or coarse textured soil were found in any of the soil samples analyzed. All samples met the MOECC Table 8 site condition standards.
- A total of eighteen (18) ground water samples including duplicated samples were analyzed for PHCs (F1-F4), VOCs, OC pesticides and metals and inorganic parameters.
- No exceedances of the applicable Standards for parameters analyzed were found in any of the ground water samples analyzed. All ground water samples met the MOECC Table 8 site condition standards.
- The measured pH values of soil and ground water samples were within the MOECC guideline.

7.2 Recommendations

Based on the available information, it is concluded that soil and ground water at the Property meet the MOECC Table 8 site condition standard in a potable ground water condition for industrial/commercial/community (ICC) and residential/parkland/institutional (RPI) Property Use. Based on the findings of Phase Two ESA:

- No further investigation is required at this time.
- All wells installed during the subsurface investigation are required to be decommissioned in accordance with O.Reg. 903 when they are no longer needed for ground water observation.

7.3 Signatures

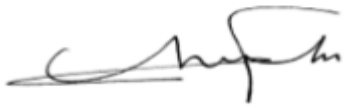
The Phase Two Environmental Site Assessment has been completed under the direction and supervision of Shafi Andseta, Ph.D., P.Geo., QP_{ESA-RA}. The findings and conclusions presented in this report have been determined on the basis of the information that was obtained and reviewed, and on an assessment of the existing conditions on the Property.

The Phase Two ESA was completed to satisfy the intent of the requirements, methodology and practices for a Phase Two ESA as described in Ontario Regulation 153/04 (as amended).

We trust this report meets with your requirements. Should you have any questions regarding the information presented, please do not hesitate to contact our office.

Yours truly,

DS Consultants Ltd.



Shafi Andseta, Ph.D., P.Geo., QP_{RA}
Senior Project Manager

Martin Gedeon, M.Sc., P.Geo.
Vice-President, Environmental Services

8. REFERENCES

1. Armstrong, D.K. and Dodge, J.E.P. *Paleozoic Geology Map of Southern Ontario*. Ontario Geological Survey, Miscellaneous Release--Data 219.
2. Chapman, L.J. and Putnam, D.F. 2007. *The Physiography of Southern Ontario*. Ontario Geological Survey, Miscellaneous Release--Data 228.
3. Freeze, R. Allen and Cherry, John A., 1979. *Ground water*. Page 29.
4. Ontario Ministry of the Environment, December 1996. *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario.*
5. Ontario Ministry of Environment, 15 April 2011. *Soil, Ground Water and Sediment Standards for use under part XV.1of the Environmental Protection Act.*
6. Ontario Ministry of the Environment, June 2011. *Guide for Completing Phase Two Environmental Site Assessments under Ontario regulation 153/04.*
7. Ontario Ministry of the Environment, July 2011. *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.*
8. The Ontario Geological Survey. 2003. *Surficial Geology of Southern Ontario*.
9. Phase One Environmental Site Assessment, 14245 Hwy 50, Caledon, Ontario, March 1, 2018.

9. LIMITATIONS

It should be noted that this Phase Two Environmental Site Assessment was focused on investigating of the areas of potential environmental concerns at the Property located at 14254 Highway # 50, in Town of Caledon, Ontario.

The conclusions drawn from the Phase Two ESA were based on information at selected observation and sampling locations. Conditions between and beyond these locations may become apparent during future investigations or on-site work, which could not be detected or anticipated at the time of this investigation. The sampling locations were chosen based upon a cursory historical search, visual observations and limited information provided by persons knowledgeable about past and current activities on this site during the Phase Two ESA activities. As such, DS Consultants Ltd. cannot be held responsible for environmental conditions at the site that was not apparent from the available information.

This report was produced for the sole use of **Georgian Group** and may not be relied upon by any other person or entity without the written authorization of DS Consultants Ltd. The scope of services performed in the execution of this investigation may not be appropriate to satisfy the needs of other users, and any use or reuse of this documents or findings, conclusions and recommendations represented herein, is at the sole risk of said users.

TABLES

Guideline: Ontario Regulation 153/04 - April 15, 2011 Standards, Table 8 Site Condition Standards-Within 30 m of Water Body in a Potable Ground Water Condition.

SOIL

Table 1: Summary of Analytical Results for PHCs in Soil

Client Sample ID	Table 8			BH18-1,SS7	BH18-2, SS3	BH18-3, SS5	BH18-4, SS4	DUP-1
Date Sampled				9-Apr-2018	9-Apr-2018	9-Apr-2018	9-Apr-2018	9-Apr-2018
Time Sampled				12:00	12:00	12:00	12:00	12:00
ALS Sample ID				L2078796-4	L2078796-7	L2078796-10	L2078796-13	L2078796-14
Parameter	Guideline Limit	Lowest Detection Limit	Units	Soil	Soil	Soil	Soil	Soil
Hydrocarbons (Soil)								
F1 (C6-C10)	25 (U)	5.0	ug/g	<5.0	<5.0	<5.0	<5.0	<5.0
F1-BTEX	25 (U)	5.0	ug/g	<5.0	<5.0			
F2 (C10-C16)	10 (U)	10	ug/g	<10	<10	<10	<10	<10
F2-Naphth		10	ug/g		<10			
F3 (C16-C34)	240 (U)	50	ug/g	<50	<50	<50	<50	<50
F3-PAH		50	ug/g		<50			
F4 (C34-C50)	120 (U)	50	ug/g	<50	<50	<50	<50	<50
Total Hydrocarbons (C6-C50)		72	ug/g	<72	<72	<72	<72	<72
Chrom. to baseline at nC50			-	YES	YES	YES	YES	YES
2-Bromobenzotrifluoride			%	88	95.8	93.4	92.6	92.5
3,4-Dichlorotoluene			%	86.6	64.9	98.8	92	74.8

Table 2: Summary of Analytical Results for VOCs in Soil

Client Sample ID				BH18-1,SS7	BH18-2, SS3
Date Sampled				9-Apr-2018	9-Apr-2018
Time Sampled				12:00	12:00
ALS Sample ID				L2078796-4	L2078796-7
Volatile Organic Compounds (Soil)					
Acetone	0.5 (U)	0.50	ug/g	<0.50	<0.50
Benzene	0.02 (U)	0.0068	ug/g	<0.0068	<0.0068
Bromodichloromethane	0.05 (U)	0.050	ug/g	<0.050	<0.050

Client Sample ID				BH18-1,SS7	BH18-2, SS3
Bromoform	0.05 (U)	0.050	ug/g	<0.050	<0.050
Bromomethane	0.05 (U)	0.050	ug/g	<0.050	<0.050
Carbon tetrachloride	0.05 (U)	0.050	ug/g	<0.050	<0.050
Chlorobenzene	0.05 (U)	0.050	ug/g	<0.050	<0.050
Dibromochloromethane	0.05 (U)	0.050	ug/g	<0.050	<0.050
Chloroform	0.05 (U)	0.050	ug/g	<0.050	<0.050
1,2-Dibromoethane	0.05 (U)	0.050	ug/g	<0.050	<0.050
1,2-Dichlorobenzene	0.05 (U)	0.050	ug/g	<0.050	<0.050
1,3-Dichlorobenzene	0.05 (U)	0.050	ug/g	<0.050	<0.050
1,4-Dichlorobenzene	0.05 (U)	0.050	ug/g	<0.050	<0.050
Dichlorodifluoromethane	0.05 (U)	0.050	ug/g	<0.050	<0.050
1,1-Dichloroethane	0.05 (U)	0.050	ug/g	<0.050	<0.050
1,2-Dichloroethane	0.05 (U)	0.050	ug/g	<0.050	<0.050
1,1-Dichloroethylene	0.05 (U)	0.050	ug/g	<0.050	<0.050
cis-1,2-Dichloroethylene	0.05 (U)	0.050	ug/g	<0.050	<0.050
trans-1,2-Dichloroethylene	0.05 (U)	0.050	ug/g	<0.050	<0.050
Methylene Chloride	0.05 (U)	0.050	ug/g	<0.050	<0.050
1,2-Dichloropropane	0.05 (U)	0.050	ug/g	<0.050	<0.050
cis-1,3-Dichloropropene		0.030	ug/g	<0.030	<0.030
trans-1,3-Dichloropropene		0.030	ug/g	<0.030	<0.030
1,3-Dichloropropene (cis & trans)	0.05 (U)	0.042	ug/g	<0.042	<0.042
Ethylbenzene	0.05 (U)	0.018	ug/g	<0.018	<0.018
n-Hexane	0.05 (U)	0.050	ug/g	<0.050	<0.050
Methyl Ethyl Ketone	0.5 (U)	0.50	ug/g	<0.50	<0.50
Methyl Isobutyl Ketone	0.5 (U)	0.50	ug/g	<0.50	<0.50
MTBE	0.05 (U)	0.050	ug/g	<0.050	<0.050
Styrene	0.05 (U)	0.050	ug/g	<0.050	<0.050
1,1,1,2-Tetrachloroethane	0.05 (U)	0.050	ug/g	<0.050	<0.050
1,1,2,2-Tetrachloroethane	0.05 (U)	0.050	ug/g	<0.050	<0.050
Tetrachloroethylene	0.05 (U)	0.050	ug/g	<0.050	<0.050
Toluene	0.2 (U)	0.080	ug/g	<0.080	<0.080
1,1,1-Trichloroethane	0.05 (U)	0.050	ug/g	<0.050	<0.050
1,1,2-Trichloroethane	0.05 (U)	0.050	ug/g	<0.050	<0.050
Trichloroethylene	0.05 (U)	0.010	ug/g	<0.010	<0.010
Trichlorofluoromethane	0.25 (U)	0.050	ug/g	<0.050	<0.050
Vinyl chloride	0.02 (U)	0.020	ug/g	<0.020	<0.020

Client Sample ID				BH18-1,SS7	BH18-2, SS3
o-Xylene		0.020	ug/g	<0.020	<0.020
m+p-Xylenes		0.030	ug/g	<0.030	<0.030
Xylenes (Total)	0.05 (U)	0.050	ug/g	<0.050	<0.050
4-Bromofluorobenzene			%	88.3	83.6
1,4-Difluorobenzene			%	91.2	87.5

Table 3: Summary of Analytical Results for Metals and Inorganics in Soil

Client Sample ID				BH18-1,SS3	BH18-2, SS1	BH18-3, SS2	BH18-4, SS3	DUP-2
Date Sampled				9-Apr-2018	9-Apr-2018	9-Apr-2018	9-Apr-2018	9-Apr-2018
Time Sampled				12:00	12:00	12:00	12:00	12:00
ALS Sample ID				L2078796-3	L2078796-5	L2078796-8	L2078796-12	L2078796-15
Parameter	Guideline Limit	Lowest Detection Limit	Units	Soil	Soil	Soil	Soil	Soil
Physical Tests (Soil)								
Conductivity	0.7 (U)	0.0040	mS/cm	0.231	0.218	0.162	0.152	0.153
% Moisture		0.10	%	16.2	18.5	14.6	17.3	16.9
pH		0.10	pH units	7.58	7.61	7.67	7.60	7.65
Cyanides (Soil)								
Cyanide, Weak Acid Diss	0.051 (U)	0.050	ug/g	<0.050	<0.050	<0.050	<0.050	<0.050
Saturated Paste Extractables (Soil)								
SAR	5 (U)	0.10	SAR	0.85	0.77	0.31	0.23	0.22
Calcium (Ca)		1.0	mg/L	6.5	6.1	6.5	6.4	6.8
Magnesium (Mg)		1.0	mg/L	2.7	2.7	1.4	<1.0	<1.0
Sodium (Na)		1.0	mg/L	10.2	9.0	3.3	2.1	2.1
Metals (Soil)								
Antimony (Sb)	1.3 (U)	1.0	ug/g	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic (As)	18 (U)	1.0	ug/g	4.4	4.3	4.3	4.7	4.4
Barium (Ba)	220 (U)	1.0	ug/g	131	126	105	107	103
Beryllium (Be)	2.5 (U)	0.50	ug/g	0.87	0.91	0.75	0.78	0.66
Boron (B), Hot Water Ext.	36 (U)	0.10	ug/g	<0.10	<0.10	<0.10	<0.10	<0.10
Boron (B)	36 (U)	5.0	ug/g	15.4	14.5	12.4	12.1	10.6
Cadmium (Cd)	1.2 (U)	0.50	ug/g	<0.50	<0.50	<0.50	<0.50	<0.50

Client Sample ID				BH18-1,SS3	BH18-2, SS1	BH18-3, SS2	BH18-4, SS3	DUP-2
Chromium (Cr)	70 (U)	1.0	ug/g	26.1	27.2	22.4	24.3	23.3
Cobalt (Co)	22 (U)	1.0	ug/g	11.6	11.2	10.9	11.9	11.5
Copper (Cu)	92 (U)	1.0	ug/g	21.8	20.7	20.0	21.4	20.8
Lead (Pb)	120 (U)	1.0	ug/g	10.2	10.0	10.1	10.0	9.4
Mercury (Hg)	0.27 (U)	0.0050	ug/g	0.0170	0.0191	0.0180	0.0212	0.0203
Molybdenum (Mo)	2 (U)	1.0	ug/g	<1.0	<1.0	<1.0	<1.0	<1.0
Nickel (Ni)	82 (U)	1.0	ug/g	25.2	25.2	23.7	25.7	24.4
Selenium (Se)	1.5 (U)	1.0	ug/g	<1.0	<1.0	<1.0	<1.0	<1.0
Silver (Ag)	0.5 (U)	0.20	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium (Tl)	1 (U)	0.50	ug/g	<0.50	<0.50	<0.50	<0.50	<0.50
Uranium (U)	2.5 (U)	1.0	ug/g	<1.0	<1.0	<1.0	<1.0	<1.0
Vanadium (V)	86 (U)	1.0	ug/g	39.5	40.4	33.6	35.2	32.3
Zinc (Zn)	290 (U)	5.0	ug/g	53.1	53.0	48.0	53.1	50.8
Speciated Metals (Soil)								
Chromium, Hexavalent	0.66 (U)	0.20	ug/g	0.33	0.56	0.22	0.21	0.31

Table 4: Summary of Analytical Results for PAHs in Soil

Client Sample ID				BH18-1, SS2	BH18-2, SS3
Date Sampled				9-Apr-2018	9-Apr-2018
Time Sampled				12:00	12:00
ALS Sample ID				L2078796-2	L2078796-7
Parameter	Guideline Limit	Lowest Detection Limit	Units	Soil	Soil
Polycyclic Aromatic Hydrocarbons (Soil)					
Acenaphthene	0.072 (U)	0.050	ug/g	<0.050	<0.050
Acenaphthylene	0.093 (U)	0.050	ug/g	<0.050	<0.050
Anthracene	0.22 (U)	0.050	ug/g	<0.050	<0.050
Benzo(a)anthracene	0.36 (U)	0.050	ug/g	<0.050	<0.050
Benzo(a)pyrene	0.3 (U)	0.050	ug/g	<0.050	<0.050
Benzo(b)fluoranthene	0.47 (U)	0.050	ug/g	<0.050	<0.050
Benzo(g,h,i)perylene	0.68 (U)	0.050	ug/g	<0.050	<0.050
Benzo(k)fluoranthene	0.48 (U)	0.050	ug/g	<0.050	<0.050
Chrysene	2.8 (U)	0.050	ug/g	<0.050	<0.050
Dibenzo(ah)anthracene	0.1 (U)	0.050	ug/g	<0.050	<0.050

Client Sample ID				BH18-1, SS2	BH18-2, SS3
Fluoranthene	0.69 (U)	0.050	ug/g	<0.050	<0.050
Fluorene	0.19 (U)	0.050	ug/g	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	0.23 (U)	0.050	ug/g	<0.050	<0.050
1+2-Methylnaphthalenes	0.59 (U)	0.042	ug/g	<0.042	<0.042
1-Methylnaphthalene	0.59 (U)	0.030	ug/g	<0.030	<0.030
2-Methylnaphthalene	0.59 (U)	0.030	ug/g	<0.030	<0.030
Naphthalene	0.09 (U)	0.013	ug/g	<0.013	<0.013
Phenanthrene	0.69 (U)	0.046	ug/g	<0.046	<0.046
Pyrene	1 (U)	0.050	ug/g	<0.050	<0.050
2-Fluorobiphenyl			%	83	81.7
p-Terphenyl d14			%	86.9	85.6

Table 5: Summary of Analytical Results for OC Pesticides in Soil

Client Sample ID				BH18-1, SS1	BH18-2, SS2	BH18-3, SS3	BH18-4, SS1
Date Sampled				9-Apr-2018	9-Apr-2018	9-Apr-2018	9-Apr-2018
Time Sampled				12:00	12:00	12:00	12:00
ALS Sample ID				L2078796-1	L2078796-6	L2078796-9	L2078796-11
Parameter	Guideline Limit	Lowest Detection Limit	Units	Soil	Soil	Soil	Soil
Organochlorine Pesticides (Soil)							
Aldrin	0.05 (U)	0.020	ug/g	<0.020	<0.020	<0.020	<0.020
gamma-hexachlorocyclohexane	0.01 (U)	0.010	ug/g	<0.010	<0.010	<0.010	<0.010
a-chlordane		0.020	ug/g	<0.020	<0.020	<0.020	<0.020
Chlordane (Total)	0.05 (U)	0.028	ug/g	<0.028	<0.028	<0.028	<0.028
g-chlordane		0.020	ug/g	<0.020	<0.020	<0.020	<0.020
op-DDD		0.020	ug/g	<0.020	<0.020	<0.020	<0.020
pp-DDD		0.020	ug/g	<0.020	<0.020	<0.020	<0.020
Total DDD	0.05 (U)	0.028	ug/g	<0.028	<0.028	<0.028	<0.028
o,p-DDE		0.020	ug/g	<0.020	<0.020	<0.020	<0.020
pp-DDE		0.020	ug/g	<0.020	<0.020	<0.020	<0.020
Total DDE	0.05 (U)	0.028	ug/g	<0.028	<0.028	<0.028	<0.028
op-DDT		0.020	ug/g	<0.020	<0.020	<0.020	<0.020
pp-DDT		0.020	ug/g	<0.020	<0.020	<0.020	<0.020
Total DDT	1.4 (U)	0.028	ug/g	<0.028	<0.028	<0.028	<0.028

Client Sample ID				BH18-1, SS1	BH18-2, SS2	BH18-3, SS3	BH18-4, SS1
Dieldrin	0.05 (U)	0.020	ug/g	<0.020	<0.020	<0.020	<0.020
Endosulfan I		0.020	ug/g	<0.020	<0.020	<0.020	<0.020
Endosulfan II		0.020	ug/g	<0.020	<0.020	<0.020	<0.020
Endosulfan (Total)	0.04 (U)	0.028	ug/g	<0.028	<0.028	<0.028	<0.028
Endrin	0.04 (U)	0.020	ug/g	<0.020	<0.020	<0.020	<0.020
Heptachlor	0.05 (U)	0.020	ug/g	<0.020	<0.020	<0.020	<0.020
Heptachlor Epoxide	0.05 (U)	0.020	ug/g	<0.020	<0.020	<0.020	<0.020
Hexachlorobenzene	0.02 (U)	0.010	ug/g	<0.010	<0.010	<0.010	<0.010
Hexachlorobutadiene	0.01 (U)	0.010	ug/g	<0.010	<0.010	<0.010	<0.010
Hexachloroethane	0.01 (U)	0.010	ug/g	<0.010	<0.010	<0.010	<0.010
Methoxychlor	0.05 (U)	0.020	ug/g	<0.020	<0.020	<0.020	<0.020
2-Fluorobiphenyl			%	97.6	89.1	96.6	96.4
d14-Terphenyl			%	82.4	94.6	107.2	76

Exceeds Guideline Limit	MOECC Table 8 Generic Site Condition Standards within 30 m of Water Body in a Potable Ground Water Condition,
Detection Limit Exceeds Guideline	Industrial/Commercial/Community/ Residential/parkland/institutional Property Use

GROUND WATER

Table 6: Summary of Analytical Results for Metal and Inorganics in Water

Client Sample ID				MW18-1	MW18-2	MW18-3	MW18-4	DUP-1
Date Sampled				17-Apr-2018	17-Apr-2018	17-Apr-2018	17-Apr-2018	17-Apr-2018
Time Sampled				11:30	12:00	12:30	13:00	11:15
ALS Sample ID				L2081144-1	L2081144-2	L2081144-3	L2081144-4	L2081144-5
Parameter	Guideline Limit	Lowest Detection Limit	Units	Water	Water	Water	Water	Water
Physical Tests (Water)								
Conductivity		0.0030	mS/cm	1.05	1.26	0.901	0.881	1.05
pH		0.10	pH units	8.06	7.95	8.01	7.98	8.01
Anions and Nutrients (Water)								
Chloride (Cl)	790 (U)	0.50	mg/L	23.4	72.8	24.6	25.6	23.5
Cyanides (Water)								
Cyanide, Weak Acid Diss	52 (U)	2.0	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Metals (Water)								
Dissolved Mercury Filtration Location			-	FIELD	FIELD	FIELD	FIELD	FIELD
Dissolved Metals Filtration Location			-	FIELD	FIELD	FIELD	FIELD	FIELD
Antimony (Sb)-Dissolved	6 (U)	0.10	ug/L	0.15	0.14	<0.10	<0.10	0.15
Arsenic (As)-Dissolved	25 (U)	0.10	ug/L	2.25	2.25	0.68	0.68	2.22
Barium (Ba)-Dissolved	1000 (U)	0.10	ug/L	172	175	173	172	173
Beryllium (Be)-Dissolved	4 (U)	0.10	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10
Boron (B)-Dissolved	5000 (U)	10	ug/L	60	63	72	72	62
Cadmium (Cd)-Dissolved	2.1 (U)	0.010	ug/L	<0.010	<0.010	<0.010	<0.010	<0.010
Chromium (Cr)-Dissolved	50 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
Cobalt (Co)-Dissolved	3.8 (U)	0.10	ug/L	0.35	0.36	<0.10	<0.10	0.34
Copper (Cu)-Dissolved	69 (U)	0.20	ug/L	0.68	0.74	0.66	0.60	0.63
Lead (Pb)-Dissolved	10 (U)	0.050	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050
Mercury (Hg)-Dissolved	0.29 (U)	0.010	ug/L	<0.010	<0.010	<0.010	<0.010	<0.010

Client Sample ID				MW18-1	MW18-2	MW18-3	MW18-4	DUP-1
Molybdenum (Mo)-Dissolved	70 (U)	0.050	ug/L	2.07	2.09	0.992	1.07	2.11
Nickel (Ni)-Dissolved	100 (U)	0.50	ug/L	0.73	0.69	0.50	0.58	0.67
Selenium (Se)-Dissolved	10 (U)	0.050	ug/L	0.175	0.182	<0.050	<0.050	0.153
Silver (Ag)-Dissolved	1.2 (U)	0.050	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050
Sodium (Na)-Dissolved	490000 (U)	500	ug/L	29800	30100	24800	24700	28700
Thallium (Tl)-Dissolved	2 (U)	0.010	ug/L	0.015	0.011	<0.010	<0.010	0.011
Uranium (U)-Dissolved	20 (U)	0.010	ug/L	1.73	1.74	0.615	0.624	1.78
Vanadium (V)-Dissolved	6.2 (U)	0.50	ug/L	0.96	0.99	<0.50	<0.50	0.96
Zinc (Zn)-Dissolved	890 (U)	1.0	ug/L	1.4	1.2	1.7	<1.0	1.7
Speciated Metals (Water)								
Chromium, Hexavalent	25 (U)	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0

Table: 7 Summary of Analytical Results for VOCs in Water

Client Sample ID				MW18-1	MW18-2	MW18-3	MW18-4	DUP-1
Date Sampled				17-Apr-2018	17-Apr-2018	17-Apr-2018	17-Apr-2018	17-Apr-2018
Time Sampled				11:30	12:00	12:30	13:00	11:15
ALS Sample ID				L2081144-1	L2081144-2	L2081144-3	L2081144-4	L2081144-5
Parameter	Guideline Limit	Lowest Detection Limit	Units	Water	Water	Water	Water	Water
Volatile Organic Compounds (Water)								
Acetone	2700 (U)	30	ug/L	<30	<30	<30	<30	<30
Benzene	5 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	16 (U)	2.0	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0
Bromoform	25 (U)	5.0	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0
Bromomethane	0.89 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon tetrachloride	0.79 (U)	0.20	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	30 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
Dibromochloromethane	25 (U)	2.0	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	2.4 (U)	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	0.2 (U)	0.20	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20

Client Sample ID				MW18-1	MW18-2	MW18-3	MW18-4	DUP-1
1,2-Dichlorobenzene	3 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	59 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	1 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	590 (U)	2.0	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethane	5 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	1.6 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	1.6 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethylene	1.6 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethylene	1.6 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	50 (U)	5.0	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane	5 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,3-Dichloropropene		0.30	ug/L	<0.30	<0.30	<0.30	<0.30	<0.30
trans-1,3-Dichloropropene		0.30	ug/L	<0.30	<0.30	<0.30	<0.30	<0.30
1,3-Dichloropropene (cis & trans)	0.5 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	2.4 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
n-Hexane	51 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Ethyl Ketone	1800 (U)	20	ug/L	<20	<20	<20	<20	<20
Methyl Isobutyl Ketone	640 (U)	20	ug/L	<20	<20	<20	<20	<20
MTBE	15 (U)	2.0	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	5.4 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	1.1 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	1 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	1.6 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	22 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	200 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	4.7 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	1.6 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane	150 (U)	5.0	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl chloride	0.5 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
o-Xylene		0.30	ug/L	<0.30	<0.30	<0.30	<0.30	<0.30
m+p-Xylenes		0.40	ug/L	<0.40	<0.40	<0.40	<0.40	<0.40
Xylenes (Total)	300 (U)	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50
4-Bromofluorobenzene			%	93.2	91.1	91.4	90.4	91.3
1,4-Difluorobenzene			%	98.5	98.9	100	99.2	98.7

Table 8: Summary of Analytical Results for PHCs in Water

Client Sample ID				MW18-1	MW18-2	MW18-3	MW18-4	DUP-1
Date Sampled				17-Apr-2018	17-Apr-2018	17-Apr-2018	17-Apr-2018	17-Apr-2018
Time Sampled				11:30	12:00	12:30	13:00	11:15
ALS Sample ID				L2081144-1	L2081144-2	L2081144-3	L2081144-4	L2081144-5
Parameter	Guideline Limit	Lowest Detection Limit	Units	Water	Water	Water	Water	Water
Hydrocarbons (Water)								
F1 (C6-C10)	420 (U)	25	ug/L	<25	<25	<25	<25	<25
F1-BTEX	420 (U)	25	ug/L	<25	<25	<25	<25	<25
F2 (C10-C16)	150 (U)	100	ug/L	<100	<100	<100	<100	<100
F3 (C16-C34)	500 (U)	250	ug/L	<250	<250	<250	<250	<250
F4 (C34-C50)	500 (U)	250	ug/L	<250	<250	<250	<250	<250
Total Hydrocarbons (C6-C50)		370	ug/L	<370	<370	<370	<370	<370
Chrom. to baseline at nC50			-	YES	YES	YES	YES	YES
2-Bromobenzotrifluoride			%	90.9	84.6	90.9	87.5	87.7
3,4-Dichlorotoluene			%	77.9	70.2	68.1	73.9	76

Table 9: Summary of Analytical Results for OC Pesticides in Water

Client Sample ID				MW18-1	MW18-3	MW18-4
Date Sampled				17-Apr-2018	17-Apr-2018	17-Apr-2018
Time Sampled				11:30	12:30	13:00
ALS Sample ID				L2081144-1	L2081144-3	L2081144-4
Parameter	Guideline Limit	Lowest Detection Limit	Units	Water	Water	Water
Organochlorine Pesticides (Water)						
Aldrin	0.35 (U)	0.010	ug/L	<0.010	<0.010	<0.010
gamma-hexachlorocyclohexane	0.95 (U)	0.010	ug/L	<0.010	<0.010	<0.010
a-chlordane		0.040	ug/L	<0.040	<0.040	<0.040
Chlordane (Total)	0.06 (U)	0.057	ug/L	<0.057	<0.057	<0.057
g-chlordane		0.040	ug/L	<0.040	<0.040	<0.040
o,p-DDD		0.030	ug/L	<0.030	<0.030	<0.030
pp-DDD		0.030	ug/L	<0.030	<0.030	<0.030
Total DDD	1.8 (U)	0.042	ug/L	<0.042	<0.042	<0.042

Client Sample ID				MW18-1	MW18-3	MW18-4
o,p-DDE		0.0080	ug/L	<0.0080	<0.0080	<0.0080
pp-DDE		0.0080	ug/L	<0.0080	<0.0080	<0.0080
Total DDE	10 (U)	0.011	ug/L	<0.011	<0.011	<0.011
op-DDT		0.030	ug/L	<0.030	<0.030	<0.030
pp-DDT		0.030	ug/L	<0.030	<0.030	<0.030
Total DDT	0.05 (U)	0.042	ug/L	<0.042	<0.042	<0.042
Dieldrin	0.35 (U)	0.050	ug/L	<0.050	<0.050	<0.050
Endosulfan I		0.030	ug/L	<0.030	<0.030	<0.030
Endosulfan II		0.030	ug/L	<0.030	<0.030	<0.030
Endosulfan (Total)	0.56 (U)	0.042	ug/L	<0.042	<0.042	<0.042
Endrin	0.36 (U)	0.040	ug/L	<0.040	<0.040	<0.040
Heptachlor	0.038 (U)	0.010	ug/L	<0.010	<0.010	<0.010
Heptachlor Epoxide	0.038 (U)	0.010	ug/L	<0.010	<0.010	<0.010
Hexachlorobenzene	1 (U)	0.010	ug/L	<0.010	<0.010	<0.010
Hexachlorobutadiene	0.44 (U)	0.010	ug/L	<0.010	<0.010	<0.010
Hexachloroethane	2.1 (U)	0.010	ug/L	<0.010	<0.010	<0.010
Methoxychlor	0.3 (U)	0.050	ug/L	<0.050	<0.050	<0.050
2-Fluorobiphenyl			%	75	78.2	71
d14-Terphenyl			%	87.2	93.2	85.7

Exceeds Guideline Limit	MOECC Table 8 Generic Site Condition Standards within 30 m of Water Body in a Potable Ground Water Condition
Detection Limit Exceeds Guideline	

FIGURES

Approxinate Boundary Location

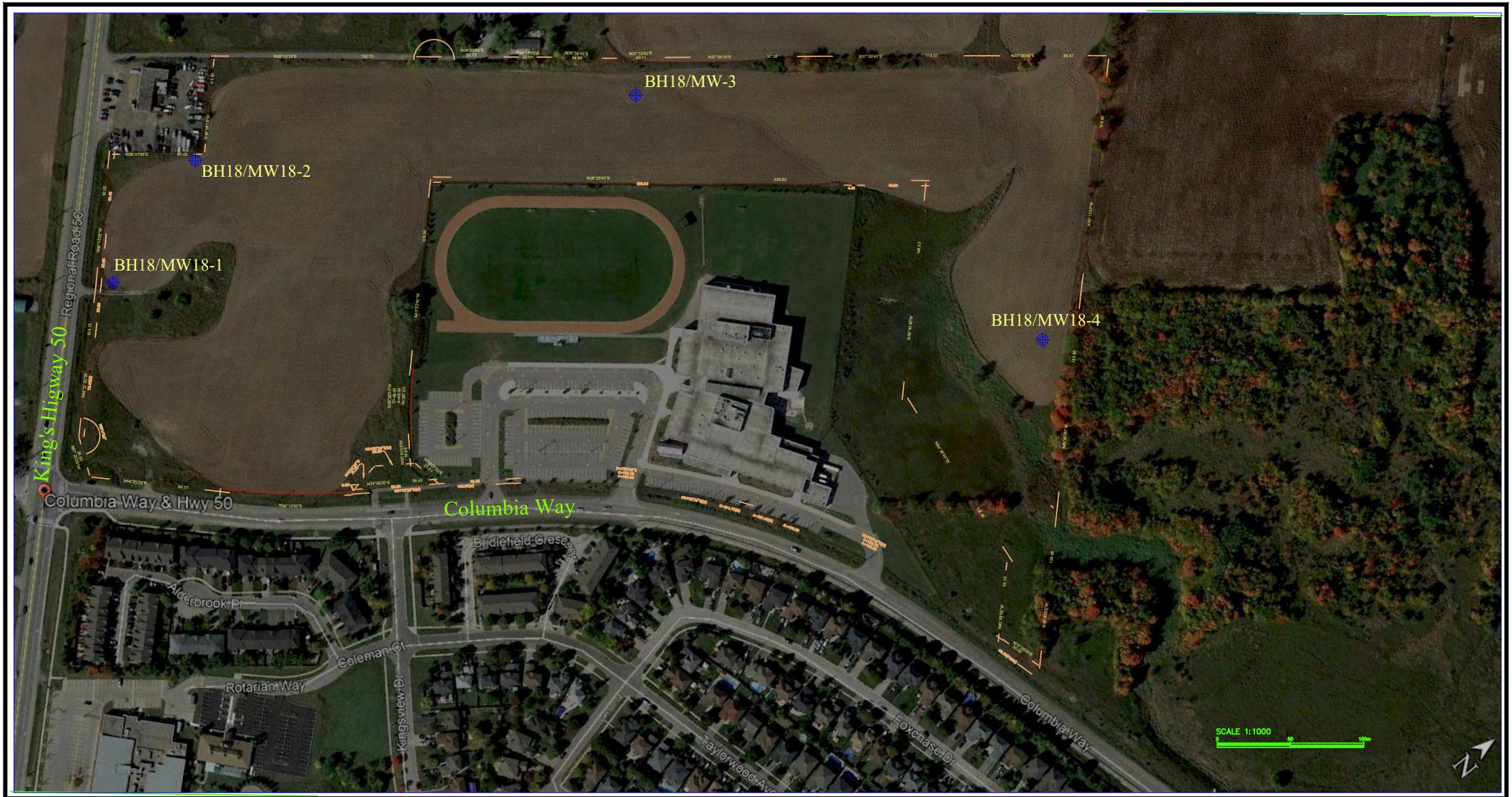
Title: Site Location Plan

DS CONSULTANTS LTD.
6221 Highway 7, Unit 16
Vaughan, Ontario, L4H 0K8
Telephone: (905) 264-9393
www.dsconsultants.ca

Project: PHASE TWO - ENVIRONMENTAL SITE ASSESSMENT
14245 HIGHWAY # 50, CALEDON, ON

Client: Georgian Group

Drawn:	LPV	Scale:	As Shown
Approved:	SA	Project No.:	18-526-20
Date:	APRIL, 2018	Figure No.:	1



Approximate Property Line

BH18/MW18-4 Monitoring well DS 2018

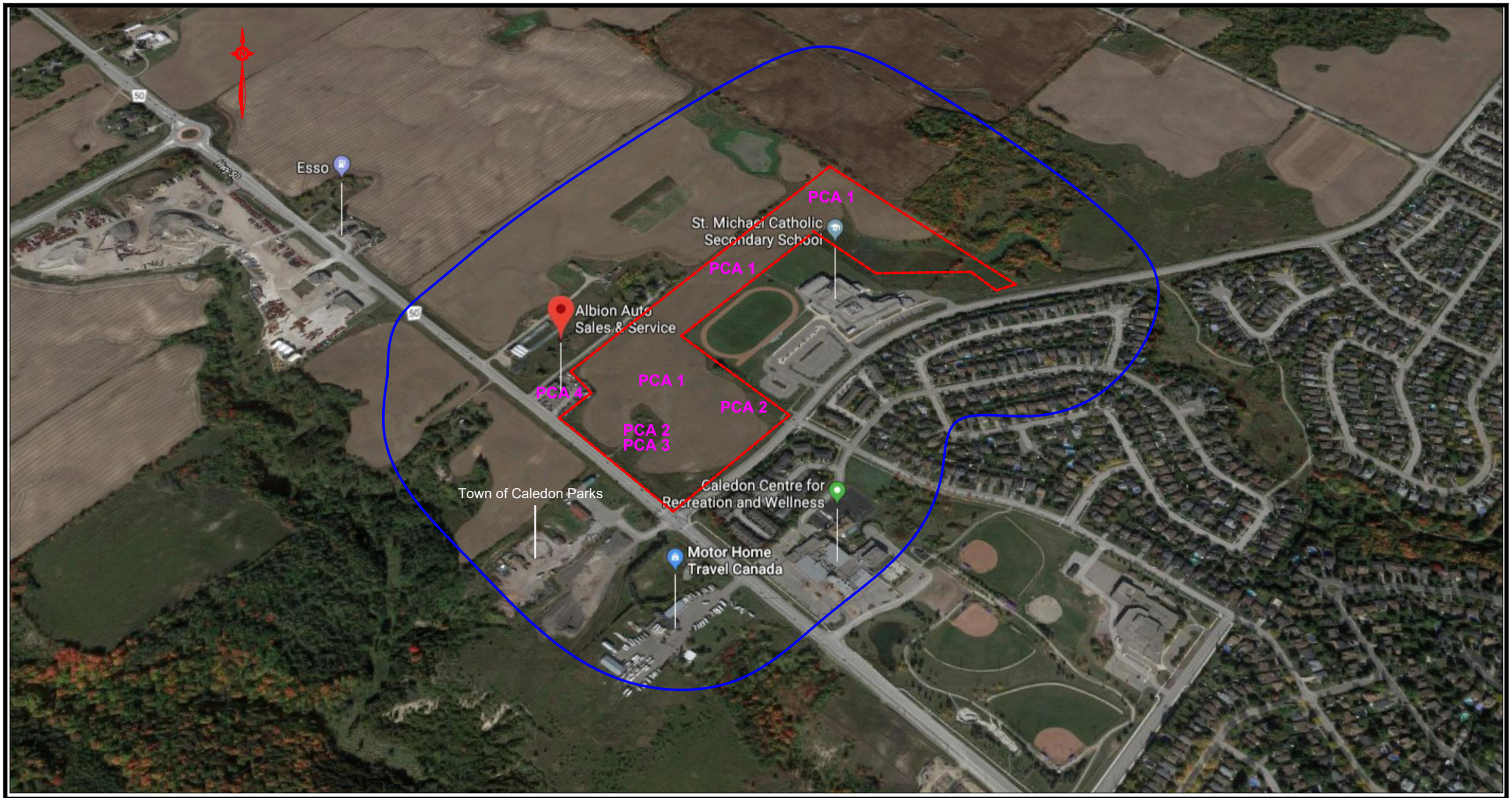
Title: Borehole Location Plan

DS CONSULTANTS LTD.
6221 Highway 7, Unit 16
Vaughan, Ontario, L4H 0K8
Telephone: (905) 264-9393
www.dsconsultants.ca

Project: PHASE TWO - ENVIRONMENTAL SITE ASSESSMENT
14245 HIGHWAY # 50, CALEDON, ON

Client: Georgian Group

Drawn:	LPV	Scale:	As Shown
Approved:	SA	Project No.:	18-526-20
Date:	APRIL, 2018	Figure No.:	2



LEGEND

- Approximate Site Boundaries
- Approximate Study Area Boundary

PCA 1 #40: Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications
PCA 2 #30: Importation of Fill Material of Unknown Quality
PCA 3 #28: Gasoline and Associated Products Storage in Fixed Tanks
PCA 4 #10: Commercial Autobody Shop

Title: Conceptual Site Model

DS CONSULTANTS LTD.
6221 Highway 7, Unit 16
Vaughan, Ontario, L4H 0K8
Telephone: (905) 264-9393
www.dsconsultants.ca

Project:	PHASE ONE - ENVIRONMENTAL SITE ASSESSMENT 14245 HIGHWAY # 50, CALEDON, ON
Client:	Georgian Group

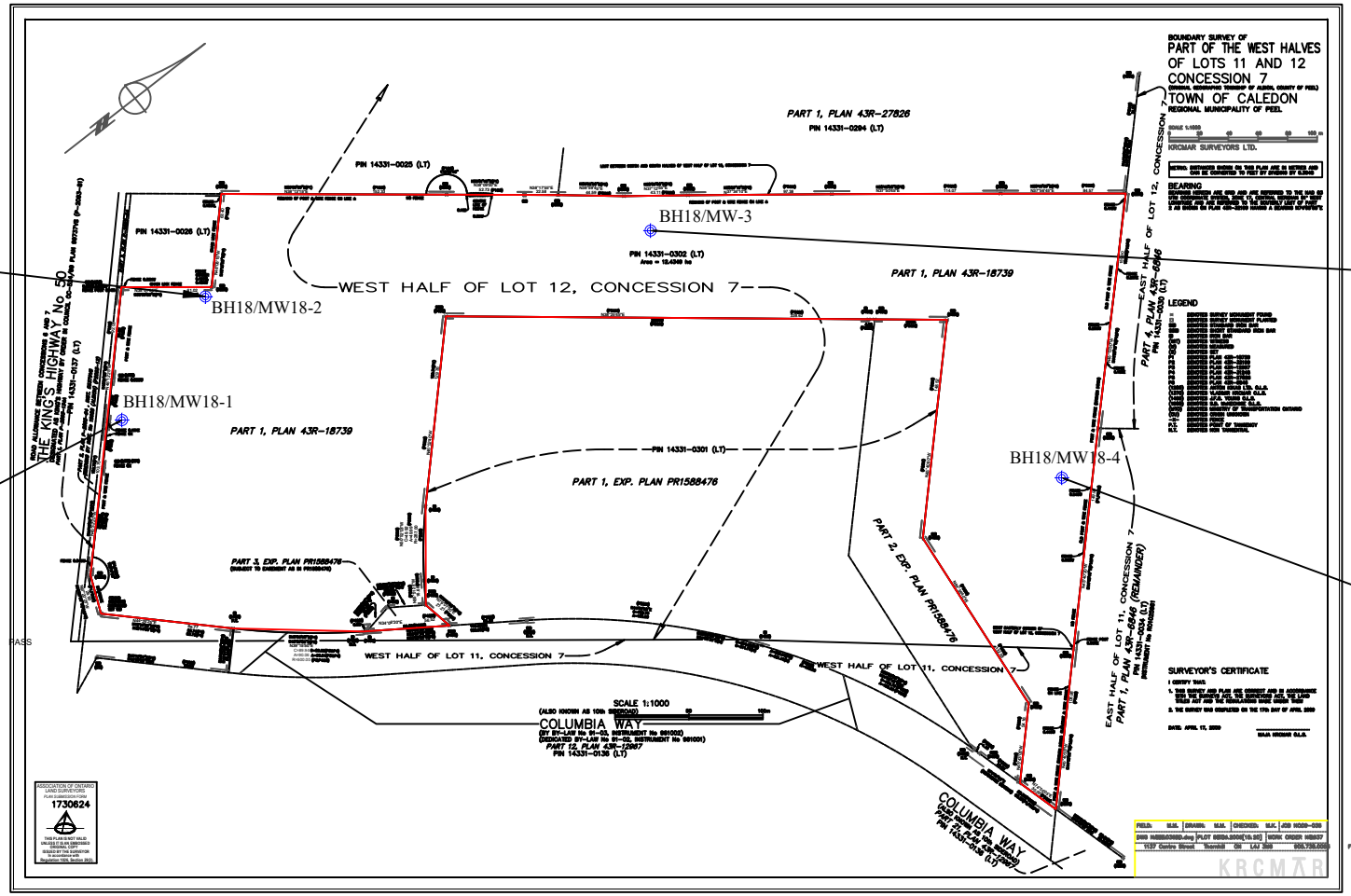
Drawn:	LPV	Scale:	As Shown
Approved:	SA	Project No.:	18-526-20
Date:	APRIL, 2018	Figure No.:	3

BH18/BH18-2

SAMPLE ID	DATE	SAMPLE DEPTH	PARAMETER	RESULT
SS-1	09-04-2018	0.00 - 0.60m	M & I	PASS
SS-2	09-04-2018	0.60 - 1.20m	OC Pesticides	PASS
SS-3	09-04-2018	1.20 - 1.80m	PAHs, PHCs (F1 - F4), VOCs	PASS

BH18/BH18-1

SAMPLE ID	DATE	SAMPLE DEPTH	PARAMETER	RESULT
SS-1	09-04-2018	0.00 - 0.60m	OC Pesticides	PASS
SS-2	09-04-2018	0.60 - 1.20m	PAHs	PASS
SS-3	09-04-2018	1.20 - 1.80m	M & I	PASS
SS-7	09-04-2018	6.10 - 6.70m	PHCs (F1 - F4), VOCs	



BH18/BH18-3

SAMPLE ID	DATE	SAMPLE DEPTH	PARAMETER	RESULT
SS-2	09-04-2018	0.80 - 1.40m	M & I	PASS
SS-3	09-04-2018	1.50 - 2.10m	OC Pesticides	PASS
SS-5	09-04-2018	3.10 - 3.7m	PHCs (F1 - F4)	PASS
DUP - 1 SS-5	09-04-2018	3.10 - 3.7m	PHCs (F1 - F4)	PASS

BH18/BH18-4

SAMPLE ID	DATE	SAMPLE DEPTH	PARAMETER	RESULT
SS-1	09-04-2018	0.00 - 0.60m	OC Pesticides	PASS
SS-3	09-04-2018	1.50 - 2.10m	M & I	PASS
DUP - 2 SS-3	09-04-2018	1.50 - 2.10m	M & I	PASS
SS-4	09-04-2018	2.30 - 2.90m	PHCs (F1 - F4)	PASS

Approximate Property Line

BH18/MW18-4 Monitoring well DS 2018

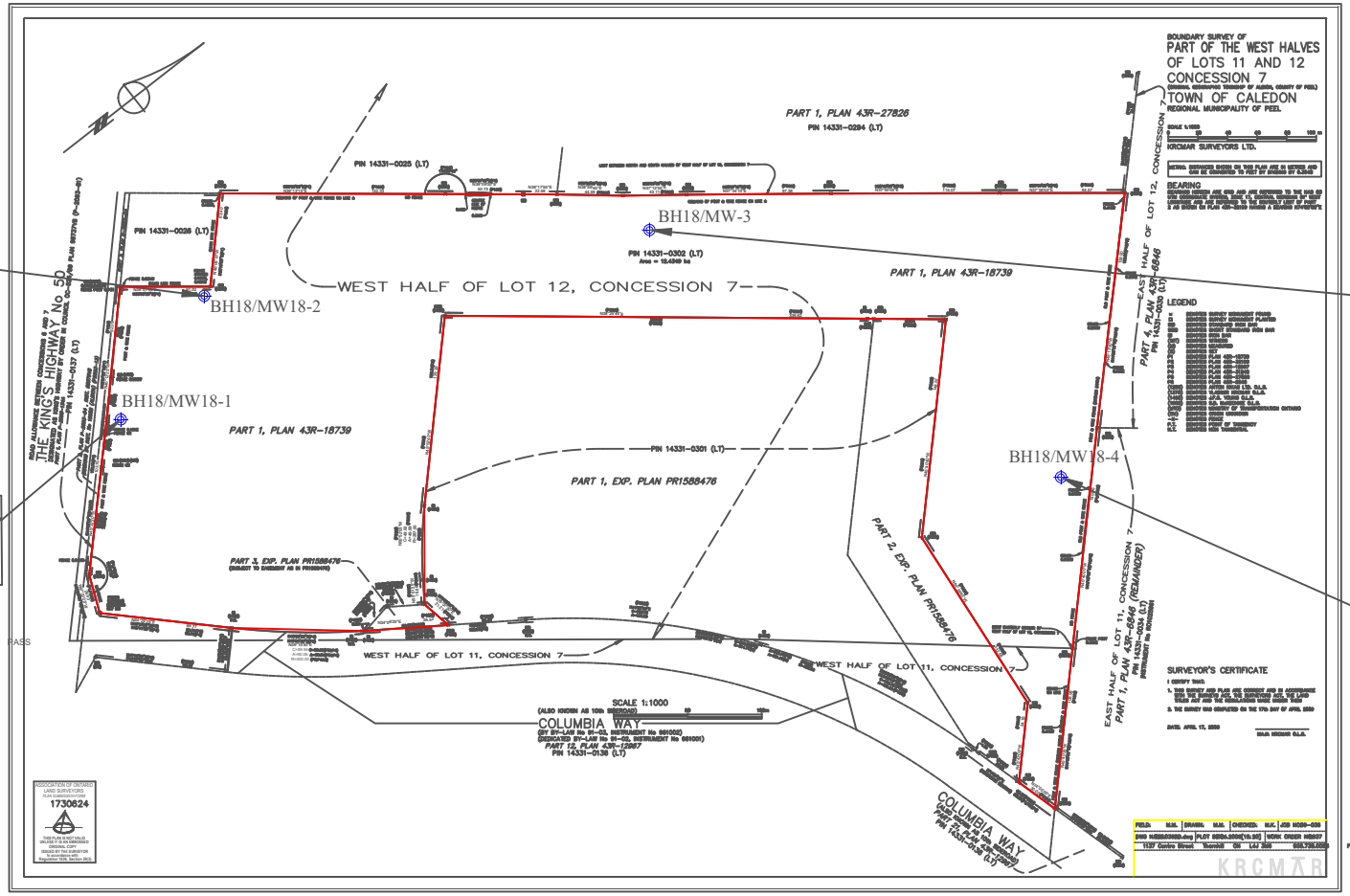
Title: Soil Characterization

DS CONSULTANTS LTD.
6221 Highway 7, Unit 16
Vaughan, Ontario, L4H 0K8
Telephone: (905) 264-9393
www.dsconsultants.ca

Project: PHASE TWO - ENVIRONMENTAL SITE ASSESSMENT
14245 HIGHWAY # 50, CALEDON, ON

Client: Georgian Group

Drawn:	LPV	Scale:	As Shown
Approved:	SA	Project No.:	18-526-20
Date:	APRIL, 2018	Figure No.:	4



Bh18/MW18-2 O.Reg. 153/04 as amended (T2)

Date	Well Depth	Parameter	Result
9-04-2018	8.2m	Metals and Inorganics, PHC (F1-F4), VOCs	Pass

Bh18/MW18-1 O.Reg. 153/04 as amended (T2)

Date	Well Depth	Parameter	Result
9-04-2018	8.2m	Metals and Inorganics, PHC (F1-F4), VOCs, OC pesticides	Pass

BH18/MW18-3 O.Reg. 153/04 as amended (T2)

Date	Well Depth	Parameter	Result
9-04-2018	9.2m	Metals and Inorganics, PHC (F1-F4), VOCs, OC pesticides	Pass

BH18/BH18-4 O.Reg. 153/04 as amended (T2)

Date	Well Depth	Parameter	Result
9-04-2018	8.2m	Metals and Inorganics, PHC (F1-F4), VOCs, OC pesticides	Pass

Approximate Property Line

BH18/MW18-4 Monitoring well DS 2018

Title: Ground Water Characterization

DS CONSULTANTS LTD.
6221 Highway 7, Unit 16
Vaughan, Ontario, L4H 0K8
Telephone: (905) 264-9393
www.dsconsultants.ca

Project: PHASE TWO - ENVIRONMENTAL SITE ASSESSMENT
14245 HIGHWAY # 50, CALEDON, ON

Client: Georgian Group

Drawn:	LPV	Scale:	As Shown
Approved:	SA	Project No.:	18-526-20
Date:	APRIL, 2018	Figure No.:	5

APPENDIX A

Survey Plan

BOUNDARY SURVEY OF

PART OF THE WEST HALVES OF LOTS 11 AND 12 CONCESSION 7

(ORIGINAL GEOGRAPHIC TOWNSHIP OF ALBION, COUNTY OF PEEL)

TOWN OF CALEDON

REGIONAL MUNICIPALITY OF PEEL

SCALE 1:1000

0 20 40 60 80 100 m

KRCMAR SURVEYORS LTD.

METRIC: DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

BEARING

BEARINGS HEREON ARE GRID AND ARE REFERRED TO THE NAD 83 UTM COORDINATE SYSTEM, ZONE 17, CENTRAL MERIDIAN 81° WEST LONGITUDE AND ARE REFERRED TO THE SOUTERLY LIMIT OF PART 2 AS SHOWN ON PLAN 43R-32199 HAVING A BEARING N74°05'05"E

LEGEND

■	DENOTES SURVEY MONUMENT FOUND
□	DENOTES SURVEY MONUMENT PLANTED
SIB	DENOTES STANDARD IRON BAR
SSIB	DENOTES SHORT STANDARD IRON BAR
IB	DENOTES IRON BAR
(WIT)	DENOTES WITNESS
(M)	DENOTES MEASURED
(S)	DENOTES SET
P1	DENOTES PLAN 43R-18739
P2	DENOTES PLAN 43R-32199
P3	DENOTES PLAN 43R-12967
P4	DENOTES PLAN 43R-31245
P5	DENOTES PLAN 43R-27826
P6	DENOTES PLAN 43R-6846
(1280)	DENOTES ANTON KIKAS LTD. O.L.S.
(1370)	DENOTES VLADIMIR KRCMAR O.L.S.
(1493)	DENOTES J.F.G. YOUNG O.L.S.
(1508)	DENOTES S.D. McKECHNIE O.L.S.
(MTO)	DENOTES MINISTRY OF TRANSPORTATION ONTARIO
(OU)	DENOTES ORIGIN UNKNOWN
-X-	DENOTES FENCE
P.T.	DENOTES POINT OF TANGENCY
N.T.	DENOTES NON TANGENTIAL

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT, THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM
2. THE SURVEY WAS COMPLETED ON THE 17th DAY OF APRIL 2009

DATE: APRIL 17, 2009

MAJA KRCMAR O.L.S.

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
1730624

THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR In accordance with Regulation 1026, Section 29(3).

FIELD:	M.M.	DRAWN:	M.M.	CHECKED:	M.K.	JOB NO:	09-036
DWG NAME:	09-036BD.dwg	PLOT INFO:	15.04.2009[15:20]	WORK ORDER NO:	9937

1137 Centre Street Thornhill ON L4J 3M6 905.738.0053 F 905.738.9221 www.krcmar.ca

KRCMAR

APPENDIX B

Borehole Logs

LOG OF BOREHOLE BH18-1

PROJECT: PHASE 2 ESA
CLIENT: Georgian Group
PROJECT LOCATION: 14245 Highway 50, Caledon, ON
DATUM: Geodetic
DRILLING COMPANY: Terra Firma

DRILLING DATA
Method: Hollow Stem Augers
Diameter: 150mm
Date: Apr-09-2018

REF. NO.: 18-526-20
ENCL NO.: 1

(m) ELEV / DEPTH	DESCRIPTION	NUMBER	TYPE	BLOWS 0.3 m "N"	GROUND WATER CONDITIONS	ELEVATION	PID (ppm)	CGD (ppm)	WATER CONTENT (%)	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	METHANE (ppm) AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
263.6												
0.0 / 263.3	**TOPSOIL:** 300 mm	1	SS	4		263						OC Pesticide
0.3	**FILL:** clayey silt, some sand, trace gravel, trace topsoil/organics, dark brown, moist, loose	2	SS	12	▽ W. L. 262.8 m Apr 25, 2018							PAHs
1 / 262.1		3	SS	16		262						M & I
1.5	**CLAYEY SILT TILL:** some sand, trace gravel, brown, moist, very stiff to hard											
2		4	SS	36		261						
3		5	SS	30		260						
4 / 258.7		6	SS	29		259						
4.9	**SANDY SILT TO SILTY SAND:** grey, wet, compact					258						
5 / 257.5												PHCs (F1-F4), VOCs
6.1	**SILT:** some clay, grey, wet, compact	7	SS	18		257						
7 / 256.0						256						
7.6	**CLAYEY SILT TILL:** some sand, trace gravel, brown, moist, very stiff	8	SS	20								
8 / 255.4												
8.2	**END OF BOREHOLE**											

Notes:
1) Water was encountered at 7 mbgs during drilling.
2) 50mm dia. monitoring well installed in the borehole upon completion.
3) Water Level Readings:

Date	Water Level (mbgs)
April 13/18	0.77
April 25/18	0.77

GROUNDWATER ELEVATIONS
Measurement 1st ▽ 2nd ▼ 3rd ▼ 4th ▼

GRAPH NOTES: + 3, × 3: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

LOG OF BOREHOLE BH18-2

PROJECT: PHASE 2 ESA
CLIENT: Georgian Group
PROJECT LOCATION: 14245 Highway 50, Caledon, ON
DATUM: Geodetic
DRILLING COMPANY: Terra Firma

DRILLING DATA
Method: Hollow Stem Augers
Diameter: 150mm
Date: Apr-09-2018

REF. NO.: 18-526-20
ENCL NO.: 2

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	BLOWS 0.3 m "N"	GROUND WATER CONDITIONS	ELEVATION	Soil Head Space Vapors PID (ppm)	Soil Head Space Vapors CGD (ppm)	PLASTIC LIMIT / NATURAL MOISTURE CONTENT / LIQUID LIMIT (w_P w w_L) WATER CONTENT (%)	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	METHANE (ppm) AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
264.4													
264.2 0.0	**TOPSOIL:** 200 mm												M & I
0.2	**FILL:** clayey silt till, trace gravel, trace organics, greyish brown, moist, stiff		1	SS	12		264						
			2	SS	20	▽ W. L. 263.8 m Apr 25, 2018							OC Pesticide
1			3	SS	24		263						PAHs, PHCs,(F1 - F4), VOCs
2													
262.1													
2.3	**CLAYEY SILT TILL:** some sand, trace gravel, brownish grey, moist, stiff to very stiff		4	SS	22		262						
3													
			5	SS	17		261						
4													
	grey below 4.6m						260						
			6	SS	14								
5							259						
6													
			7	SS	19		258						
7													
							257						
8			8	SS	19								
256.2													
8.2	**END OF BOREHOLE**												

Notes:
1) Water was encountered at 7 mbgs during drilling.
2) 50mm dia. monitoring well installed in the borehole upon completion.
3) Water Level Readings:

Date	Water Level (mbgs)
April 13/18	0.56
April 25/18	0.65

GROUNDWATER ELEVATIONS
Measurement 1st ▽ 2nd ▼ 3rd ▼ 4th ▼

GRAPH NOTES: + 3, × 3: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

DS ENVIRO 0-50 PPM-2016 18-526-20 - 14245 HIGHWAY 50, CALEDON.GPJ DS.GDT 18-4-26

DS CONSULTANTS LTD.

LOG OF BOREHOLE BH18-3

PROJECT: PHASE 2 ESA
CLIENT: Georgian Group
PROJECT LOCATION: 14245 Highway 50, Caledon, ON
DATUM: Geodetic
DRILLING COMPANY: Terra Firma

DRILLING DATA
Method: Hollow Stem Augers
Diameter: 150mm
Date: Apr-09-2018

REF. NO.: 18-526-20
ENCL NO.: 3

(m) ELEV / DEPTH	DESCRIPTION	NUMBER	TYPE	BLOWS 0.3 m "N"	ELEVATION	METHANE (ppm) AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
263.4 / 0.0	**TOPSOIL:** 200 mm					
263.2 / 0.2	**FILL:** clayey silt, trace clay. trace sand, trace gravel trace organics, brown, moist, very stiff	1	SS	8	263	
		2	SS	23		M & I
		3	SS	16	262	OC Pesticide
261.1 / 2.3	**CLAYEY SILT TILL:** some sand, trace gravel, brown, moist, hard	4	SS	43	261	
		5	SS	40	260	PHCs(F1 - F4)
	grey, stiff to very stiff below 4.6m	6	SS	18	259	
		7	SS	13	258	
		8	SS	26	257	
					256	
					255	
254.3 / 9.1	**END OF BOREHOLE**					

Notes:
1) Borehole was dry and open upon completion of drilling.
2) 50mm dia. monitoring well installed in the borehole upon completion.
3) Water Level Readings:

Date	Water Level (mbgs)
April 13/18	8.97
April 25/18	8.94

W. L. 254.5 m
Apr 25, 2018

Soil Head Space Vapors: PID (ppm) 10 20 30 40; CGD (ppm) 10 20 30 40

PLASTIC LIMIT w_P — NATURAL MOISTURE CONTENT w — LIQUID LIMIT w_L
WATER CONTENT (%) 10 20 30

POCKET PEN. (Cu) (kPa)
NATURAL UNIT WT (kN/m³)

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES
+ 3, × 3: Numbers refer to Sensitivity
○ 8=3% Strain at Failure

DS ENVIRO 0-50 PPM-2016 18-526-20 - 14245 HIGHWAY 50, CALEDON.GPJ DS.GDT 18-4-26

LOG OF BOREHOLE BH18-4

PROJECT: PHASE 2 ESA
CLIENT: Georgian Group
PROJECT LOCATION: 14245 Highway 50, Caledon, ON
DATUM: Geodetic
DRILLING COMPANY: Terra Firma

DRILLING DATA
Method: Hollow Stem Augers
Diameter: 150mm
Date: Apr-09-2018

REF. NO.: 18-526-20
ENCL NO.: 4

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	BLOWS 0.3 m "N"	GROUND WATER CONDITIONS	ELEVATION	Soil Head Space Vapors PID (ppm)	Soil Head Space Vapors CGD (ppm)	PLASTIC LIMIT W_P / NATURAL MOISTURE CONTENT W / LIQUID LIMIT W_L — WATER CONTENT (%)	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	METHANE (ppm) AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
261.7								10 20 30 40	10 20 30 40	10 20 30			
261.6	**TOPSOIL** 200mm												OC Pesticide
0.2	**FILL:** Silt, trace clay, trace sand, trace organics, dark brown, moist, compact		1	SS	9		261						
1			2	SS	23								M & I
260.2													
1.5	**SILT** Silt, some sand, moist to very moist, compact		3	SS	25		260						PHCs (F1 - F4)
2			4	SS	18		259						
258.6													
3.1	**CLAYEY SILT TILL:** brown to grey, very moist, very stiff		5	SS	27		258						
4													
			6	SS	18		257						
5													
6			7	SS	17	▽	256						
							W. L. 255.2 m Apr 25, 2018						
7													
254.1													
7.6	**SILT** Silt, trace sand, trace clay, grey, moist, dense		8	SS	30		254						
8													
253.5													
8.2	**END OF BOREHOLE**												

Notes:
1) Water was encountered at 7.5 mbgs during drilling.
2) 50mm dia. monitoring well installed in the borehole upon completion.
3) Water Level Readings:

Date	Water Level (mbgs)
April 13/18	6.68
April 25/18	6.56

GROUNDWATER ELEVATIONS
Measurement 1st ▽ 2nd ▼ 3rd ▼ 4th ▼

GRAPH NOTES: + ³, × ³: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

APPENDIX C

Laboratory Certificates of Analysis

SOIL

DS Consultants (Vaughan)
ATTN: Shaffi Andseta
6221 Highway 7
Unit 16
Vaughan ON L4H 0K8

Date Received: 11-APR-18
Report Date: 23-APR-18 12:40 (MT)
Version: FINAL REV. 2

Client Phone: 647-237-5110

Certificate of Analysis

Lab Work Order #: L2078796

Project P.O. #: NOT SUBMITTED
Job Reference: 18-526-20
C of C Numbers:
Legal Site Desc:

Comments: 23-APR-18 Report type revision to compare to Table 8 as per client request. -A.Fazekas

Amanda Fazekas
Account Manager

ANALYTICAL REPORT

Summary of Guideline Exceedances

Guideline ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T8-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

(No parameter exceedances)

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Physical Tests - SOIL

		Guide Limits									
Analyte	**Unit**	**#1**	**#2**								
Lab ID				L2078796-1	L2078796-2	L2078796-3	L2078796-4	L2078796-5	L2078796-6	L2078796-7	L2078796-8	L2078796-9
Sample Date				09-APR-18	09-APR-18	09-APR-18	09-APR-18	09-APR-18	09-APR-18	09-APR-18	09-APR-18	09-APR-18
Sample ID				BH18-1, SS1	BH18-1, SS2	BH18-1,SS3	BH18-1,SS7	BH18-2, SS1	BH18-2, SS2	BH18-2, SS3	BH18-3, SS2	BH18-3, SS3
Conductivity	mS/cm	0.7	-			0.231		0.218			0.162	
% Moisture	%	-	-	25.3	12.8	16.2	20.8	18.5	15.1	14.8	14.6	15.4
pH	pH units	-	-			7.58		7.61			7.67	

Guide Limit #1: T8-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Physical Tests - SOIL

		Guide Limits							
Lab ID				L2078796-10	L2078796-11	L2078796-12	L2078796-13	L2078796-14	L2078796-15
Sample Date				09-APR-18	09-APR-18	09-APR-18	09-APR-18	09-APR-18	09-APR-18
Sample ID				BH18-3, SS5	BH18-4, SS1	BH18-4, SS3	BH18-4, SS4	DUP-1	DUP-2
Analyte	**Unit**	**#1**	**#2**						
Conductivity	mS/cm	0.7	-			0.152			0.153
% Moisture	%	-	-	9.73	18.5	17.3	16.5	15.7	16.9
pH	pH units	-	-			7.60			7.65

Guide Limit #1: T8-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Cyanides - SOIL

		Guide Limits						
Lab ID				L2078796-3	L2078796-5	L2078796-8	L2078796-12	L2078796-15
Sample Date				09-APR-18	09-APR-18	09-APR-18	09-APR-18	09-APR-18
Sample ID				BH18-1,SS3	BH18-2, SS1	BH18-3, SS2	BH18-4, SS3	DUP-2
Analyte	**Unit**	**#1**	**#2**					
Cyanide, Weak Acid Diss	ug/g	0.051	-	<0.050	<0.050	<0.050	<0.050	<0.050

Guide Limit #1: T8-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Saturated Paste Extractables - SOIL

Analyte	Unit	Guide Limits #1	Guide Limits #2	Lab ID	Sample Date	Sample ID		
				L2078796-3	L2078796-5	L2078796-8	L2078796-12	L2078796-15
				09-APR-18	09-APR-18	09-APR-18	09-APR-18	09-APR-18
				BH18-1,SS3	BH18-2, SS1	BH18-3, SS2	BH18-4, SS3	DUP-2
SAR	SAR	5	-	0.85	0.77	0.31	0.23 SAR:M	0.22 SAR:M
Calcium (Ca)	mg/L	-	-	6.5	6.1	6.5	6.4	6.8
Magnesium (Mg)	mg/L	-	-	2.7	2.7	1.4	<1.0	<1.0
Sodium (Na)	mg/L	-	-	10.2	9.0	3.3	2.1	2.1

Guide Limit #1: T8-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

ANALYTICAL REPORT

Metals - SOIL

		Guide Limits						
Lab ID				L2078796-3	L2078796-5	L2078796-8	L2078796-12	L2078796-15
Sample Date				09-APR-18	09-APR-18	09-APR-18	09-APR-18	09-APR-18
Sample ID				BH18-1,SS3	BH18-2, SS1	BH18-3, SS2	BH18-4, SS3	DUP-2
Analyte	**Unit**	**#1**	**#2**					
Antimony (Sb)	ug/g	1.3	-	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic (As)	ug/g	18	-	4.4	4.3	4.3	4.7	4.4
Barium (Ba)	ug/g	220	-	131	126	105	107	103
Beryllium (Be)	ug/g	2.5	-	0.87	0.91	0.75	0.78	0.66
Boron (B)	ug/g	36	-	15.4	14.5	12.4	12.1	10.6
Boron (B), Hot Water Ext.	ug/g	1.5	-	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium (Cd)	ug/g	1.2	-	<0.50	<0.50	<0.50	<0.50	<0.50
Chromium (Cr)	ug/g	70	-	26.1	27.2	22.4	24.3	23.3
Cobalt (Co)	ug/g	22	-	11.6	11.2	10.9	11.9	11.5
Copper (Cu)	ug/g	92	-	21.8	20.7	20.0	21.4	20.8
Lead (Pb)	ug/g	120	-	10.2	10.0	10.1	10.0	9.4
Mercury (Hg)	ug/g	0.27	-	0.0170	0.0191	0.0180	0.0212	0.0203
Molybdenum (Mo)	ug/g	2	-	<1.0	<1.0	<1.0	<1.0	<1.0
Nickel (Ni)	ug/g	82	-	25.2	25.2	23.7	25.7	24.4
Selenium (Se)	ug/g	1.5	-	<1.0	<1.0	<1.0	<1.0	<1.0
Silver (Ag)	ug/g	0.5	-	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium (Tl)	ug/g	1	-	<0.50	<0.50	<0.50	<0.50	<0.50
Uranium (U)	ug/g	2.5	-	<1.0	<1.0	<1.0	<1.0	<1.0
Vanadium (V)	ug/g	86	-	39.5	40.4	33.6	35.2	32.3
Zinc (Zn)	ug/g	290	-	53.1	53.0	48.0	53.1	50.8

Guide Limit #1: T8-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

ANALYTICAL REPORT

Speciated Metals - SOIL

Analyte	Unit	Guide Limits #1	Guide Limits #2	Lab ID	L2078796-3	L2078796-5	L2078796-8	L2078796-12	L2078796-15
				Sample Date	09-APR-18	09-APR-18	09-APR-18	09-APR-18	09-APR-18
				Sample ID	BH18-1,SS3	BH18-2, SS1	BH18-3, SS2	BH18-4, SS3	DUP-2
Chromium, Hexavalent	ug/g	0.66	-		0.33	0.56	0.22	0.21	0.31

Guide Limit #1: T8-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Volatile Organic Compounds - SOIL

				Lab ID	L2078796-4	L2078796-7
				Sample Date	09-APR-18	09-APR-18
				Sample ID	BH18-1,SS7	BH18-2, SS3
		Guide Limits				
Analyte	Unit	#1	#2			
Acetone	ug/g	0.5	-		<0.50	<0.50
Benzene	ug/g	0.02	-		<0.0068	<0.0068
Bromodichloromethane	ug/g	0.05	-		<0.050	<0.050
Bromoform	ug/g	0.05	-		<0.050	<0.050
Bromomethane	ug/g	0.05	-		<0.050	<0.050
Carbon tetrachloride	ug/g	0.05	-		<0.050	<0.050
Chlorobenzene	ug/g	0.05	-		<0.050	<0.050
Dibromochloromethane	ug/g	0.05	-		<0.050	<0.050
Chloroform	ug/g	0.05	-		<0.050	<0.050
1,2-Dibromoethane	ug/g	0.05	-		<0.050	<0.050
1,2-Dichlorobenzene	ug/g	0.05	-		<0.050	<0.050
1,3-Dichlorobenzene	ug/g	0.05	-		<0.050	<0.050
1,4-Dichlorobenzene	ug/g	0.05	-		<0.050	<0.050
Dichlorodifluoromethane	ug/g	0.05	-		<0.050	<0.050
1,1-Dichloroethane	ug/g	0.05	-		<0.050	<0.050
1,2-Dichloroethane	ug/g	0.05	-		<0.050	<0.050
1,1-Dichloroethylene	ug/g	0.05	-		<0.050	<0.050
cis-1,2-Dichloroethylene	ug/g	0.05	-		<0.050	<0.050
trans-1,2-Dichloroethylene	ug/g	0.05	-		<0.050	<0.050
Methylene Chloride	ug/g	0.05	-		<0.050	<0.050
1,2-Dichloropropane	ug/g	0.05	-		<0.050	<0.050
cis-1,3-Dichloropropene	ug/g	-	-		<0.030	<0.030
trans-1,3-Dichloropropene	ug/g	-	-		<0.030	<0.030
1,3-Dichloropropene (cis & trans)	ug/g	0.05	-		<0.042	<0.042
Ethylbenzene	ug/g	0.05	-		<0.018	<0.018
n-Hexane	ug/g	0.05	-		<0.050	<0.050
Methyl Ethyl Ketone	ug/g	0.5	-		<0.50	<0.50
Methyl Isobutyl Ketone	ug/g	0.5	-		<0.50	<0.50
MTBE	ug/g	0.05	-		<0.050	<0.050
Styrene	ug/g	0.05	-		<0.050	<0.050

Guide Limit #1: T8-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Volatile Organic Compounds - SOIL

			Lab ID	L2078796-4	L2078796-7
			Sample Date	09-APR-18	09-APR-18
			Sample ID	BH18-1,SS7	BH18-2, SS3
		Guide Limits			
Analyte	**Unit**	**#1**	**#2**		
1,1,1,2-Tetrachloroethane	ug/g	0.05	-	<0.050	<0.050
1,1,2,2-Tetrachloroethane	ug/g	0.05	-	<0.050	<0.050
Tetrachloroethylene	ug/g	0.05	-	<0.050	<0.050
Toluene	ug/g	0.2	-	<0.080	<0.080
1,1,1-Trichloroethane	ug/g	0.05	-	<0.050	<0.050
1,1,2-Trichloroethane	ug/g	0.05	-	<0.050	<0.050
Trichloroethylene	ug/g	0.05	-	<0.010	<0.010
Trichlorofluoromethane	ug/g	0.25	-	<0.050	<0.050
Vinyl chloride	ug/g	0.02	-	<0.020	<0.020
o-Xylene	ug/g	-	-	<0.020	<0.020
m+p-Xylenes	ug/g	-	-	<0.030	<0.030
Xylenes (Total)	ug/g	0.05	-	<0.050	<0.050
Surrogate: 4-Bromofluorobenzene	%	-	-	88.3	83.6
Surrogate: 1,4-Difluorobenzene	%	-	-	91.2	87.5

Guide Limit #1: T8-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

ANALYTICAL REPORT

Hydrocarbons - SOIL

			Lab ID	L2078796-4	L2078796-7	L2078796-10	L2078796-13	L2078796-14
			Sample Date	09-APR-18	09-APR-18	09-APR-18	09-APR-18	09-APR-18
			Sample ID	BH18-1,SS7	BH18-2, SS3	BH18-3, SS5	BH18-4, SS4	DUP-1
		Guide Limits						
Analyte	Unit	#1	#2					
F1 (C6-C10)	ug/g	25	-	<5.0	<5.0	<5.0	<5.0	<5.0
F1-BTEX	ug/g	25	-	<5.0	<5.0			
F2 (C10-C16)	ug/g	10	-	<10	<10	<10	<10	<10
F2-Naphth	ug/g	-	-		<10			
F3 (C16-C34)	ug/g	240	-	<50	<50	<50	<50	<50
F3-PAH	ug/g	-	-		<50			
F4 (C34-C50)	ug/g	120	-	<50	<50	<50	<50	<50
Total Hydrocarbons (C6-C50)	ug/g	-	-	<72	<72	<72	<72	<72
Chrom. to baseline at nC50		-	-	YES	YES	YES	YES	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	88.0	95.8	93.4	92.6	92.5
Surrogate: 3,4-Dichlorotoluene	%	-	-	86.6	64.9	98.8	92.0	74.8

Guide Limit #1: T8-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Polycyclic Aromatic Hydrocarbons - SOIL

		Guide Limits			
Lab ID				L2078796-2	L2078796-7
Sample Date				09-APR-18	09-APR-18
Sample ID				BH18-1, SS2	BH18-2, SS3
Analyte	**Unit**	**#1**	**#2**		
Acenaphthene	ug/g	0.072	-	<0.050	<0.050
Acenaphthylene	ug/g	0.093	-	<0.050	<0.050
Anthracene	ug/g	0.22	-	<0.050	<0.050
Benzo(a)anthracene	ug/g	0.36	-	<0.050	<0.050
Benzo(a)pyrene	ug/g	0.3	-	<0.050	<0.050
Benzo(b)fluoranthene	ug/g	0.47	-	<0.050	<0.050
Benzo(g,h,i)perylene	ug/g	0.68	-	<0.050	<0.050
Benzo(k)fluoranthene	ug/g	0.48	-	<0.050	<0.050
Chrysene	ug/g	2.8	-	<0.050	<0.050
Dibenzo(ah)anthracene	ug/g	0.1	-	<0.050	<0.050
Fluoranthene	ug/g	0.69	-	<0.050	<0.050
Fluorene	ug/g	0.19	-	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	ug/g	0.23	-	<0.050	<0.050
1+2-Methylnaphthalenes	ug/g	0.59	-	<0.042	<0.042
1-Methylnaphthalene	ug/g	0.59	-	<0.030	<0.030
2-Methylnaphthalene	ug/g	0.59	-	<0.030	<0.030
Naphthalene	ug/g	0.09	-	<0.013	<0.013
Phenanthrene	ug/g	0.69	-	<0.046	<0.046
Pyrene	ug/g	1	-	<0.050	<0.050
Surrogate: 2-Fluorobiphenyl	%	-	-	83.0	81.7
Surrogate: p-Terphenyl d14	%	-	-	86.9	85.6

Guide Limit #1: T8-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Organochlorine Pesticides - SOIL

			Lab ID	L2078796-1	L2078796-6	L2078796-9	L2078796-11
			Sample Date	09-APR-18	09-APR-18	09-APR-18	09-APR-18
			Sample ID	BH18-1, SS1	BH18-2, SS2	BH18-3, SS3	BH18-4, SS1
		Guide Limits					
Analyte	Unit	#1	#2				
Aldrin	ug/g	0.05	-	<0.020	<0.020	<0.020	<0.020
gamma-hexachlorocyclohexane	ug/g	0.01	-	<0.010	<0.010	<0.010	<0.010
a-chlordane	ug/g	-	-	<0.020	<0.020	<0.020	<0.020
Chlordane (Total)	ug/g	0.05	-	<0.028	<0.028	<0.028	<0.028
g-chlordane	ug/g	-	-	<0.020	<0.020	<0.020	<0.020
op-DDD	ug/g	-	-	<0.020	<0.020	<0.020	<0.020
pp-DDD	ug/g	-	-	<0.020	<0.020	<0.020	<0.020
Total DDD	ug/g	0.05	-	<0.028	<0.028	<0.028	<0.028
o,p-DDE	ug/g	-	-	<0.020	<0.020	<0.020	<0.020
pp-DDE	ug/g	-	-	<0.020	<0.020	<0.020	<0.020
Total DDE	ug/g	0.05	-	<0.028	<0.028	<0.028	<0.028
op-DDT	ug/g	-	-	<0.020	<0.020	<0.020	<0.020
pp-DDT	ug/g	-	-	<0.020	<0.020	<0.020	<0.020
Total DDT	ug/g	1.4	-	<0.028	<0.028	<0.028	<0.028
Dieldrin	ug/g	0.05	-	<0.020	<0.020	<0.020	<0.020
Endosulfan I	ug/g	-	-	<0.020	<0.020	<0.020	<0.020
Endosulfan II	ug/g	-	-	<0.020	<0.020	<0.020	<0.020
Endosulfan (Total)	ug/g	0.04	-	<0.028	<0.028	<0.028	<0.028
Endrin	ug/g	0.04	-	<0.020	<0.020	<0.020	<0.020
Heptachlor	ug/g	0.05	-	<0.020	<0.020	<0.020	<0.020
Heptachlor Epoxide	ug/g	0.05	-	<0.020	<0.020	<0.020	<0.020
Hexachlorobenzene	ug/g	0.02	-	<0.010	<0.010	<0.010	<0.010
Hexachlorobutadiene	ug/g	0.01	-	<0.010	<0.010	<0.010	<0.010
Hexachloroethane	ug/g	0.01	-	<0.010	<0.010	<0.010	<0.010
Methoxychlor	ug/g	0.05	-	<0.020	<0.020	<0.020	<0.020
Surrogate: 2-Fluorobiphenyl	%	-	-	97.6	89.1	96.6	96.4
Surrogate: d14-Terphenyl	%	-	-	82.4	94.6	107.2	76.0

Guide Limit #1: T8-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.

Reference Information

Qualifiers for Individual Parameters Listed:

Qualifier	Description
SAR:M	Reported SAR represents a maximum value. Actual SAR may be lower if both Ca and Mg were detectable.

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
B-HWS-R511-WT	Soil	Boron-HWE-O.Reg 153/04 (July 2011)	HW EXTR, EPA 6010B

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

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).

CHLORDANE-T-CALC-WT	Soil	Chlordane Total sums	CALCULATION

Aqueous sample is extracted by liquid/liquid extraction with a solvent mix. After extraction, a number of clean up techniques may be applied, depending on the sample matrix and analyzed by GC/MS.

CN-WAD-R511-WT	Soil	Cyanide (WAD)-O.Reg 153/04 (July 2011)	MOE 3015/APHA 4500CN I-WAD

The sample is extracted with a strong base for 16 hours, and then filtered. The filtrate is then distilled where the cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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

CR-CR6-IC-WT	Soil	Hexavalent Chromium in Soil	SW846 3060A/7199

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

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).

DDD-DDE-DDT-CALC-WT	Soil	DDD, DDE, DDT sums	CALCULATION

Aqueous sample is extracted by liquid/liquid extraction with a solvent mix. After extraction, a number of clean up techniques may be applied, depending on the sample matrix and analyzed by GC/MS.

EC-WT	Soil	Conductivity (EC)	MOEE E3138

A representative subsample is tumbled with de-ionized (DI) water. The ratio of water to soil is 2:1 v/w. After tumbling the sample is then analyzed by a conductivity 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).

ENDOSULFAN-T-CALC-WT	Soil	Endosulfan Total sums	CALCULATION

Aqueous sample is extracted by liquid/liquid extraction with a solvent mix. After extraction, a number of clean up techniques may be applied, depending on the sample matrix and analyzed by GC/MS.

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.

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**

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).

HG-200.2-CVAA-WT Soil Mercury in Soil by CVAAS EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

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

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

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**

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. Results for benzo(b) fluoranthene may include contributions from benzo(j)fluoranthene, if also present in the sample.

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

PEST-OC-511-WT	Soil	OC Pesticides-O.Reg 153/04 (July 2011)	SW846 8270 (511)

Soil sample is extracted in a solvent, after extraction a number of clean up techniques may be applied, depending on the sample matrix and analyzed by 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).

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).

SAR-R511-WT	Soil	SAR-O.Reg 153/04 (July 2011)	SW846 6010C

A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES. The concentrations of Na, Ca and Mg are reported as per CALA requirements for calculated parameters. These individual parameters are not for comparison to any guideline.

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).

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.

Reference Information

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
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.

Quality Control Report

Workorder: L2078796 Report Date: 23-APR-18

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
B-HWS-R511-WT	**Soil**							
Batch R4015749								
WG2751709-4 DUP		**L2078796-15**						
Boron (B), Hot Water Ext.		<0.10	<0.10	RPD-NA	ug/g	N/A	30	16-APR-18
WG2751709-2 IRM		**HOTB-SAL_SOIL5**						
Boron (B), Hot Water Ext.			92.2		%		70-130	16-APR-18
WG2751709-3 LCS								
Boron (B), Hot Water Ext.			107.4		%		70-130	16-APR-18
WG2751709-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	16-APR-18
CN-WAD-R511-WT	**Soil**							
Batch R4013851								
WG2750108-3 DUP		**L2077208-16**						
Cyanide, Weak Acid Diss		<0.050	<0.050	RPD-NA	ug/g	N/A	35	13-APR-18
WG2750108-2 LCS								
Cyanide, Weak Acid Diss			92.8		%		80-120	13-APR-18
WG2750108-1 MB								
Cyanide, Weak Acid Diss			<0.050		ug/g		0.05	13-APR-18
WG2750108-4 MS		**L2077208-16**						
Cyanide, Weak Acid Diss			101.9		%		70-130	13-APR-18
CR-CR6-IC-WT	**Soil**							
Batch R4010850								
WG2749993-4 CRM		**WT-SQC012**						
Chromium, Hexavalent			82.4		%		70-130	13-APR-18
WG2749993-3 DUP		**L2077208-16**						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	13-APR-18
WG2749993-2 LCS								
Chromium, Hexavalent			104.2		%		80-120	13-APR-18
WG2749993-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	13-APR-18
EC-WT	**Soil**							
Batch R4014637								
WG2751714-4 DUP		**WG2751714-3**						
Conductivity		0.335	0.336		mS/cm	0.3	20	16-APR-18
WG2751958-1 LCS								
Conductivity			97.4		%		90-110	16-APR-18
WG2751714-1 MB								
Conductivity			<0.0040		mS/cm		0.004	16-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EC-WT	**Soil**							
Batch R4014647								
WG2751713-4 DUP		**WG2751713-3**						
Conductivity		0.231	0.236		mS/cm	2.1	20	16-APR-18
WG2751959-1 LCS								
Conductivity			96.5		%		90-110	16-APR-18
WG2751713-1 MB								
Conductivity			<0.0040		mS/cm		0.004	16-APR-18
F1-HS-511-WT	**Soil**							
Batch R4009952								
WG2749679-4 DUP		**WG2749679-3**						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	13-APR-18
WG2749679-2 LCS								
F1 (C6-C10)			98.0		%		80-120	13-APR-18
WG2749679-1 MB								
F1 (C6-C10)			<5.0		ug/g		5	13-APR-18
Surrogate: 3,4-Dichlorotoluene			91.4		%		60-140	13-APR-18
WG2749679-6 MS		**L2078737-2**						
F1 (C6-C10)			74.4		%		60-140	13-APR-18
Batch R4010428								
WG2749637-4 DUP		**WG2749637-3**						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	13-APR-18
WG2749637-2 LCS								
F1 (C6-C10)			106.6		%		80-120	13-APR-18
WG2749637-1 MB								
F1 (C6-C10)			<5.0		ug/g		5	13-APR-18
Surrogate: 3,4-Dichlorotoluene			93.1		%		60-140	13-APR-18
WG2749637-6 MS		**L2078942-1**						
F1 (C6-C10)			100.7		%		60-140	13-APR-18
F2-F4-511-WT	**Soil**							
Batch R4011588								
WG2749449-3 DUP		**WG2749449-5**						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	13-APR-18
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	13-APR-18
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	13-APR-18
WG2749449-2 LCS								
F2 (C10-C16)			115.9		%		80-120	13-APR-18
F3 (C16-C34)			117.4		%		80-120	13-APR-18
F4 (C34-C50)			117.3		%		80-120	13-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-511-WT	**Soil**							
Batch R4011588								
WG2749449-1 MB								
F2 (C10-C16)			<10		ug/g		10	13-APR-18
F3 (C16-C34)			<50		ug/g		50	13-APR-18
F4 (C34-C50)			<50		ug/g		50	13-APR-18
Surrogate: 2-Bromobenzotrifluoride			90.8		%		60-140	13-APR-18
WG2749449-4 MS		**WG2749449-5**						
F2 (C10-C16)			115.7		%		60-140	13-APR-18
F3 (C16-C34)			115.7		%		60-140	13-APR-18
F4 (C34-C50)			115.6		%		60-140	13-APR-18
HG-200.2-CVAA-WT	**Soil**							
Batch R4014507								
WG2751700-2 CRM		**WT-CANMET-TILL1**						
Mercury (Hg)			108.3		%		70-130	16-APR-18
WG2751700-6 DUP		**WG2751700-5**						
Mercury (Hg)		0.0158	0.0172		ug/g	8.5	40	16-APR-18
WG2751700-3 LCS								
Mercury (Hg)			118.0		%		80-120	16-APR-18
WG2751700-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	16-APR-18
MET-200.2-CCMS-WT	**Soil**							
Batch R4015674								
WG2751700-2 CRM		**WT-CANMET-TILL1**						
Antimony (Sb)			102.5		%		70-130	16-APR-18
Arsenic (As)			105.9		%		70-130	16-APR-18
Barium (Ba)			106.3		%		70-130	16-APR-18
Beryllium (Be)			99.2		%		70-130	16-APR-18
Boron (B)			3.5		mg/kg		0-8.2	16-APR-18
Cadmium (Cd)			108.0		%		70-130	16-APR-18
Chromium (Cr)			102.1		%		70-130	16-APR-18
Cobalt (Co)			100.2		%		70-130	16-APR-18
Copper (Cu)			101.4		%		70-130	16-APR-18
Lead (Pb)			103.5		%		70-130	16-APR-18
Molybdenum (Mo)			103.8		%		70-130	16-APR-18
Nickel (Ni)			102.1		%		70-130	16-APR-18
Selenium (Se)			0.30		mg/kg		0.11-0.51	16-APR-18
Silver (Ag)			0.24		mg/kg		0.13-0.33	16-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R4015674								
WG2751700-2 CRM		**WT-CANMET-TILL1**						
Thallium (Tl)			0.128		mg/kg		0.077-0.18	16-APR-18
Uranium (U)			103.5		%		70-130	16-APR-18
Vanadium (V)			105.0		%		70-130	16-APR-18
Zinc (Zn)			105.5		%		70-130	16-APR-18
WG2751700-6 DUP		**WG2751700-5**						
Antimony (Sb)		0.15	0.14		ug/g	3.8	30	16-APR-18
Arsenic (As)		4.29	4.37		ug/g	1.7	30	16-APR-18
Barium (Ba)		164	157		ug/g	4.7	40	16-APR-18
Beryllium (Be)		0.90	0.95		ug/g	5.2	30	16-APR-18
Boron (B)		18.1	19.5		ug/g	7.6	30	16-APR-18
Cadmium (Cd)		0.137	0.128		ug/g	6.4	30	16-APR-18
Chromium (Cr)		35.3	35.3		ug/g	0.2	30	16-APR-18
Cobalt (Co)		11.8	12.0		ug/g	1.3	30	16-APR-18
Copper (Cu)		21.6	20.8		ug/g	3.6	30	16-APR-18
Lead (Pb)		10.5	10.2		ug/g	2.6	40	16-APR-18
Molybdenum (Mo)		0.47	0.54		ug/g	14	40	16-APR-18
Nickel (Ni)		27.4	27.2		ug/g	0.6	30	16-APR-18
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	16-APR-18
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	16-APR-18
Thallium (Tl)		0.188	0.190		ug/g	0.6	30	16-APR-18
Uranium (U)		0.638	0.659		ug/g	3.2	30	16-APR-18
Vanadium (V)		47.3	47.2		ug/g	0.2	30	16-APR-18
Zinc (Zn)		78.8	73.8		ug/g	6.5	30	16-APR-18
WG2751700-4 LCS								
Antimony (Sb)			100.7		%		80-120	16-APR-18
Arsenic (As)			98.4		%		80-120	16-APR-18
Barium (Ba)			95.9		%		80-120	16-APR-18
Beryllium (Be)			94.1		%		80-120	16-APR-18
Boron (B)			91.8		%		80-120	16-APR-18
Cadmium (Cd)			97.8		%		80-120	16-APR-18
Chromium (Cr)			91.4		%		80-120	16-APR-18
Cobalt (Co)			89.6		%		80-120	16-APR-18
Copper (Cu)			88.5		%		80-120	16-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R4015674								
WG2751700-4 LCS								
Lead (Pb)			97.2		%		80-120	16-APR-18
Molybdenum (Mo)			98.8		%		80-120	16-APR-18
Nickel (Ni)			89.5		%		80-120	16-APR-18
Selenium (Se)			97.0		%		80-120	16-APR-18
Silver (Ag)			98.6		%		80-120	16-APR-18
Thallium (Tl)			99.1		%		80-120	16-APR-18
Uranium (U)			97.9		%		80-120	16-APR-18
Vanadium (V)			93.9		%		80-120	16-APR-18
Zinc (Zn)			88.3		%		80-120	16-APR-18
WG2751700-1 MB								
Antimony (Sb)			<0.10		mg/kg		0.1	16-APR-18
Arsenic (As)			<0.10		mg/kg		0.1	16-APR-18
Barium (Ba)			<0.50		mg/kg		0.5	16-APR-18
Beryllium (Be)			<0.10		mg/kg		0.1	16-APR-18
Boron (B)			<5.0		mg/kg		5	16-APR-18
Cadmium (Cd)			<0.020		mg/kg		0.02	16-APR-18
Chromium (Cr)			<0.50		mg/kg		0.5	16-APR-18
Cobalt (Co)			<0.10		mg/kg		0.1	16-APR-18
Copper (Cu)			<0.50		mg/kg		0.5	16-APR-18
Lead (Pb)			<0.50		mg/kg		0.5	16-APR-18
Molybdenum (Mo)			<0.10		mg/kg		0.1	16-APR-18
Nickel (Ni)			<0.50		mg/kg		0.5	16-APR-18
Selenium (Se)			<0.20		mg/kg		0.2	16-APR-18
Silver (Ag)			<0.10		mg/kg		0.1	16-APR-18
Thallium (Tl)			<0.050		mg/kg		0.05	16-APR-18
Uranium (U)			<0.050		mg/kg		0.05	16-APR-18
Vanadium (V)			<0.20		mg/kg		0.2	16-APR-18
Zinc (Zn)			<2.0		mg/kg		2	16-APR-18
MOISTURE-WT	**Soil**							
Batch R4009567								
WG2749942-3 DUP		**L2078796-10**						
% Moisture		9.73	9.61		%	1.2	20	12-APR-18
WG2749942-2 LCS								
% Moisture			100.7		%		90-110	12-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4009567								
WG2749942-1 MB								
% Moisture			<0.10		%		0.1	12-APR-18
Batch R4009627								
WG2749768-3 DUP		**L2079089-1**						
% Moisture		10.1	9.62		%	5.3	20	12-APR-18
WG2749768-2 LCS								
% Moisture			99.9		%		90-110	12-APR-18
WG2749768-1 MB								
% Moisture			<0.10		%		0.1	12-APR-18
Batch R4009630								
WG2750271-3 DUP		**L2079086-4**						
% Moisture		9.73	9.90		%	1.8	20	13-APR-18
WG2750271-2 LCS								
% Moisture			100.2		%		90-110	13-APR-18
WG2750271-1 MB								
% Moisture			<0.10		%		0.1	13-APR-18
Batch R4009651								
WG2750385-3 DUP		**L2079562-3**						
% Moisture		15.5	15.0		%	3.2	20	13-APR-18
WG2750385-2 LCS								
% Moisture			100.3		%		90-110	13-APR-18
WG2750385-1 MB								
% Moisture			<0.10		%		0.1	13-APR-18
PAH-511-WT	**Soil**							
Batch R4015785								
WG2749991-4 DUP		**WG2749991-3**						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	17-APR-18
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	17-APR-18
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	17-APR-18
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	17-APR-18
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	17-APR-18
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	17-APR-18
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	17-APR-18
Benzo(b)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	17-APR-18
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	17-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R4015785								
WG2749991-4 DUP		**WG2749991-3**						
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	17-APR-18
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	17-APR-18
Dibenzo(ah)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	17-APR-18
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	17-APR-18
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	17-APR-18
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	17-APR-18
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	17-APR-18
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	17-APR-18
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	17-APR-18
WG2749991-2 LCS								
1-Methylnaphthalene			96.3		%		50-140	17-APR-18
2-Methylnaphthalene			96.8		%		50-140	17-APR-18
Acenaphthene			98.6		%		50-140	17-APR-18
Acenaphthylene			92.7		%		50-140	17-APR-18
Anthracene			94.4		%		50-140	17-APR-18
Benzo(a)anthracene			94.4		%		50-140	17-APR-18
Benzo(a)pyrene			88.8		%		50-140	17-APR-18
Benzo(b)fluoranthene			92.5		%		50-140	17-APR-18
Benzo(g,h,i)perylene			80.8		%		50-140	17-APR-18
Benzo(k)fluoranthene			91.7		%		50-140	17-APR-18
Chrysene			97.8		%		50-140	17-APR-18
Dibenzo(ah)anthracene			81.1		%		50-140	17-APR-18
Fluoranthene			82.6		%		50-140	17-APR-18
Fluorene			92.1		%		50-140	17-APR-18
Indeno(1,2,3-cd)pyrene			77.6		%		50-140	17-APR-18
Naphthalene			95.9		%		50-140	17-APR-18
Phenanthrene			94.8		%		50-140	17-APR-18
Pyrene			83.6		%		50-140	17-APR-18
WG2749991-1 MB								
1-Methylnaphthalene			<0.030		ug/g		0.03	17-APR-18
2-Methylnaphthalene			<0.030		ug/g		0.03	17-APR-18
Acenaphthene			<0.050		ug/g		0.05	17-APR-18
Acenaphthylene			<0.050		ug/g		0.05	17-APR-18
Anthracene			<0.050		ug/g		0.05	17-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R4015785								
WG2749991-1 MB								
Benzo(a)anthracene			<0.050		ug/g		0.05	17-APR-18
Benzo(a)pyrene			<0.050		ug/g		0.05	17-APR-18
Benzo(b)fluoranthene			<0.050		ug/g		0.05	17-APR-18
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	17-APR-18
Benzo(k)fluoranthene			<0.050		ug/g		0.05	17-APR-18
Chrysene			<0.050		ug/g		0.05	17-APR-18
Dibenzo(ah)anthracene			<0.050		ug/g		0.05	17-APR-18
Fluoranthene			<0.050		ug/g		0.05	17-APR-18
Fluorene			<0.050		ug/g		0.05	17-APR-18
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	17-APR-18
Naphthalene			<0.013		ug/g		0.013	17-APR-18
Phenanthrene			<0.046		ug/g		0.046	17-APR-18
Pyrene			<0.050		ug/g		0.05	17-APR-18
Surrogate: 2-Fluorobiphenyl			80.3		%		50-140	17-APR-18
Surrogate: p-Terphenyl d14			79.9		%		50-140	17-APR-18
WG2749991-5 MS		**WG2749991-3**						
1-Methylnaphthalene			91.7		%		50-140	17-APR-18
2-Methylnaphthalene			91.9		%		50-140	17-APR-18
Acenaphthene			94.0		%		50-140	17-APR-18
Acenaphthylene			91.7		%		50-140	17-APR-18
Anthracene			92.4		%		50-140	17-APR-18
Benzo(a)anthracene			95.6		%		50-140	17-APR-18
Benzo(a)pyrene			87.8		%		50-140	17-APR-18
Benzo(b)fluoranthene			89.0		%		50-140	17-APR-18
Benzo(g,h,i)perylene			77.4		%		50-140	17-APR-18
Benzo(k)fluoranthene			87.2		%		50-140	17-APR-18
Chrysene			91.8		%		50-140	17-APR-18
Dibenzo(ah)anthracene			78.6		%		50-140	17-APR-18
Fluoranthene			80.4		%		50-140	17-APR-18
Fluorene			88.7		%		50-140	17-APR-18
Indeno(1,2,3-cd)pyrene			76.9		%		50-140	17-APR-18
Naphthalene			90.7		%		50-140	17-APR-18
Phenanthrene			90.3		%		50-140	17-APR-18
Pyrene			80.8		%		50-140	17-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-OC-511-WT	**Soil**							
Batch R4016696								
WG2750071-4 DUP		**WG2750071-3**						
Aldrin		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
a-chlordane		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
g-chlordane		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
op-DDD		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
pp-DDD		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
o,p-DDE		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
pp-DDE		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
op-DDT		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
pp-DDT		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
Dieldrin		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
Endosulfan I		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
Endosulfan II		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
Endrin		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
gamma-hexachlorocyclohexane		<0.010	<0.010	RPD-NA	ug/g	N/A	40	18-APR-18
Heptachlor		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
Heptachlor Epoxide		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
Hexachlorobenzene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	18-APR-18
Hexachlorobutadiene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	18-APR-18
Hexachloroethane		<0.010	<0.010	RPD-NA	ug/g	N/A	40	18-APR-18
Methoxychlor		<0.020	<0.020	RPD-NA	ug/g	N/A	40	18-APR-18
WG2750071-2 LCS								
Aldrin			140.6	MES	%		50-140	17-APR-18
a-chlordane			115.7		%		50-140	17-APR-18
g-chlordane			107.4		%		50-140	17-APR-18
op-DDD			116.5		%		50-140	17-APR-18
pp-DDD			146.5	MES	%		50-140	17-APR-18
o,p-DDE			106.6		%		50-140	17-APR-18
pp-DDE			111.4		%		50-140	17-APR-18
op-DDT			106.7		%		50-140	17-APR-18
pp-DDT			100.8		%		50-140	17-APR-18
Dieldrin			92.3		%		50-140	17-APR-18
Endosulfan I			104.3		%		50-140	17-APR-18
Endosulfan II			123.4		%		50-140	17-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-OC-511-WT	**Soil**							
Batch R4016696								
WG2750071-2 LCS								
Endrin			118.8		%		50-140	17-APR-18
gamma-hexachlorocyclohexane			106.7		%		50-140	17-APR-18
Heptachlor			100.0		%		50-140	17-APR-18
Heptachlor Epoxide			113.1		%		50-140	17-APR-18
Hexachlorobenzene			115.6		%		50-140	17-APR-18
Hexachlorobutadiene			106.7		%		50-140	17-APR-18
Hexachloroethane			104.8		%		50-140	17-APR-18
Methoxychlor			109.4		%		50-140	17-APR-18
WG2750071-1 MB								
Aldrin			<0.020		ug/g		0.02	18-APR-18
a-chlordane			<0.020		ug/g		0.02	18-APR-18
g-chlordane			<0.020		ug/g		0.02	18-APR-18
op-DDD			<0.020		ug/g		0.02	18-APR-18
pp-DDD			<0.020		ug/g		0.02	18-APR-18
o,p-DDE			<0.020		ug/g		0.02	18-APR-18
pp-DDE			<0.020		ug/g		0.02	18-APR-18
op-DDT			<0.020		ug/g		0.02	18-APR-18
pp-DDT			<0.020		ug/g		0.02	18-APR-18
Dieldrin			<0.020		ug/g		0.02	18-APR-18
Endosulfan I			<0.020		ug/g		0.02	18-APR-18
Endosulfan II			<0.020		ug/g		0.02	18-APR-18
Endrin			<0.020		ug/g		0.02	18-APR-18
gamma-hexachlorocyclohexane			<0.010		ug/g		0.01	18-APR-18
Heptachlor			<0.020		ug/g		0.02	18-APR-18
Heptachlor Epoxide			<0.020		ug/g		0.02	18-APR-18
Hexachlorobenzene			<0.010		ug/g		0.01	18-APR-18
Hexachlorobutadiene			<0.010		ug/g		0.01	18-APR-18
Hexachloroethane			<0.010		ug/g		0.01	18-APR-18
Methoxychlor			<0.020		ug/g		0.02	18-APR-18
Surrogate: 2-Fluorobiphenyl			93.6		%		50-140	18-APR-18
Surrogate: d14-Terphenyl			101.0		%		50-140	18-APR-18
WG2750071-5 MS		**WG2750071-3**						
Aldrin			153.2	RRQC	%		50-140	18-APR-18
a-chlordane			135.8		%		50-140	18-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-OC-511-WT	**Soil**							
Batch R4016696								
WG2750071-5 MS		**WG2750071-3**						
g-chlordane			122.2		%		50-140	18-APR-18
op-DDD			123.9		%		50-140	18-APR-18
pp-DDD			156.7	RRQC	%		50-140	18-APR-18
o,p-DDE			118.3		%		50-140	18-APR-18
pp-DDE			123.0		%		50-140	18-APR-18
op-DDT			117.5		%		50-140	18-APR-18
pp-DDT			126.1		%		50-140	18-APR-18
Dieldrin			110.5		%		50-140	18-APR-18
Endosulfan I			122.6		%		50-140	18-APR-18
Endosulfan II			140.0		%		50-140	18-APR-18
Endrin			125.9		%		50-140	18-APR-18
gamma-hexachlorocyclohexane			115.6		%		50-140	18-APR-18
Heptachlor			111.1		%		50-140	18-APR-18
Heptachlor Epoxide			127.3		%		50-140	18-APR-18
Hexachlorobenzene			122.1		%		50-140	18-APR-18
Hexachlorobutadiene			117.7		%		50-140	18-APR-18
Hexachloroethane			120.1		%		50-140	18-APR-18
Methoxychlor			131.2		%		50-140	18-APR-18
COMMENTS: RRQC:Recoveries are outside ALS control limits. Associated non-detect sample results have not been affected.								
PH-WT	**Soil**							
Batch R4011950								
WG2750046-1 DUP		**L2078954-1**						
pH		7.71	7.61	J	pH units	0.10	0.3	13-APR-18
WG2750728-1 LCS								
pH			6.98		pH units		6.9-7.1	13-APR-18
SAR-R511-WT	**Soil**							
Batch R4014429								
WG2751713-4 DUP		**WG2751713-3**						
Calcium (Ca)		6.6	6.5		mg/L	0.7	30	16-APR-18
Sodium (Na)		10.3	10.2		mg/L	0.6	30	16-APR-18
Magnesium (Mg)		2.7	2.7		mg/L	0.9	30	16-APR-18
WG2751713-2 IRM		**WT SAR1**						
Calcium (Ca)			79.2		%		70-130	16-APR-18
Sodium (Na)			99.3		%		70-130	16-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SAR-R511-WT	**Soil**							
Batch R4014429								
WG2751713-2 IRM		**WT SAR1**						
Magnesium (Mg)			89.4		%		70-130	16-APR-18
WG2751713-1 MB								
Calcium (Ca)			<1.0		mg/L		1	16-APR-18
Sodium (Na)			<1.0		mg/L		1	16-APR-18
Magnesium (Mg)			<1.0		mg/L		1	16-APR-18
Batch R4014433								
WG2751714-4 DUP		**WG2751714-3**						
Calcium (Ca)		19.5	19.5		mg/L	0.1	30	16-APR-18
Sodium (Na)		2.0	2.0		mg/L	1.5	30	16-APR-18
Magnesium (Mg)		4.7	4.7		mg/L	0.0	30	16-APR-18
WG2751714-2 IRM		**WT SAR1**						
Calcium (Ca)			80.3		%		70-130	16-APR-18
Sodium (Na)			94.8		%		70-130	16-APR-18
Magnesium (Mg)			90.4		%		70-130	16-APR-18
WG2751714-1 MB								
Calcium (Ca)			<1.0		mg/L		1	16-APR-18
Sodium (Na)			<1.0		mg/L		1	16-APR-18
Magnesium (Mg)			<1.0		mg/L		1	16-APR-18
VOC-511-HS-WT	**Soil**							
Batch R4010428								
WG2749637-4 DUP		**WG2749637-3**						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	13-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4010428								
WG2749637-4 DUP		**WG2749637-3**						
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	13-APR-18
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	13-APR-18
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	13-APR-18
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	13-APR-18
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	13-APR-18
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	13-APR-18
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	13-APR-18
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	13-APR-18
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	13-APR-18
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	13-APR-18
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-APR-18
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	13-APR-18
WG2749637-2 LCS								
1,1,1,2-Tetrachloroethane			93.2		%		60-130	13-APR-18
1,1,2,2-Tetrachloroethane			91.8		%		60-130	13-APR-18
1,1,1-Trichloroethane			102.8		%		60-130	13-APR-18
1,1,2-Trichloroethane			98.0		%		60-130	13-APR-18
1,1-Dichloroethane			86.8		%		60-130	13-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4010428								
WG2749637-2 LCS								
1,1-Dichloroethylene			99.5		%		60-130	13-APR-18
1,2-Dibromoethane			97.4		%		70-130	13-APR-18
1,2-Dichlorobenzene			101.1		%		70-130	13-APR-18
1,2-Dichloroethane			111.5		%		60-130	13-APR-18
1,2-Dichloropropane			106.3		%		70-130	13-APR-18
1,3-Dichlorobenzene			101.5		%		70-130	13-APR-18
1,4-Dichlorobenzene			103.1		%		70-130	13-APR-18
Acetone			113.6		%		60-140	13-APR-18
Benzene			104.8		%		70-130	13-APR-18
Bromodichloromethane			99.9		%		50-140	13-APR-18
Bromoform			80.3		%		70-130	13-APR-18
Bromomethane			96.0		%		50-140	13-APR-18
Carbon tetrachloride			101.3		%		70-130	13-APR-18
Chlorobenzene			99.6		%		70-130	13-APR-18
Chloroform			104.9		%		70-130	13-APR-18
cis-1,2-Dichloroethylene			102.1		%		70-130	13-APR-18
cis-1,3-Dichloropropene			98.3		%		70-130	13-APR-18
Dibromochloromethane			95.5		%		60-130	13-APR-18
Dichlorodifluoromethane			61.5		%		50-140	13-APR-18
Ethylbenzene			101.6		%		70-130	13-APR-18
n-Hexane			119.6		%		70-130	13-APR-18
Methylene Chloride			103.9		%		70-130	13-APR-18
MTBE			98.8		%		70-130	13-APR-18
m+p-Xylenes			103.0		%		70-130	13-APR-18
Methyl Ethyl Ketone			91.0		%		60-140	13-APR-18
Methyl Isobutyl Ketone			86.2		%		60-140	13-APR-18
o-Xylene			100.2		%		70-130	13-APR-18
Styrene			94.0		%		70-130	13-APR-18
Tetrachloroethylene			96.5		%		60-130	13-APR-18
Toluene			103.0		%		70-130	13-APR-18
trans-1,2-Dichloroethylene			108.8		%		60-130	13-APR-18
trans-1,3-Dichloropropene			100.9		%		70-130	13-APR-18
Trichloroethylene			99.0		%		60-130	13-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4010428								
WG2749637-2 LCS								
Trichlorofluoromethane			104.2		%		50-140	13-APR-18
Vinyl chloride			95.8		%		60-140	13-APR-18
WG2749637-1 MB								
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	13-APR-18
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	13-APR-18
1,1,1-Trichloroethane			<0.050		ug/g		0.05	13-APR-18
1,1,2-Trichloroethane			<0.050		ug/g		0.05	13-APR-18
1,1-Dichloroethane			<0.050		ug/g		0.05	13-APR-18
1,1-Dichloroethylene			<0.050		ug/g		0.05	13-APR-18
1,2-Dibromoethane			<0.050		ug/g		0.05	13-APR-18
1,2-Dichlorobenzene			<0.050		ug/g		0.05	13-APR-18
1,2-Dichloroethane			<0.050		ug/g		0.05	13-APR-18
1,2-Dichloropropane			<0.050		ug/g		0.05	13-APR-18
1,3-Dichlorobenzene			<0.050		ug/g		0.05	13-APR-18
1,4-Dichlorobenzene			<0.050		ug/g		0.05	13-APR-18
Acetone			<0.50		ug/g		0.5	13-APR-18
Benzene			<0.0068		ug/g		0.0068	13-APR-18
Bromodichloromethane			<0.050		ug/g		0.05	13-APR-18
Bromoform			<0.050		ug/g		0.05	13-APR-18
Bromomethane			<0.050		ug/g		0.05	13-APR-18
Carbon tetrachloride			<0.050		ug/g		0.05	13-APR-18
Chlorobenzene			<0.050		ug/g		0.05	13-APR-18
Chloroform			<0.050		ug/g		0.05	13-APR-18
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	13-APR-18
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	13-APR-18
Dibromochloromethane			<0.050		ug/g		0.05	13-APR-18
Dichlorodifluoromethane			<0.050		ug/g		0.05	13-APR-18
Ethylbenzene			<0.018		ug/g		0.018	13-APR-18
n-Hexane			<0.050		ug/g		0.05	13-APR-18
Methylene Chloride			<0.050		ug/g		0.05	13-APR-18
MTBE			<0.050		ug/g		0.05	13-APR-18
m+p-Xylenes			<0.030		ug/g		0.03	13-APR-18
Methyl Ethyl Ketone			<0.50		ug/g		0.5	13-APR-18
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	13-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4010428								
WG2749637-1 MB								
o-Xylene			<0.020		ug/g		0.02	13-APR-18
Styrene			<0.050		ug/g		0.05	13-APR-18
Tetrachloroethylene			<0.050		ug/g		0.05	13-APR-18
Toluene			<0.080		ug/g		0.08	13-APR-18
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	13-APR-18
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	13-APR-18
Trichloroethylene			<0.010		ug/g		0.01	13-APR-18
Trichlorofluoromethane			<0.050		ug/g		0.05	13-APR-18
Vinyl chloride			<0.020		ug/g		0.02	13-APR-18
Surrogate: 1,4-Difluorobenzene			91.1		%		50-140	13-APR-18
Surrogate: 4-Bromofluorobenzene			87.6		%		50-140	13-APR-18
WG2749637-5 MS		**L2078926-2**						
1,1,1,2-Tetrachloroethane			104.5		%		50-140	13-APR-18
1,1,2,2-Tetrachloroethane			101.5		%		50-140	13-APR-18
1,1,1-Trichloroethane			114.5		%		50-140	13-APR-18
1,1,2-Trichloroethane			114.0		%		50-140	13-APR-18
1,1-Dichloroethane			99.5		%		50-140	13-APR-18
1,1-Dichloroethylene			111.3		%		50-140	13-APR-18
1,2-Dibromoethane			112.9		%		50-140	13-APR-18
1,2-Dichlorobenzene			113.4		%		50-140	13-APR-18
1,2-Dichloroethane			130.3		%		50-140	13-APR-18
1,2-Dichloropropane			121.8		%		50-140	13-APR-18
1,3-Dichlorobenzene			119.5		%		50-140	13-APR-18
1,4-Dichlorobenzene			121.9		%		50-140	13-APR-18
Acetone			137.0		%		50-140	13-APR-18
Benzene			119.1		%		50-140	13-APR-18
Bromodichloromethane			115.3		%		50-140	13-APR-18
Bromoform			81.4		%		50-140	13-APR-18
Bromomethane			108.2		%		50-140	13-APR-18
Carbon tetrachloride			112.9		%		50-140	13-APR-18
Chlorobenzene			111.7		%		50-140	13-APR-18
Chloroform			119.4		%		50-140	13-APR-18
cis-1,2-Dichloroethylene			115.4		%		50-140	13-APR-18
cis-1,3-Dichloropropene			114.7		%		50-140	13-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R4010428								
WG2749637-5 MS		**L2078926-2**						
Dibromochloromethane			109.0		%		50-140	13-APR-18
Dichlorodifluoromethane			62.4		%		50-140	13-APR-18
Ethylbenzene			113.2		%		50-140	13-APR-18
n-Hexane			132.3		%		50-140	13-APR-18
Methylene Chloride			118.9		%		50-140	13-APR-18
MTBE			110.1		%		50-140	13-APR-18
m+p-Xylenes			113.6		%		50-140	13-APR-18
Methyl Ethyl Ketone			112.7		%		50-140	13-APR-18
Methyl Isobutyl Ketone			105.1		%		50-140	13-APR-18
o-Xylene			112.4		%		50-140	13-APR-18
Styrene			105.9		%		50-140	13-APR-18
Tetrachloroethylene			107.5		%		50-140	13-APR-18
Toluene			115.3		%		50-140	13-APR-18
trans-1,2-Dichloroethylene			122.9		%		50-140	13-APR-18
trans-1,3-Dichloropropene			116.1		%		50-140	13-APR-18
Trichloroethylene			111.7		%		50-140	13-APR-18
Trichlorofluoromethane			115.5		%		50-140	13-APR-18
Vinyl chloride			105.1		%		50-140	13-APR-18

Quality Control Report

Workorder: L2078796 Report Date: 23-APR-18

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shaffi Andseta

Legend:

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

Sample Parameter Qualifier Definitions:

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

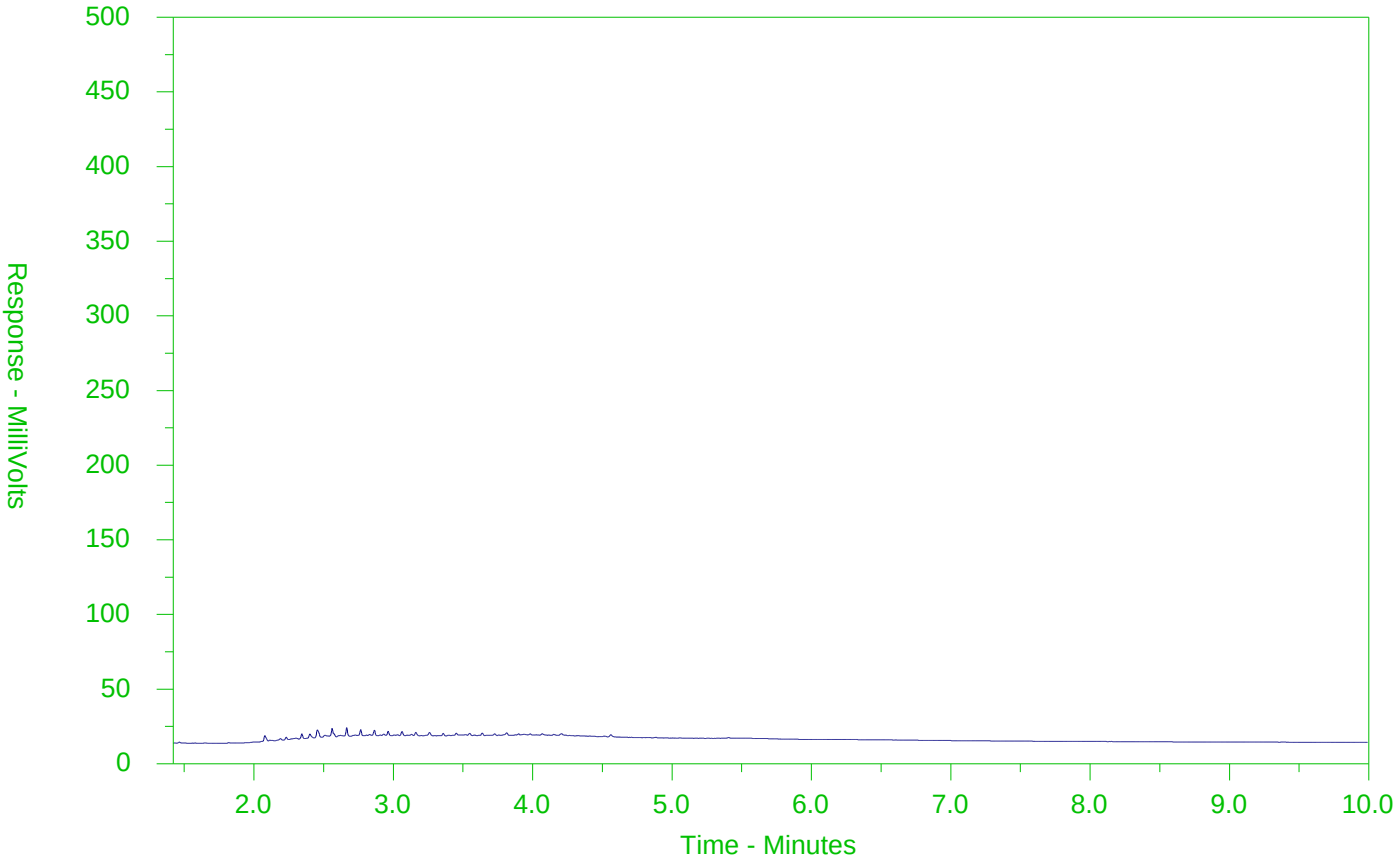
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where 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: L2078796-4
Client Sample ID: BH18-1,SS7



←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.

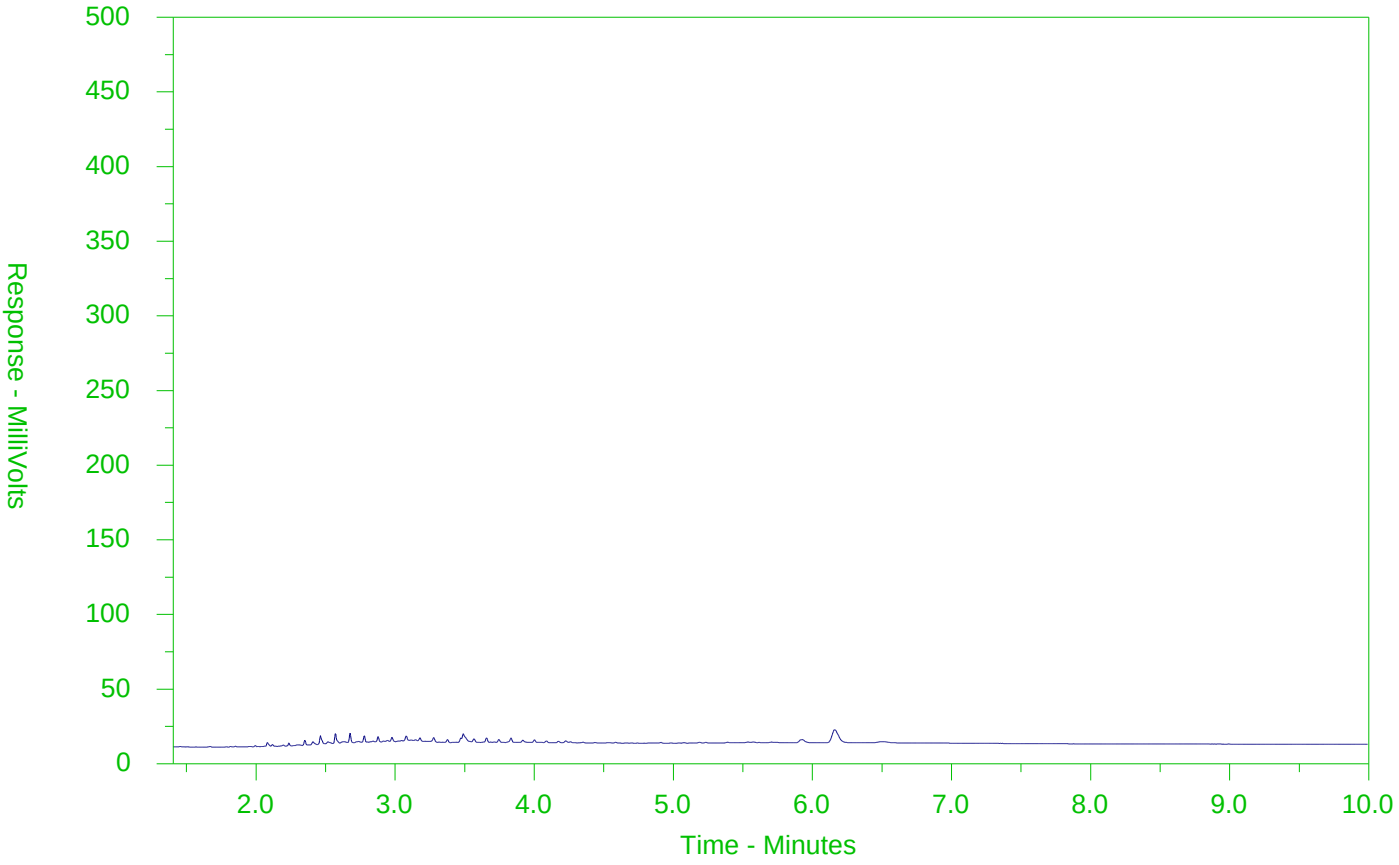
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2078796-7
Client Sample ID: BH18-2, SS3



←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.

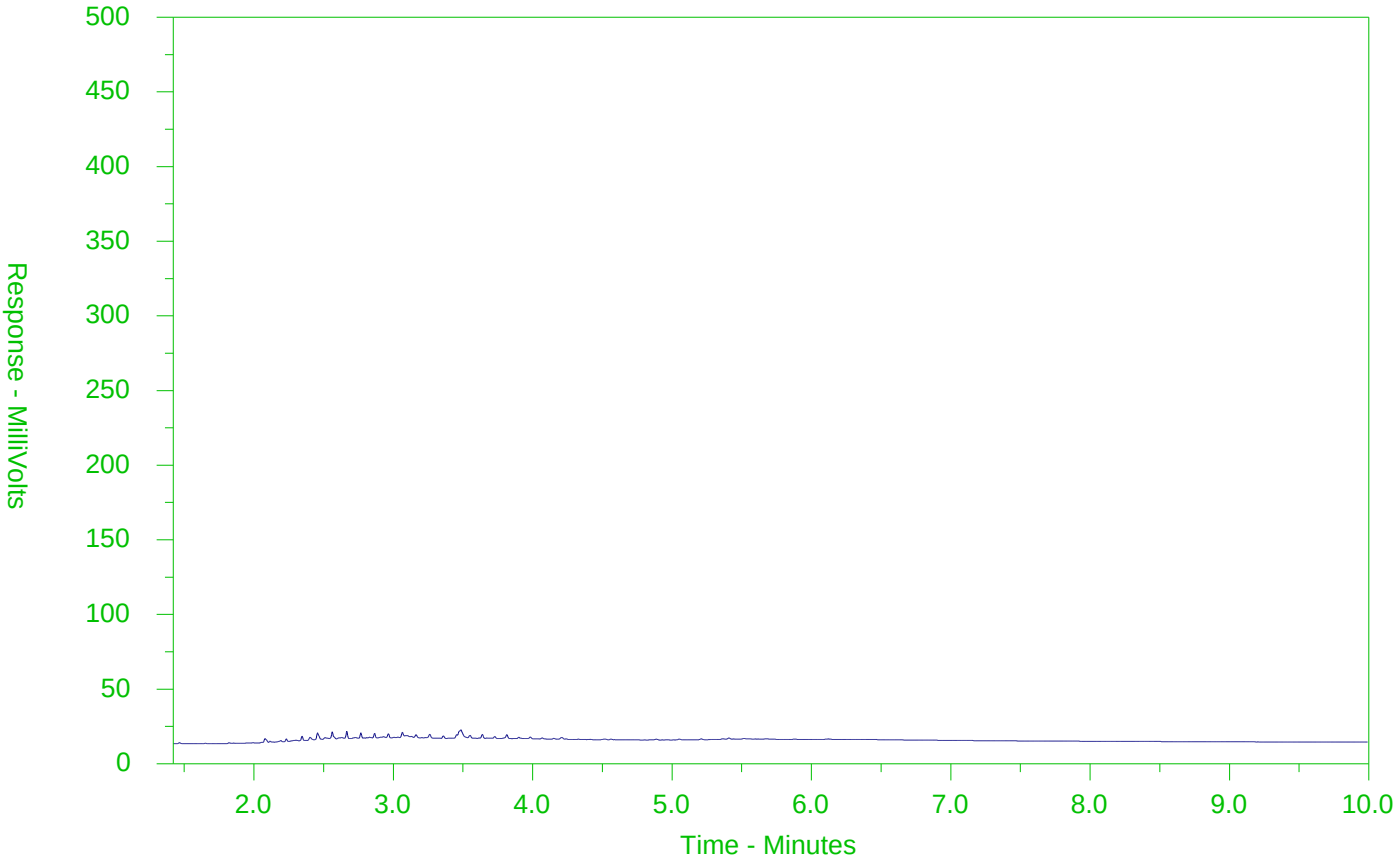
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2078796-10
Client Sample ID: BH18-3, SS5



←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.

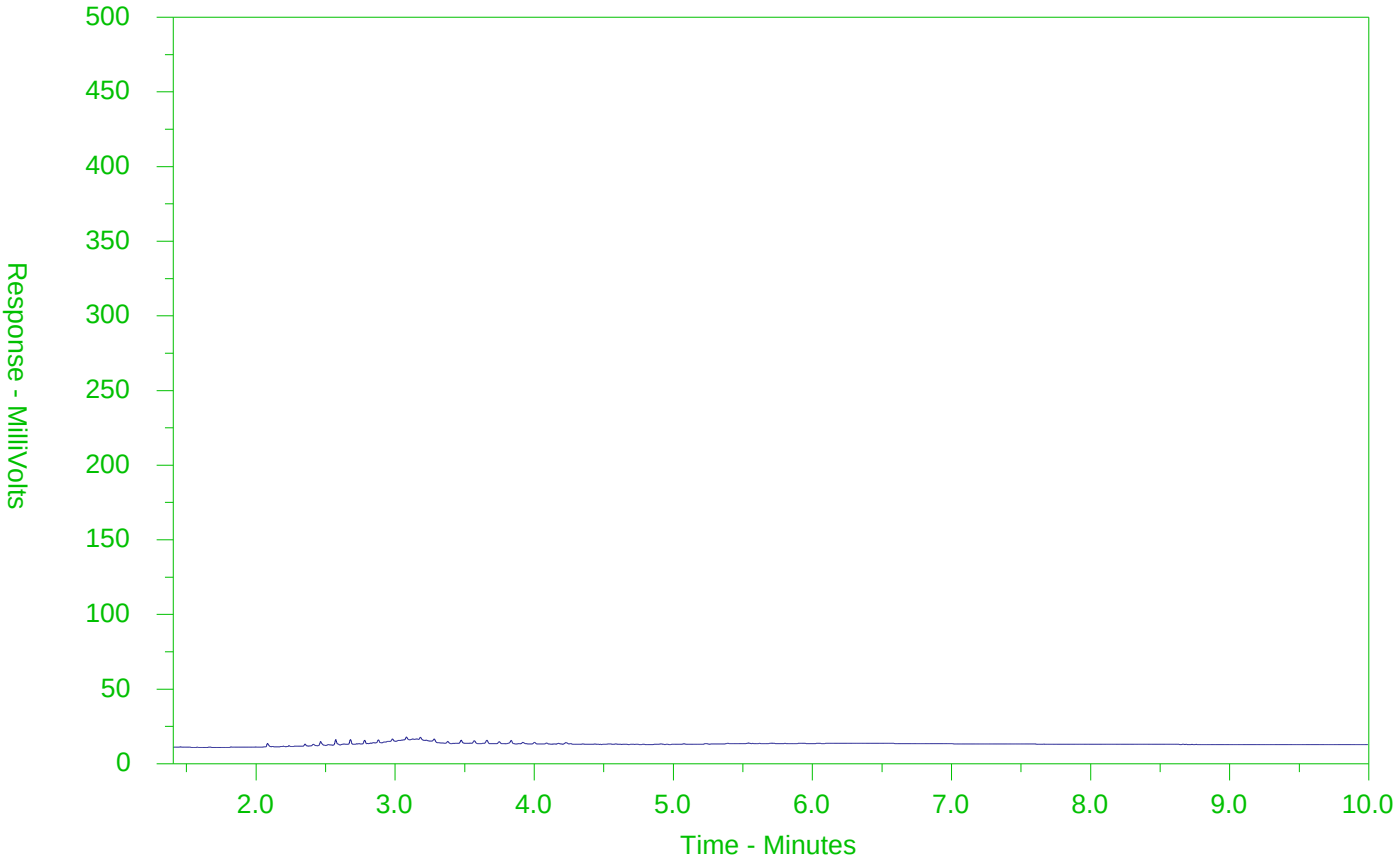
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2078796-13
Client Sample ID: BH18-4, SS4



←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.

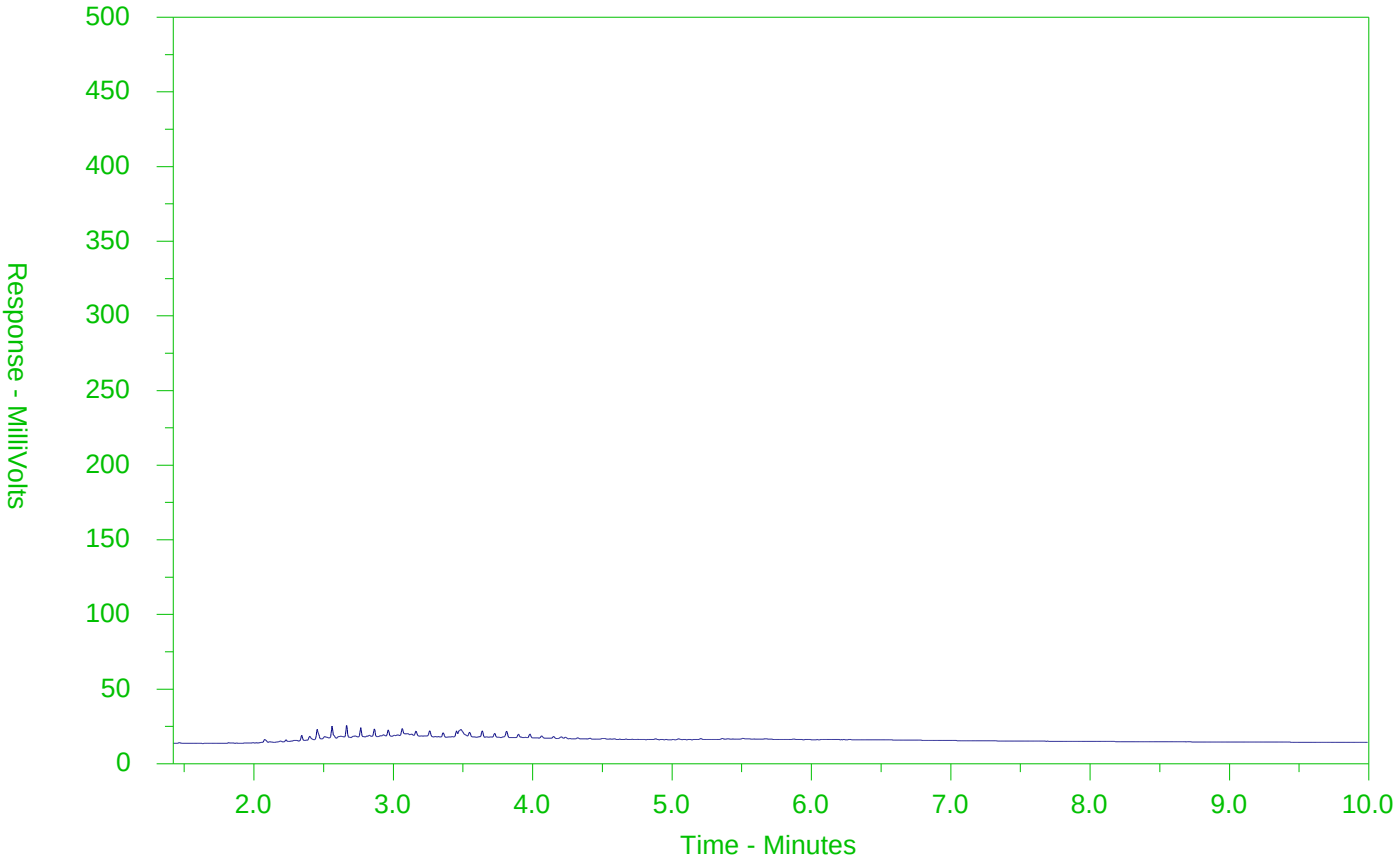
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2078796-14
Client Sample ID: DUP-1



←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

L2078796-COFC

C Number: 17 -

Page 1 of 2

Report To	Contact and company name below will appear on the final report
Company:	DS Consultants Limited
Contact:	Shafi Andseta
Phone:	(905) 264-9393
	Company address below will appear on the final report
Street:	6221 Highway 7, Unit 16
City/Province:	Vaughan, Ontario
Postal Code:	L4H 0K8
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ~~☑ YES~~ ☑ NO
Company:	
Contact:	

Report Format / Distribution

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

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: shafi.andseta@dsconsultants.ca
Email 2:

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

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

Priority (Business Days)		Emergency	
	4 day [P4-20%] ☐		1 Business day [E1 - 100%] ☐
	3 day [P3-25%] ☐		Same Day, Weekend or Statutory holiday [E2 -200%] (Laboratory opening fees may apply)] ☐
	2 day [P2-50%] ☐		

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm
For tests that can not be performed according to the service level selected, you will be contacted.

Project Information

ALS Account # / Quote #:
Job #: 18-526-20
PO / AFE:
LSD:
ALS Lab Work Order # (lab use only): L2078796 RC 11 B

Oil and Gas Required Fields (client use)

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

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	OCP	PAHs	M+I	PHCs (F1-F4)	VOCs	SAMPLES ON HOLD	Sample is hazardous (please provide further det	NUMBER OF CONTAINERS
1	BH18-1, SS1	09-Apr-18	AM	Soil	X							1
2	BH18-1, SS2					X						1
3	BH18-1, SS3						X					1
4	BH18-1, SS7							X X				4
5	BH18-2, SS1						X					1
6	BH18-2, SS2				X							1
7	BH18-2, SS3					X		X X				5
8	BH18-3, SS2						X					1
9	BH18-3, SS3				X							1
10	BH18-3, SS5						X					3
11	BH18-4, SS1				X							1
12	BH18-4, SS3						X					1

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

Are samples taken from a Regulated DW System? ☐ YES ☐ NO
Are samples for human consumption/ use? ☐ YES ☐ NO

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

T2 RPI

SAMPLE CONDITION AS RECEIVED (lab use only)

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

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
5.7				5.0			

SHIPMENT RELEASE (client use)

Released by: Sean Ellison Date: April 10/2018 Time: 11:06

INITIAL SHIPMENT RECEPTION (lab use only)

Received by: Date: APR. 11/18 Time: 1107

FINAL SHIPMENT RECEPTION (lab use only)

Received by: Date: April 11/18 Time: 16:50

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

SEPT 2015 FRONT

AP

Chain of Custody (COC) / Analytical Request Form

ALS Environmental
www.alsglobal.com
Canada Toll Free: 1 800 668 9878

L2078796-COFC

OC Number: 17 -

Page 2 of 2

Report To	Contact and company name below will appear on the final report
Company:	DS Consultants Limited
Contact:	Shafi Andseta
Phone:	(905) 264-9393
	Company address below will appear on the final report
Street:	6221 Highway 7, Unit 16
City/Province:	Vaughan, Ontario
Postal Code:	L4H 0K8
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	
Contact:	

Report Format / Distribution

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

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: shafi.andseta@dsconsultants.ca
Email 2:

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

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

PRIORITY (Business Days): 4 day [P4-20%] ☐ ; 3 day [P3-25%] ☐ ; 2 day [P2-50%] ☐
EMERGENCY: 1 Business day [E1 - 100%] ☐ ; Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐

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

Project Information

ALS Account # / Quote #:
Job #: 18-526-20
PO / AFE:
LSD:
ALS Lab Work Order # (lab use only): L2078796 RK 11 B

Client Reference / Billing (client use)

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

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	OCP	PAHs	M+I	PHCs (F1-F4)	VOCs	SAMPLES ON HOLD	Sample is hazardous (please provide further details)	NUMBER OF CONTAINERS
13	BH18-4, SS4	09-Apr-18	Am	Soil			X	X				3
14	Dup-1	↓	↓	↓			X	X				3
15	Dup-2	↓	↓	↓								1

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

Are samples taken from a Regulated DW System? ☐ YES ☐ NO
Are samples for human consumption/ use? ☐ YES ☐ NO

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

T2 RPI

SAMPLE CONDITION AS RECEIVED (lab use only)

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

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
5.7			5.0		

SHIPMENT RELEASE (client use)

Released by: Sean Ellison Date: April 11/2018 Time: 11:00AM

INITIAL SHIPMENT RECEPTION (lab use only)

Received by: RK Date: APR. 11/18 Time: 1107

FINAL SHIPMENT RECEPTION (lab use only)

Received by: Date: April 11/18 Time: 17:50

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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.

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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

SEPT 2017 FRONT

AP

GROUND WATER

[redacted]

DS Consultants (Vaughan)
ATTN: Shafi Andseta
6221 Highway 7
Unit 16
Vaughan ON L4H 0K8

Date Received: 17-APR-18
Report Date: 23-APR-18 15:09 (MT)
Version: FINAL

Client Phone: 647-237-5110

Certificate of Analysis

Lab Work Order #: L2081144

Project P.O. #: NOT SUBMITTED
Job Reference: 18-526-20
C of C Numbers: 17-637918
Legal Site Desc:

[redacted]

[redacted]

ANALYTICAL REPORT

Summary of Guideline Exceedances

ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit	Guideline

Ontario Regulation 153/04 - April 15, 2011 Standards - T8-Ground Water - All Types of Property Use

(No parameter exceedances)

ANALYTICAL REPORT

Physical Tests - WATER

		Guide Limits						
				Lab ID	L2081144-1	L2081144-2	L2081144-3	L2081144-4	L2081144-5
				Sample Date	17-APR-18	17-APR-18	17-APR-18	17-APR-18	17-APR-18
				Sample ID	MW18-1	MW18-2	MW18-3	MW18-4	DUP-1
Analyte	Unit	#1	#2						
Conductivity	mS/cm	-	-		1.05	1.26	0.901	0.881	1.05
pH	pH units	-	-		8.06	7.95	8.01	7.98	8.01

Guide Limit #1: T8-Ground Water - All Types of Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

ANALYTICAL REPORT

Anions and Nutrients - WATER

		Guide Limits						
				Lab ID	L2081144-1	L2081144-2	L2081144-3	L2081144-4	L2081144-5
				Sample Date	17-APR-18	17-APR-18	17-APR-18	17-APR-18	17-APR-18
				Sample ID	MW18-1	MW18-2	MW18-3	MW18-4	DUP-1
Analyte	Unit	#1	#2						
Chloride (Cl)	mg/L	790	-		23.4	72.8	24.6	25.6	23.5

Guide Limit #1: T8-Ground Water - All Types of Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

ANALYTICAL REPORT

Cyanides - WATER

		Guide Limits						
				Lab ID	L2081144-1	L2081144-2	L2081144-3	L2081144-4	L2081144-5
				Sample Date	17-APR-18	17-APR-18	17-APR-18	17-APR-18	17-APR-18
				Sample ID	MW18-1	MW18-2	MW18-3	MW18-4	DUP-1
Analyte	Unit	#1	#2						
Cyanide, Weak Acid Diss	ug/L	52	-		<2.0	<2.0	<2.0	<2.0	<2.0

Guide Limit #1: T8-Ground Water - All Types of Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

ANALYTICAL REPORT

Dissolved Metals - WATER

				Lab ID	L2081144-1	L2081144-2	L2081144-3	L2081144-4	L2081144-5
				Sample Date	17-APR-18	17-APR-18	17-APR-18	17-APR-18	17-APR-18
				Sample ID	MW18-1	MW18-2	MW18-3	MW18-4	DUP-1
		Guide Limits							
Analyte	Unit	#1	#2						
Dissolved Mercury Filtration Location		-	-	FIELD	FIELD	FIELD	FIELD	FIELD	
Dissolved Metals Filtration Location		-	-	FIELD	FIELD	FIELD	FIELD	FIELD	
Antimony (Sb)-Dissolved	ug/L	6	-	0.15	0.14	<0.10	<0.10	0.15	
Arsenic (As)-Dissolved	ug/L	25	-	2.25	2.25	0.68	0.68	2.22	
Barium (Ba)-Dissolved	ug/L	1000	-	172	175	173	172	173	
Beryllium (Be)-Dissolved	ug/L	4	-	<0.10	<0.10	<0.10	<0.10	<0.10	
Boron (B)-Dissolved	ug/L	5000	-	60	63	72	72	62	
Cadmium (Cd)-Dissolved	ug/L	2.1	-	<0.010	<0.010	<0.010	<0.010	<0.010	
Chromium (Cr)-Dissolved	ug/L	50	-	<0.50	<0.50	<0.50	<0.50	<0.50	
Cobalt (Co)-Dissolved	ug/L	3.8	-	0.35	0.36	<0.10	<0.10	0.34	
Copper (Cu)-Dissolved	ug/L	69	-	0.68	0.74	0.66	0.60	0.63	
Lead (Pb)-Dissolved	ug/L	10	-	<0.050	<0.050	<0.050	<0.050	<0.050	
Mercury (Hg)-Dissolved	ug/L	0.29	-	<0.010	<0.010	<0.010	<0.010	<0.010	
Molybdenum (Mo)-Dissolved	ug/L	70	-	2.07	2.09	0.992	1.07	2.11	
Nickel (Ni)-Dissolved	ug/L	100	-	0.73	0.69	0.50	0.58	0.67	
Selenium (Se)-Dissolved	ug/L	10	-	0.175	0.182	<0.050	<0.050	0.153	
Silver (Ag)-Dissolved	ug/L	1.2	-	<0.050	<0.050	<0.050	<0.050	<0.050	
Sodium (Na)-Dissolved	ug/L	490000	-	29800	30100	24800	24700	28700	
Thallium (Tl)-Dissolved	ug/L	2	-	0.015	0.011	<0.010	<0.010	0.011	
Uranium (U)-Dissolved	ug/L	20	-	1.73	1.74	0.615	0.624	1.78	
Vanadium (V)-Dissolved	ug/L	6.2	-	0.96	0.99	<0.50	<0.50	0.96	
Zinc (Zn)-Dissolved	ug/L	890	-	1.4	1.2	1.7	<1.0	1.7	

Guide Limit #1: T8-Ground Water - All Types of Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

ANALYTICAL REPORT

Speciated Metals - WATER

		Lab ID	L2081144-1	L2081144-2	L2081144-3	L2081144-4	L2081144-5
		Sample Date	17-APR-18	17-APR-18	17-APR-18	17-APR-18	17-APR-18
		Sample ID	MW18-1	MW18-2	MW18-3	MW18-4	DUP-1
Analyte	Unit	Guide Limits #1	#2				
Chromium, Hexavalent	ug/L	25	-	<1.0	<1.0	<1.0	<1.0	<1.0

Guide Limit #1: T8-Ground Water - All Types of Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

ANALYTICAL REPORT

Volatile Organic Compounds - WATER

				Lab ID	L2081144-1	L2081144-2	L2081144-3	L2081144-4	L2081144-5
				Sample Date	17-APR-18	17-APR-18	17-APR-18	17-APR-18	17-APR-18
				Sample ID	MW18-1	MW18-2	MW18-3	MW18-4	DUP-1
		Guide Limits							
Analyte	Unit	#1	#2						
Acetone	ug/L	2700	-		<30	<30	<30	<30	<30
Benzene	ug/L	5	-		<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	ug/L	16	-		<2.0	<2.0	<2.0	<2.0	<2.0
Bromoform	ug/L	25	-		<5.0	<5.0	<5.0	<5.0	<5.0
Bromomethane	ug/L	0.89	-		<0.50	<0.50	<0.50	<0.50	<0.50
Carbon tetrachloride	ug/L	0.79	-		<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	ug/L	30	-		<0.50	<0.50	<0.50	<0.50	<0.50
Dibromochloromethane	ug/L	25	-		<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	ug/L	2.4	-		<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	ug/L	0.2	-		<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichlorobenzene	ug/L	3	-		<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	ug/L	59	-		<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	ug/L	1	-		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	ug/L	590	-		<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethane	ug/L	5	-		<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	ug/L	1.6	-		<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/L	1.6	-		<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethylene	ug/L	1.6	-		<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethylene	ug/L	1.6	-		<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	ug/L	50	-		<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane	ug/L	5	-		<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,3-Dichloropropene	ug/L	-	-		<0.30	<0.30	<0.30	<0.30	<0.30
trans-1,3-Dichloropropene	ug/L	-	-		<0.30	<0.30	<0.30	<0.30	<0.30
1,3-Dichloropropene (cis & trans)	ug/L	0.5	-		<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	ug/L	2.4	-		<0.50	<0.50	<0.50	<0.50	<0.50
n-Hexane	ug/L	51	-		<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Ethyl Ketone	ug/L	1800	-		<20	<20	<20	<20	<20
Methyl Isobutyl Ketone	ug/L	640	-		<20	<20	<20	<20	<20
MTBE	ug/L	15	-		<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	ug/L	5.4	-		<0.50	<0.50	<0.50	<0.50	<0.50

Guide Limit #1: T8-Ground Water - All Types of Property Use

ANALYTICAL REPORT

Volatile Organic Compounds - WATER

				Lab ID	L2081144-1	L2081144-2	L2081144-3	L2081144-4	L2081144-5
				Sample Date	17-APR-18	17-APR-18	17-APR-18	17-APR-18	17-APR-18
				Sample ID	MW18-1	MW18-2	MW18-3	MW18-4	DUP-1
		Guide Limits							
Analyte	Unit	#1	#2						
1,1,1,2-Tetrachloroethane	ug/L	1.1	-	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	ug/L	1	-	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	ug/L	1.6	-	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	ug/L	22	-	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	ug/L	200	-	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/L	4.7	-	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	ug/L	1.6	-	<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane	ug/L	150	-	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl chloride	ug/L	0.5	-	<0.50	<0.50	<0.50	<0.50	<0.50
o-Xylene	ug/L	-	-	<0.30	<0.30	<0.30	<0.30	<0.30
m+p-Xylenes	ug/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40
Xylenes (Total)	ug/L	300	-	<0.50	<0.50	<0.50	<0.50	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	93.2	91.1	91.4	90.4	91.3
Surrogate: 1,4-Difluorobenzene	%	-	-	98.5	98.9	100.0	99.2	98.7

Guide Limit #1: T8-Ground Water - All Types of Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

ANALYTICAL REPORT

Hydrocarbons - WATER

		Guide Limits						
				Lab ID	L2081144-1	L2081144-2	L2081144-3	L2081144-4	L2081144-5
				Sample Date	17-APR-18	17-APR-18	17-APR-18	17-APR-18	17-APR-18
				Sample ID	MW18-1	MW18-2	MW18-3	MW18-4	DUP-1
Analyte	Unit	#1	#2						
F1 (C6-C10)	ug/L	420	-		<25	<25	<25	<25	<25
F1-BTEX	ug/L	420	-		<25	<25	<25	<25	<25
F2 (C10-C16)	ug/L	150	-		<100	<100	<100	<100	<100
F3 (C16-C34)	ug/L	500	-		<250	<250	<250	<250	<250
F4 (C34-C50)	ug/L	500	-		<250	<250	<250	<250	<250
Total Hydrocarbons (C6-C50)	ug/L	-	-		<370	<370	<370	<370	<370
Chrom. to baseline at nC50		-	-		YES	YES	YES	YES	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-		90.9	84.6	90.9	87.5	87.7
Surrogate: 3,4-Dichlorotoluene	%	-	-		77.9	70.2	68.1	73.9	76.0

Guide Limit #1: T8-Ground Water - All Types of Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

ANALYTICAL REPORT

Organochlorine Pesticides - WATER

				Lab ID	L2081144-1	L2081144-3	L2081144-4
				Sample Date	17-APR-18	17-APR-18	17-APR-18
				Sample ID	MW18-1	MW18-3	MW18-4
		Guide Limits					
Analyte	Unit	#1	#2				
Aldrin	ug/L	0.35	-	<0.010	<0.010	<0.010
gamma-hexachlorocyclohexane	ug/L	0.95	-	<0.010	<0.010	<0.010
a-chlordane	ug/L	-	-	<0.040	<0.040	<0.040
Chlordane (Total)	ug/L	0.06	-	<0.057	<0.057	<0.057
g-chlordane	ug/L	-	-	<0.040	<0.040	<0.040
o,p-DDD	ug/L	-	-	<0.030	<0.030	<0.030
pp-DDD	ug/L	-	-	<0.030	<0.030	<0.030
Total DDD	ug/L	1.8	-	<0.042	<0.042	<0.042
o,p-DDE	ug/L	-	-	<0.0080	<0.0080	<0.0080
pp-DDE	ug/L	-	-	<0.0080	<0.0080	<0.0080
Total DDE	ug/L	10	-	<0.011	<0.011	<0.011
op-DDT	ug/L	-	-	<0.030	<0.030	<0.030
pp-DDT	ug/L	-	-	<0.030	<0.030	<0.030
Total DDT	ug/L	0.05	-	<0.042	<0.042	<0.042
Dieldrin	ug/L	0.35	-	<0.050	<0.050	<0.050
Endosulfan I	ug/L	-	-	<0.030	<0.030	<0.030
Endosulfan II	ug/L	-	-	<0.030	<0.030	<0.030
Endosulfan (Total)	ug/L	0.56	-	<0.042	<0.042	<0.042
Endrin	ug/L	0.36	-	<0.040	<0.040	<0.040
Heptachlor	ug/L	0.038	-	<0.010	<0.010	<0.010
Heptachlor Epoxide	ug/L	0.038	-	<0.010	<0.010	<0.010
Hexachlorobenzene	ug/L	1	-	<0.010	<0.010	<0.010
Hexachlorobutadiene	ug/L	0.44	-	<0.010	<0.010	<0.010
Hexachloroethane	ug/L	2.1	-	<0.010	<0.010	<0.010
Methoxychlor	ug/L	0.3	-	<0.050	<0.050	<0.050
Surrogate: 2-Fluorobiphenyl	%	-	-	75.0	78.2	71.0
Surrogate: d14-Terphenyl	%	-	-	87.2	93.2	85.7

Guide Limit #1: T8-Ground Water - All Types of Property Use

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
CHLORDANE-T-CALC-WT	Water	Chlordane Total sums	CALCULATION

Aqueous sample is extracted by liquid/liquid extraction with a solvent mix. After extraction, a number of clean up techniques may be applied, depending on the sample matrix and analyzed by GC/MS.

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

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

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

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

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

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

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

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

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

DDD-DDE-DDT-CALC-WT	Water	DDD, DDE, DDT sums	CALCULATION

Aqueous sample is extracted by liquid/liquid extraction with a solvent mix. After extraction, a number of clean up techniques may be applied, depending on the sample matrix and analyzed by GC/MS.

EC-R511-WT	Water	Conductivity-O.Reg 153/04 (July 2011)	APHA 2510 B

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

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

ENDOSULFAN-T-CALC-WT	Water	Endosulfan Total sums	CALCULATION

Aqueous sample is extracted by liquid/liquid extraction with a solvent mix. After extraction, a number of clean up techniques may be applied, depending on the sample matrix and analyzed by GC/MS.

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.

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**

3. Linearity of gasoline response within 15% throughout the calibration range.

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

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

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

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

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

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

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

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

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

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

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

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

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

PEST-OC-511-WT	Water	OC Pesticides-O. Reg 153/04 (July 2011)	SW846 8270 (511)

Aqueous sample is extracted by liquid/liquid extraction with a solvent mix. After extraction, a number of clean up techniques may be applied, depending on the sample matrix and analyzed by 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).

PH-WT	Water	pH	APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH meter.

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

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

Liquid samples are analyzed by headspace GC/MSD.

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**

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:

17-637918

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

GLOSSARY OF REPORT TERMS

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

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

Quality Control Report

Workorder: L2081144 Report Date: 23-APR-18

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shafi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WT	**Water**							
Batch R4017399								
WG2753387-9 DUP		**L2081144-5**						
Chloride (Cl)		23.5	23.4		mg/L	0.6	20	18-APR-18
WG2753387-7 LCS								
Chloride (Cl)			101.7		%		90-110	18-APR-18
WG2753387-6 MB								
Chloride (Cl)			<0.50		mg/L		0.5	18-APR-18
WG2753387-8 MS		**L2081144-5**						
Chloride (Cl)			100.8		%		75-125	18-APR-18
CN-WAD-R511-WT	**Water**							
Batch R4017045								
WG2754205-3 DUP		**L2081059-1**						
Cyanide, Weak Acid Diss		<2.0	<2.0	RPD-NA	ug/L	N/A	20	18-APR-18
WG2754205-2 LCS								
Cyanide, Weak Acid Diss			99.4		%		80-120	18-APR-18
WG2754205-1 MB								
Cyanide, Weak Acid Diss			<2.0		ug/L		2	18-APR-18
WG2754205-4 MS		**L2081059-1**						
Cyanide, Weak Acid Diss			99.7		%		70-130	18-APR-18
CR-CR6-IC-R511-WT	**Water**							
Batch R4018089								
WG2754442-4 DUP		**WG2754442-3**						
Chromium, Hexavalent		<1.0	<1.0	RPD-NA	ug/L	N/A	20	19-APR-18
WG2754442-2 LCS								
Chromium, Hexavalent			100.0		%		80-120	19-APR-18
WG2754442-1 MB								
Chromium, Hexavalent			<1.0		ug/L		1	19-APR-18
WG2754442-5 MS		**WG2754442-3**						
Chromium, Hexavalent			97.2		%		70-130	19-APR-18
EC-R511-WT	**Water**							
Batch R4017072								
WG2753471-12 DUP		**WG2753471-11**						
Conductivity		0.362	0.363		mS/cm	0.3	10	18-APR-18
WG2753471-16 DUP		**WG2753471-15**						
Conductivity		0.953	0.951		mS/cm	0.2	10	18-APR-18
WG2753471-10 LCS								
Conductivity			98.9		%		90-110	18-APR-18
WG2753471-14 LCS								

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shafi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EC-R511-WT	**Water**							
Batch R4017072								
WG2753471-14 LCS								
Conductivity			99.8		%		90-110	18-APR-18
WG2753471-13 MB								
Conductivity			<0.0030		mS/cm		0.003	18-APR-18
WG2753471-9 MB								
Conductivity			<0.0030		mS/cm		0.003	18-APR-18
F1-HS-511-WT	**Water**							
Batch R4017718								
WG2753474-4 DUP		**WG2753474-3**						
F1 (C6-C10)		<25	<25	RPD-NA	ug/L	N/A	30	20-APR-18
WG2753474-1 LCS								
F1 (C6-C10)			104.6		%		80-120	19-APR-18
WG2753474-2 MB								
F1 (C6-C10)			<25		ug/L		25	20-APR-18
Surrogate: 3,4-Dichlorotoluene			91.9		%		60-140	20-APR-18
WG2753474-5 MS		**WG2753474-3**						
F1 (C6-C10)			85.8		%		60-140	20-APR-18
F2-F4-511-WT	**Water**							
Batch R4017198								
WG2753328-2 LCS								
F2 (C10-C16)			108.4		%		70-130	18-APR-18
F3 (C16-C34)			114.4		%		70-130	18-APR-18
F4 (C34-C50)			114.1		%		70-130	18-APR-18
WG2753328-3 LCSD		**WG2753328-2**						
F2 (C10-C16)		108.4	111.5		%	2.8	50	18-APR-18
F3 (C16-C34)		114.4	113.8		%	0.5	50	18-APR-18
F4 (C34-C50)		114.1	109.3		%	4.3	50	18-APR-18
WG2753328-1 MB								
F2 (C10-C16)			<100		ug/L		100	18-APR-18
F3 (C16-C34)			<250		ug/L		250	18-APR-18
F4 (C34-C50)			<250		ug/L		250	18-APR-18
Surrogate: 2-Bromobenzotrifluoride			108.4		%		60-140	18-APR-18
HG-D-UG/L-CVAA-WT	**Water**							

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shafi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-D-UG/L-CVAA-WT	**Water**							
Batch R4017981								
WG2754660-4 DUP		**WG2754660-3**						
Mercury (Hg)-Dissolved		<0.010	<0.010	RPD-NA	ug/L	N/A	20	20-APR-18
WG2754660-2 LCS								
Mercury (Hg)-Dissolved			104.0		%		80-120	20-APR-18
WG2754660-1 MB								
Mercury (Hg)-Dissolved			<0.010		ug/L		0.01	20-APR-18
WG2754660-6 MS		**WG2754660-5**						
Mercury (Hg)-Dissolved			95.7		%		70-130	20-APR-18
MET-D-UG/L-MS-WT	**Water**							
Batch R4017017								
WG2753249-4 DUP		**WG2753249-3**						
Antimony (Sb)-Dissolved		0.15	0.15		ug/L	3.5	20	18-APR-18
Arsenic (As)-Dissolved		2.25	2.30		ug/L	1.9	20	18-APR-18
Barium (Ba)-Dissolved		172	174		ug/L	1.4	20	18-APR-18
Beryllium (Be)-Dissolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	18-APR-18
Boron (B)-Dissolved		60	63		ug/L	4.9	20	18-APR-18
Cadmium (Cd)-Dissolved		<0.0050	<0.0050	RPD-NA	ug/L	N/A	20	18-APR-18
Chromium (Cr)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	18-APR-18
Cobalt (Co)-Dissolved		0.35	0.36		ug/L	3.8	20	18-APR-18
Copper (Cu)-Dissolved		0.68	0.70		ug/L	3.2	20	18-APR-18
Lead (Pb)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	18-APR-18
Molybdenum (Mo)-Dissolved		2.07	2.11		ug/L	1.9	20	18-APR-18
Nickel (Ni)-Dissolved		0.73	0.75		ug/L	3.6	20	18-APR-18
Selenium (Se)-Dissolved		0.175	0.162		ug/L	7.7	20	18-APR-18
Silver (Ag)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	18-APR-18
Sodium (Na)-Dissolved		29800	29500		ug/L	0.9	20	18-APR-18
Thallium (Tl)-Dissolved		0.015	0.012		ug/L	19	20	18-APR-18
Uranium (U)-Dissolved		1.73	1.80		ug/L	3.6	20	18-APR-18
Vanadium (V)-Dissolved		0.96	0.98		ug/L	2.0	20	18-APR-18
Zinc (Zn)-Dissolved		1.4	1.2		ug/L	16	20	18-APR-18
WG2753249-2 LCS								
Antimony (Sb)-Dissolved			100.8		%		80-120	18-APR-18
Arsenic (As)-Dissolved			100.4		%		80-120	18-APR-18
Barium (Ba)-Dissolved			102.0		%		80-120	18-APR-18
Beryllium (Be)-Dissolved			99.6		%		80-120	18-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shafi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	**Water**							
Batch R4017017								
WG2753249-2 LCS								
Boron (B)-Dissolved			97.2		%		80-120	18-APR-18
Cadmium (Cd)-Dissolved			98.2		%		80-120	18-APR-18
Chromium (Cr)-Dissolved			98.9		%		80-120	18-APR-18
Cobalt (Co)-Dissolved			97.3		%		80-120	18-APR-18
Copper (Cu)-Dissolved			96.2		%		80-120	18-APR-18
Lead (Pb)-Dissolved			99.4		%		80-120	18-APR-18
Molybdenum (Mo)-Dissolved			99.7		%		80-120	18-APR-18
Nickel (Ni)-Dissolved			97.5		%		80-120	18-APR-18
Selenium (Se)-Dissolved			98.8		%		80-120	18-APR-18
Silver (Ag)-Dissolved			101.9		%		80-120	18-APR-18
Sodium (Na)-Dissolved			102.8		%		80-120	18-APR-18
Thallium (Tl)-Dissolved			100.2		%		80-120	18-APR-18
Uranium (U)-Dissolved			101.0		%		80-120	18-APR-18
Vanadium (V)-Dissolved			99.7		%		80-120	18-APR-18
Zinc (Zn)-Dissolved			96.3		%		80-120	18-APR-18
WG2753249-1 MB								
Antimony (Sb)-Dissolved			<0.10		ug/L		0.1	18-APR-18
Arsenic (As)-Dissolved			<0.10		ug/L		0.1	18-APR-18
Barium (Ba)-Dissolved			<0.10		ug/L		0.1	18-APR-18
Beryllium (Be)-Dissolved			<0.10		ug/L		0.1	18-APR-18
Boron (B)-Dissolved			<10		ug/L		10	18-APR-18
Cadmium (Cd)-Dissolved			<0.0050		ug/L		0.005	18-APR-18
Chromium (Cr)-Dissolved			<0.50		ug/L		0.5	18-APR-18
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	18-APR-18
Copper (Cu)-Dissolved			<0.20		ug/L		0.2	18-APR-18
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	18-APR-18
Molybdenum (Mo)-Dissolved			<0.050		ug/L		0.05	18-APR-18
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	18-APR-18
Selenium (Se)-Dissolved			<0.050		ug/L		0.05	18-APR-18
Silver (Ag)-Dissolved			<0.050		ug/L		0.05	18-APR-18
Sodium (Na)-Dissolved			<50		ug/L		50	18-APR-18
Thallium (Tl)-Dissolved			<0.010		ug/L		0.01	18-APR-18
Uranium (U)-Dissolved			<0.010		ug/L		0.01	18-APR-18
Vanadium (V)-Dissolved			<0.50		ug/L		0.5	18-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shafi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	**Water**							
Batch R4017017								
WG2753249-1 MB								
Zinc (Zn)-Dissolved			<1.0		ug/L		1	18-APR-18
WG2753249-5 MS		**WG2753249-6**						
Antimony (Sb)-Dissolved			99.6		%		70-130	18-APR-18
Arsenic (As)-Dissolved			104.4		%		70-130	18-APR-18
Barium (Ba)-Dissolved			N/A	MS-B	%		-	18-APR-18
Beryllium (Be)-Dissolved			96.4		%		70-130	18-APR-18
Boron (B)-Dissolved			N/A	MS-B	%		-	18-APR-18
Cadmium (Cd)-Dissolved			101.3		%		70-130	18-APR-18
Chromium (Cr)-Dissolved			100.4		%		70-130	18-APR-18
Cobalt (Co)-Dissolved			94.3		%		70-130	18-APR-18
Copper (Cu)-Dissolved			92.5		%		70-130	18-APR-18
Lead (Pb)-Dissolved			97.1		%		70-130	18-APR-18
Molybdenum (Mo)-Dissolved			94.9		%		70-130	18-APR-18
Nickel (Ni)-Dissolved			93.2		%		70-130	18-APR-18
Selenium (Se)-Dissolved			105.0		%		70-130	18-APR-18
Silver (Ag)-Dissolved			79.2		%		70-130	19-APR-18
Sodium (Na)-Dissolved			N/A	MS-B	%		-	18-APR-18
Thallium (Tl)-Dissolved			98.5		%		70-130	18-APR-18
Uranium (U)-Dissolved			N/A	MS-B	%		-	18-APR-18
Vanadium (V)-Dissolved			102.2		%		70-130	18-APR-18
Zinc (Zn)-Dissolved			96.8		%		70-130	18-APR-18
PEST-OC-511-WT	**Water**							
Batch R4021094								
WG2755028-2 LCS								
Aldrin			103.5		%		50-140	23-APR-18
a-chlordane			116.0		%		50-140	23-APR-18
g-chlordane			121.4		%		50-140	23-APR-18
o,p-DDD			94.2		%		50-140	23-APR-18
pp-DDD			96.4		%		50-140	23-APR-18
o,p-DDE			88.8		%		50-140	23-APR-18
pp-DDE			92.2		%		50-140	23-APR-18
op-DDT			119.8		%		50-140	23-APR-18
pp-DDT			117.5		%		50-140	23-APR-18
Dieldrin			105.5		%		50-140	23-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shafi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-OC-511-WT	**Water**							
Batch R4021094								
WG2755028-2 LCS								
Endosulfan I			112.8		%		50-140	23-APR-18
Endosulfan II			110.2		%		50-140	23-APR-18
Endrin			144.4	LCS-H	%		50-140	23-APR-18
gamma-hexachlorocyclohexane			91.3		%		50-140	23-APR-18
Heptachlor			96.8		%		50-140	23-APR-18
Heptachlor Epoxide			117.6		%		50-140	23-APR-18
Hexachlorobenzene			85.4		%		40-130	23-APR-18
Hexachlorobutadiene			72.1		%		40-130	23-APR-18
Hexachloroethane			69.1		%		40-130	23-APR-18
Methoxychlor			122.4		%		50-140	23-APR-18
WG2755028-3 LCSD		**WG2755028-2**						
Aldrin		103.5	118.7		%	14	50	23-APR-18
a-chlordane		116.0	129.3		%	11	50	23-APR-18
g-chlordane		121.4	147.7		%	20	50	23-APR-18
o,p-DDD		94.2	102.1		%	8.0	50	23-APR-18
pp-DDD		96.4	113.1		%	16	50	23-APR-18
o,p-DDE		88.8	91.9		%	3.4	50	23-APR-18
pp-DDE		92.2	93.6		%	1.5	50	23-APR-18
op-DDT		119.8	143.6		%	18	50	23-APR-18
pp-DDT		117.5	159.0		%	30	50	23-APR-18
Dieldrin		105.5	123.8		%	16	50	23-APR-18
Endosulfan I		112.8	126.7		%	12	50	23-APR-18
Endosulfan II		110.2	134.6		%	20	50	23-APR-18
Endrin		144.4	188.6		%	27	50	23-APR-18
gamma-hexachlorocyclohexane		91.3	81.6		%	11	50	23-APR-18
Heptachlor		96.8	97.8		%	1.1	50	23-APR-18
Heptachlor Epoxide		117.6	122.1		%	3.8	50	23-APR-18
Hexachlorobenzene		85.4	72.2		%	17	50	23-APR-18
Hexachlorobutadiene		72.1	60.7		%	17	50	23-APR-18
Hexachloroethane		69.1	58.9		%	16	50	23-APR-18
Methoxychlor		122.4	159.2		%	26	50	23-APR-18
WG2755028-1 MB								
Aldrin			<0.010		ug/L		0.01	23-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shafi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-OC-511-WT	**Water**							
Batch R4021094								
WG2755028-1 MB								
a-chlordane			<0.040		ug/L		0.04	23-APR-18
g-chlordane			<0.040		ug/L		0.04	23-APR-18
o,p-DDD			<0.030		ug/L		0.03	23-APR-18
pp-DDD			<0.030		ug/L		0.03	23-APR-18
o,p-DDE			<0.0080		ug/L		0.008	23-APR-18
pp-DDE			<0.0080		ug/L		0.008	23-APR-18
op-DDT			<0.030		ug/L		0.03	23-APR-18
pp-DDT			<0.030		ug/L		0.03	23-APR-18
Dieldrin			<0.050		ug/L		0.05	23-APR-18
Endosulfan I			<0.030		ug/L		0.03	23-APR-18
Endosulfan II			<0.030		ug/L		0.03	23-APR-18
Endrin			<0.040		ug/L		0.04	23-APR-18
gamma-hexachlorocyclohexane			<0.010		ug/L		0.01	23-APR-18
Heptachlor			<0.010		ug/L		0.01	23-APR-18
Heptachlor Epoxide			<0.010		ug/L		0.01	23-APR-18
Hexachlorobenzene			<0.010		ug/L		0.01	23-APR-18
Hexachlorobutadiene			<0.010		ug/L		0.01	23-APR-18
Hexachloroethane			<0.010		ug/L		0.01	23-APR-18
Methoxychlor			<0.050		ug/L		0.05	23-APR-18
Surrogate: 2-Fluorobiphenyl			83.9		%		50-140	23-APR-18
Surrogate: d14-Terphenyl			90.2		%		60-140	23-APR-18
PH-WT	**Water**							
Batch R4017072								
WG2753471-12 DUP		**WG2753471-11**						
pH		7.98	7.99	J	pH units	0.01	0.2	18-APR-18
WG2753471-16 DUP		**WG2753471-15**						
pH		6.20	6.15	J	pH units	0.04	0.2	18-APR-18
WG2753471-10 LCS								
pH			6.97		pH units		6.9-7.1	18-APR-18
WG2753471-14 LCS								
pH			7.07		pH units		6.9-7.1	18-APR-18
VOC-511-HS-WT	**Water**							

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shafi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R4017718								
WG2753474-4 DUP		**WG2753474-3**						
1,1,1,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
1,1,2,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-APR-18
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	20-APR-18
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-APR-18
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-APR-18
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-APR-18
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	20-APR-18
cis-1,2-Dichloroethylene		1.16	1.14		ug/L	1.7	30	20-APR-18
cis-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	20-APR-18
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-APR-18
Dichlorodifluoromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-APR-18
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	20-APR-18
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	20-APR-18
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	20-APR-18
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-APR-18
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-APR-18
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	20-APR-18
Styrene		<0.50	<0.50		ug/L			20-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shafi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R4017718								
WG2753474-4 DUP		**WG2753474-3**						
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
trans-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
trans-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	20-APR-18
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-APR-18
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-APR-18
Vinyl chloride		0.91	0.93		ug/L	2.2	30	20-APR-18
WG2753474-1 LCS								
1,1,1,2-Tetrachloroethane			103.1		%		70-130	19-APR-18
1,1,2,2-Tetrachloroethane			99.0		%		70-130	19-APR-18
1,1,1-Trichloroethane			103.9		%		70-130	19-APR-18
1,1,2-Trichloroethane			96.7		%		70-130	19-APR-18
1,1-Dichloroethane			112.6		%		70-130	19-APR-18
1,1-Dichloroethylene			92.5		%		70-130	19-APR-18
1,2-Dibromoethane			103.8		%		70-130	19-APR-18
1,2-Dichlorobenzene			95.0		%		70-130	19-APR-18
1,2-Dichloroethane			95.8		%		70-130	19-APR-18
1,2-Dichloropropane			103.4		%		70-130	19-APR-18
1,3-Dichlorobenzene			96.2		%		70-130	19-APR-18
1,4-Dichlorobenzene			97.3		%		70-130	19-APR-18
Acetone			93.0		%		60-140	19-APR-18
Benzene			96.5		%		70-130	19-APR-18
Bromodichloromethane			99.8		%		70-130	19-APR-18
Bromoform			100.1		%		70-130	19-APR-18
Bromomethane			97.9		%		60-140	19-APR-18
Carbon tetrachloride			93.5		%		70-130	19-APR-18
Chlorobenzene			102.3		%		70-130	19-APR-18
Chloroform			95.6		%		70-130	19-APR-18
cis-1,2-Dichloroethylene			92.5		%		70-130	19-APR-18
cis-1,3-Dichloropropene			102.7		%		70-130	19-APR-18
Dibromochloromethane			105.9		%		70-130	19-APR-18
Dichlorodifluoromethane			96.6		%		50-140	19-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shafi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R4017718								
WG2753474-1 LCS								
Ethylbenzene			100.9		%		70-130	19-APR-18
n-Hexane			106.7		%		70-130	19-APR-18
m+p-Xylenes			106.6		%		70-130	19-APR-18
Methyl Ethyl Ketone			99.2		%		60-140	19-APR-18
Methyl Isobutyl Ketone			111.3		%		60-140	19-APR-18
Methylene Chloride			96.0		%		70-130	19-APR-18
MTBE			100.2		%		70-130	19-APR-18
o-Xylene			101.8		%		70-130	19-APR-18
Styrene			103.6		%		70-130	19-APR-18
Tetrachloroethylene			96.6		%		70-130	19-APR-18
Toluene			97.6		%		70-130	19-APR-18
trans-1,2-Dichloroethylene			97.3		%		70-130	19-APR-18
trans-1,3-Dichloropropene			98.8		%		70-130	19-APR-18
Trichloroethylene			98.1		%		70-130	19-APR-18
Trichlorofluoromethane			104.4		%		60-140	19-APR-18
Vinyl chloride			99.7		%		60-140	19-APR-18
WG2753474-2 MB								
1,1,1,2-Tetrachloroethane			<0.50		ug/L		0.5	20-APR-18
1,1,2,2-Tetrachloroethane			<0.50		ug/L		0.5	20-APR-18
1,1,1-Trichloroethane			<0.50		ug/L		0.5	20-APR-18
1,1,2-Trichloroethane			<0.50		ug/L		0.5	20-APR-18
1,1-Dichloroethane			<0.50		ug/L		0.5	20-APR-18
1,1-Dichloroethylene			<0.50		ug/L		0.5	20-APR-18
1,2-Dibromoethane			<0.20		ug/L		0.2	20-APR-18
1,2-Dichlorobenzene			<0.50		ug/L		0.5	20-APR-18
1,2-Dichloroethane			<0.50		ug/L		0.5	20-APR-18
1,2-Dichloropropane			<0.50		ug/L		0.5	20-APR-18
1,3-Dichlorobenzene			<0.50		ug/L		0.5	20-APR-18
1,4-Dichlorobenzene			<0.50		ug/L		0.5	20-APR-18
Acetone			<30		ug/L		30	20-APR-18
Benzene			<0.50		ug/L		0.5	20-APR-18
Bromodichloromethane			<2.0		ug/L		2	20-APR-18
Bromoform			<5.0		ug/L		5	20-APR-18
Bromomethane			<0.50		ug/L		0.5	20-APR-18

Quality Control Report

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shafi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R4017718								
WG2753474-2 MB								
Carbon tetrachloride			<0.20		ug/L		0.2	20-APR-18
Chlorobenzene			<0.50		ug/L		0.5	20-APR-18
Chloroform			<1.0		ug/L		1	20-APR-18
cis-1,2-Dichloroethylene			<0.50		ug/L		0.5	20-APR-18
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	20-APR-18
Dibromochloromethane			<2.0		ug/L		2	20-APR-18
Dichlorodifluoromethane			<2.0		ug/L		2	20-APR-18
Ethylbenzene			<0.50		ug/L		0.5	20-APR-18
n-Hexane			<0.50		ug/L		0.5	20-APR-18
m+p-Xylenes			<0.40		ug/L		0.4	20-APR-18
Methyl Ethyl Ketone			<20		ug/L		20	20-APR-18
Methyl Isobutyl Ketone			<20		ug/L		20	20-APR-18
Methylene Chloride			<5.0		ug/L		5	20-APR-18
MTBE			<2.0		ug/L		2	20-APR-18
o-Xylene			<0.30		ug/L		0.3	20-APR-18
Styrene			<0.50		ug/L		0.5	20-APR-18
Tetrachloroethylene			<0.50		ug/L		0.5	20-APR-18
Toluene			<0.50		ug/L		0.5	20-APR-18
trans-1,2-Dichloroethylene			<0.50		ug/L		0.5	20-APR-18
trans-1,3-Dichloropropene			<0.30		ug/L		0.3	20-APR-18
Trichloroethylene			<0.50		ug/L		0.5	20-APR-18
Trichlorofluoromethane			<5.0		ug/L		5	20-APR-18
Vinyl chloride			<0.50		ug/L		0.5	20-APR-18
Surrogate: 1,4-Difluorobenzene			98.9		%		70-130	20-APR-18
Surrogate: 4-Bromofluorobenzene			91.2		%		70-130	20-APR-18
WG2753474-5 MS		**WG2753474-3**						
1,1,1,2-Tetrachloroethane			103.1		%		50-140	20-APR-18
1,1,2,2-Tetrachloroethane			91.6		%		50-140	20-APR-18
1,1,1-Trichloroethane			109.3		%		50-140	20-APR-18
1,1,2-Trichloroethane			90.1		%		50-140	20-APR-18
1,1-Dichloroethane			101.0		%		50-140	20-APR-18
1,1-Dichloroethylene			93.6		%		50-140	20-APR-18
1,2-Dibromoethane			93.9		%		50-140	20-APR-18
1,2-Dichlorobenzene			95.6		%		50-140	20-APR-18

Quality Control Report

Workorder: L2081144 Report Date: 23-APR-18

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shafi Andseta

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R4017718								
WG2753474-5 MS		**WG2753474-3**						
1,2-Dichloroethane			87.8		%		50-140	20-APR-18
1,2-Dichloropropane			100.9		%		50-140	20-APR-18
1,3-Dichlorobenzene			97.7		%		50-140	20-APR-18
1,4-Dichlorobenzene			97.0		%		50-140	20-APR-18
Acetone			82.4		%		50-140	20-APR-18
Benzene			97.1		%		50-140	20-APR-18
Bromodichloromethane			95.2		%		50-140	20-APR-18
Bromoform			89.8		%		50-140	20-APR-18
Bromomethane			84.4		%		50-140	20-APR-18
Carbon tetrachloride			99.2		%		50-140	20-APR-18
Chlorobenzene			102.2		%		50-140	20-APR-18
Chloroform			95.6		%		50-140	20-APR-18
cis-1,2-Dichloroethylene			101.1		%		50-140	20-APR-18
cis-1,3-Dichloropropene			84.0		%		50-140	20-APR-18
Dibromochloromethane			100.4		%		50-140	20-APR-18
Dichlorodifluoromethane			63.5		%		50-140	20-APR-18
Ethylbenzene			105.2		%		50-140	20-APR-18
n-Hexane			109.4		%		50-140	20-APR-18
m+p-Xylenes			109.8		%		50-140	20-APR-18
Methyl Ethyl Ketone			79.6		%		50-140	20-APR-18
Methyl Isobutyl Ketone			88.0		%		50-140	20-APR-18
Methylene Chloride			92.5		%		50-140	20-APR-18
MTBE			100.3		%		50-140	20-APR-18
o-Xylene			104.1		%		50-140	20-APR-18
Styrene			100.1		%		50-140	20-APR-18
Tetrachloroethylene			99.8		%		50-140	20-APR-18
Toluene			102.0		%		50-140	20-APR-18
trans-1,2-Dichloroethylene			94.4		%		50-140	20-APR-18
trans-1,3-Dichloropropene			78.2		%		50-140	20-APR-18
Trichloroethylene			98.0		%		50-140	20-APR-18
Trichlorofluoromethane			105.5		%		50-140	20-APR-18
Vinyl chloride			88.1		%		50-140	20-APR-18

Quality Control Report

Workorder: L2081144 Report Date: 23-APR-18

Client: DS Consultants (Vaughan)
6221 Highway 7 Unit 16
Vaughan ON L4H 0K8
Contact: Shafi Andseta

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.
LCS-H	Lab Control Sample recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

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

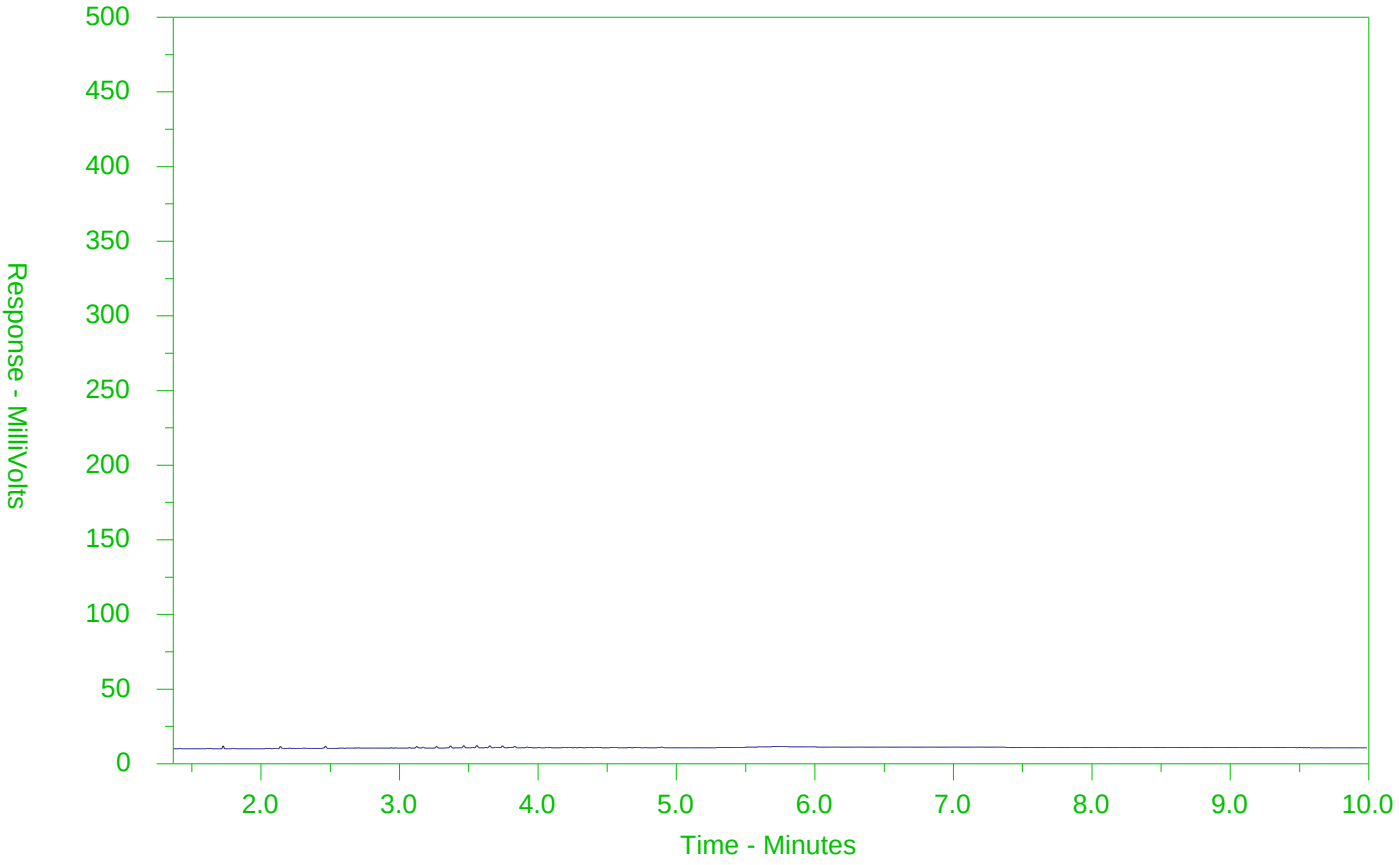
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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

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

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

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2081144-1
Client Sample ID: MW18-1



←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.

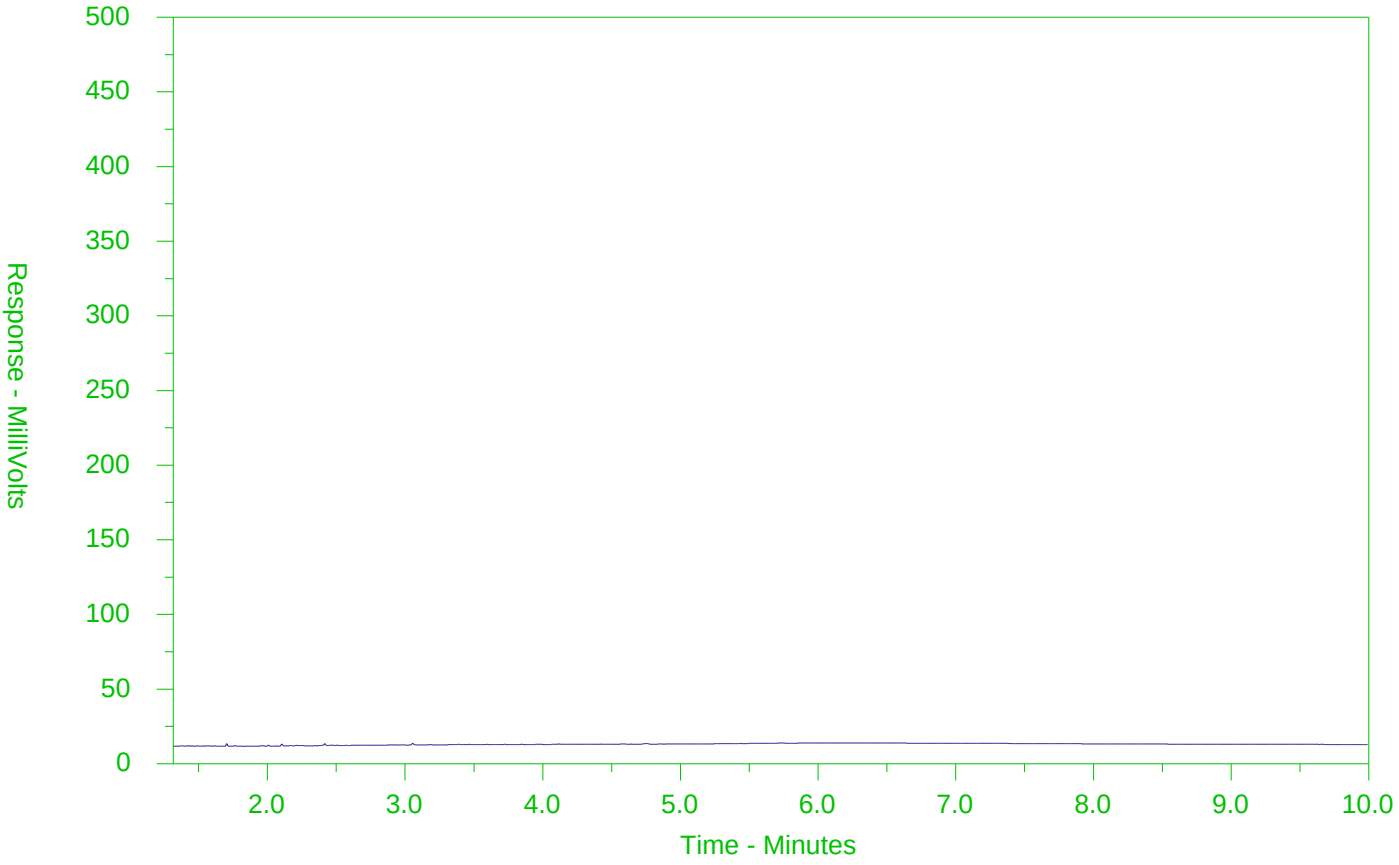
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2081144-2
Client Sample ID: MW18-2



←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.

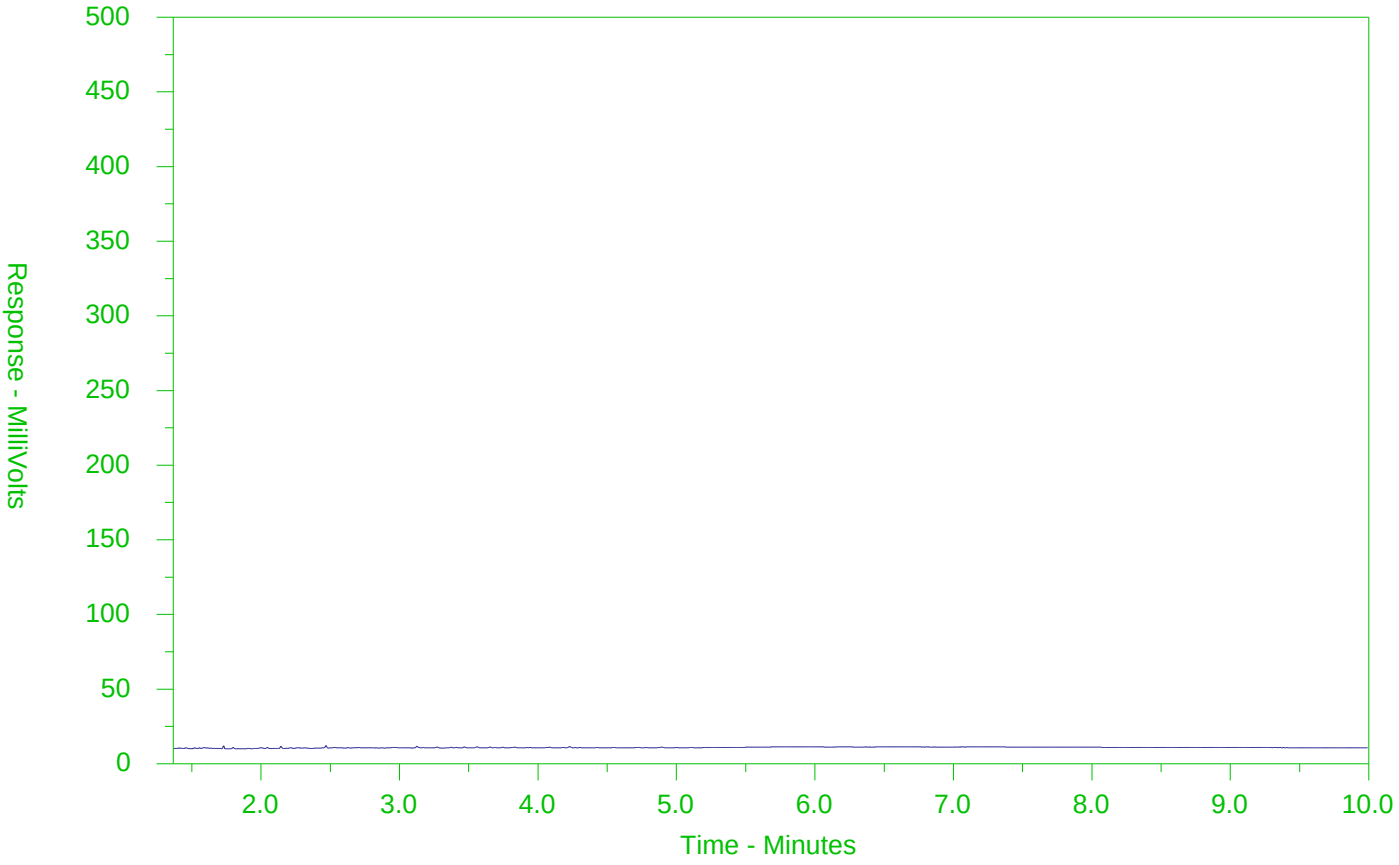
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2081144-3
Client Sample ID: MW18-3



←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.

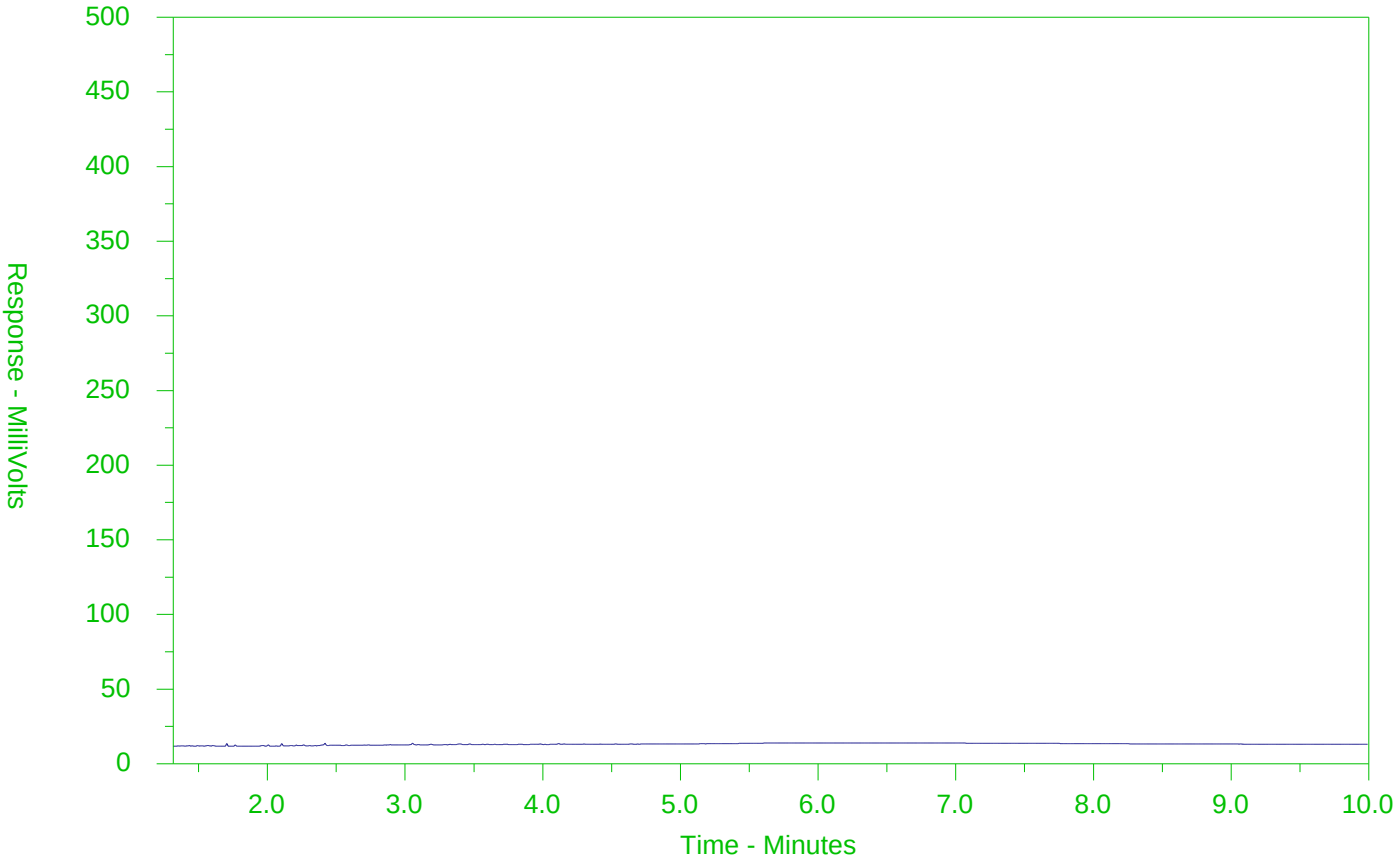
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2081144-4
Client Sample ID: MW18-4



←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.

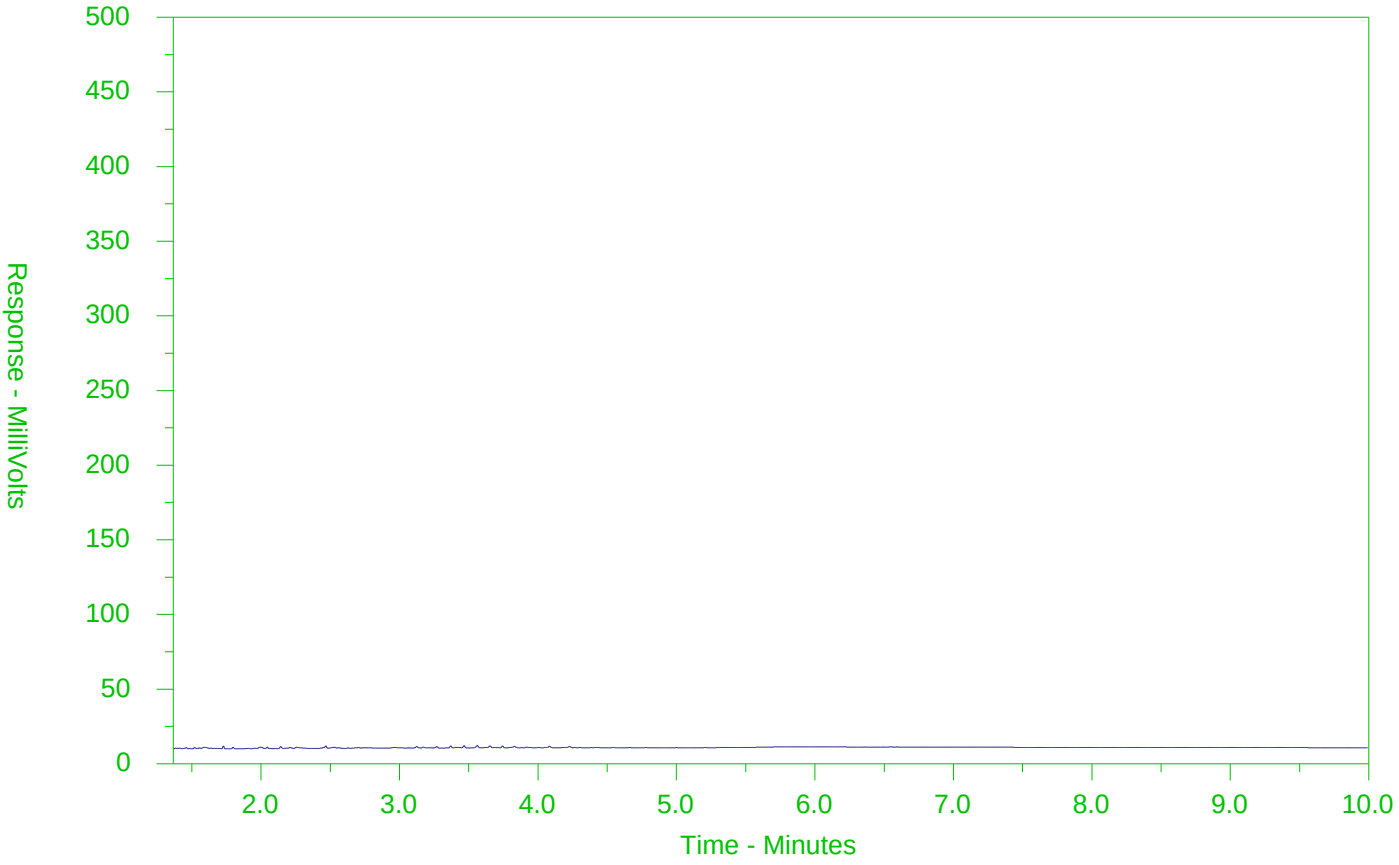
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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: L2081144-5
Client Sample ID: DUP-1



←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

L2081144-COFC

COC Number: 17 - 637918

Page / of /

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:	DS Consultants Ltd.	Select Report Format: ☑ PDF ☐ EXCEL ☐ EDD (DIGITAL)	Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply
Contact:	Shafi Andleeb	Quality Control (QC) Report with Report ☑ YES ☐ NO	PRIORITY (Business Days): 4 day [P4-20%] ☐ / 3 day [P3-25%] ☐ / 2 day [P2-50%] ☐
Phone:	(705) - 896 - 1979	☐ 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:	6221 Hwy 7, Unit 16	Email 1 or Fax: Shafi.Andleeb@dsconsultants.ca	For tests that can not be performed according to the service level selected, you will be contacted.
City/Province:	Vaughan, ON	Email 2: Sean.Ellison@dsconsultants.ca	
Postal Code:		Email 3:	

Invoice To		Invoice Distribution
	Same as Report To ☑ YES ☐ NO	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
	Copy of Invoice with Report ☐ YES ☐ NO	
Company:		Email 1 or Fax: Sams
Contact:		Email 2:

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:		AFE/Cost Center:	PO#:
Job #:	18-526-20	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	
ALS Lab Work Order # (lab use only):	L2081144 VL 17B	ALS Contact: AP	Sampler:

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	OCP	M+T	PHCs + VOCs	SAMPLES ON HOLD	Sample is hazardous (please provide further details)	NUMBER OF CONTAINERS
	~~18 [illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~						
1	MW18-1	17-Apr-18	11:30 AM	GW	X	X	X			12
2	MW18-2		12:00 PM			X	X			11
3	MW18-3		12:30 PM		X	X	X			12
4	MW18-4		1:00 PM		X	X	X			12
5	Dup-1		11:15 AM			X	X			11

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	O.Reg 153/04 Table 2
Are samples for human consumption/ use? ☐ YES ☑ NO	

SAMPLE CONDITION AS RECEIVED (lab use only)

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

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
2.6				7.6°C			

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
Sean Ellison	Apr. 17/2018	2:40PM	[signature]	04/17/18	14:05	VL	Apr. 17/18	16:45

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**.

APPENDIX D

Private Locator Report

multiVIEW Locates Inc.
Phone: (905) 629-8959
Fax: 1-866-571-5946
www.multiview.ca

Auxiliary Locate Sheet

multiVIEW Locate Sheet 2 of 9
OOC Ticket # 20181215262
Date 04/03/2018
Locator's Initials Y. ZERROOK
Type of Work: DRILLING
Address: 14245 HIGHWAY 50

On behalf of Enbridge Gas Distribution (Client)
If a buried plant is damaged during excavation, the excavator must cease further excavation and contact multiVIEW Locates Inc. at 1-800-363-3116
Customer: DS Consultants Ltd

☐ Emergency ☑ Standard
☐ Office
City: CALEDON

Marking Method: ☑ Paint ☑ Pin Flags ☐ Wood Stakes ☐ Marker/Crayon ☐ Chalk ☐ Other:

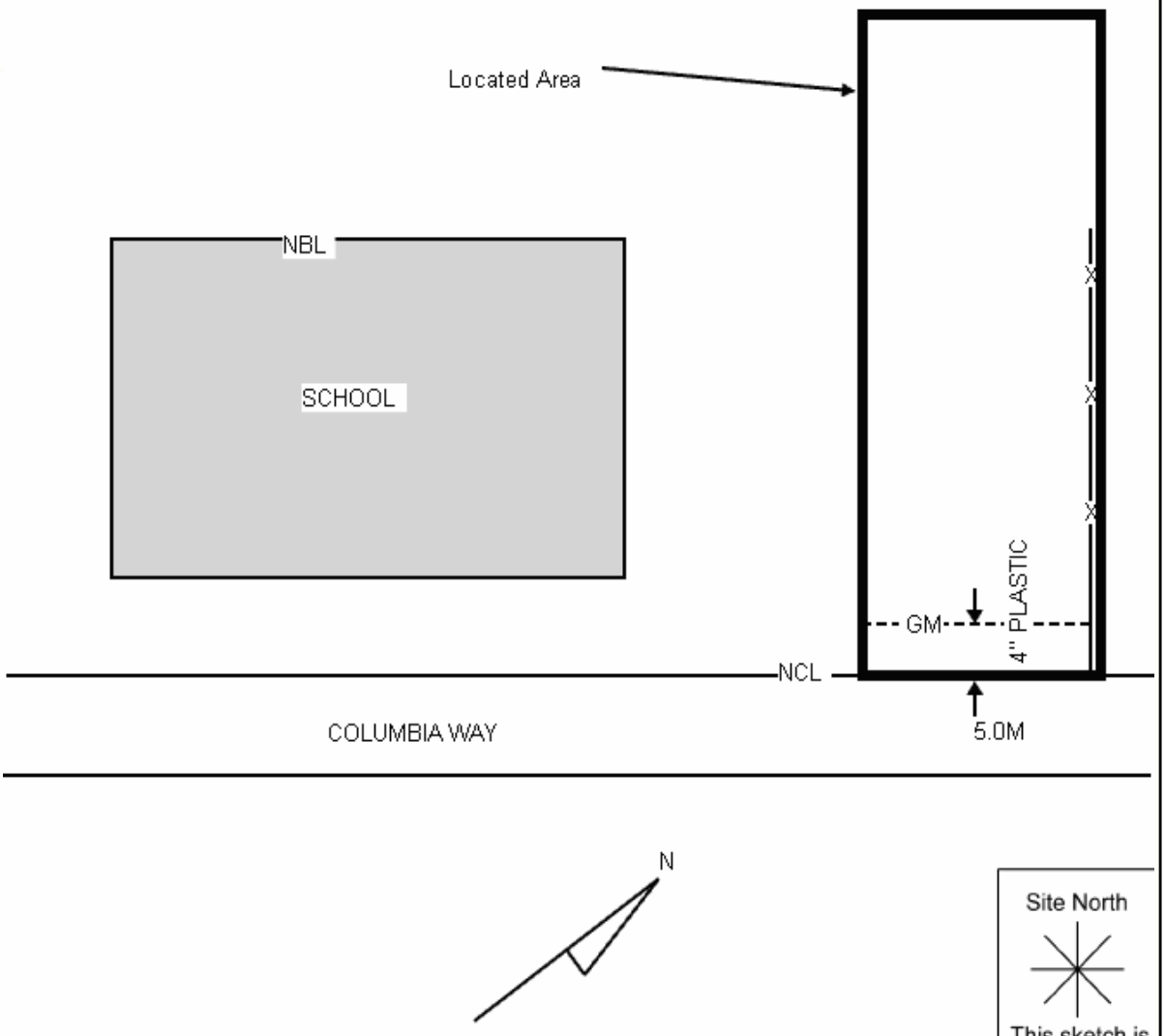
Number of Services marked (Specify building/house numbers):

From: 150.0M N / NBL OF SCHOOL
To: NCL OF COLUMBIA WAY
From: FENCE LINE
To: 80.0M W OF FENCE LINE

HAND DIG WITHIN 1M AS MEASURED HORIZONTALLY FROM THE FIELD MARKINGS UNLESS OTHEWISE NOTED.
DEPTH TO BURIED PLANT VARIES AND MUST BE VERIFIED BY HAND DIGGING.
☐ Locate Area has been altered as per: _____ APPR. _____

Legend

FEATURE	SYMBOL	PAINT
Gas Main	---GM---	Yellow
Gas Service	--GS--	Yellow
Unknown	---?---	Pink
Transformer		
Street Light Pole		
Pole		
Pedestal		
Hydrant		
Valve		
Valve Chamber		
Manhole	MH	
Catch Basin	CB	
Curb Line	--CL--	
Building Line	--BL--	
Fence Line	--FL--	
Property Line	--PL--	
Sidewalk	--SW--	
Road Edge	--RE--	
Railway		
Driveway	--DW--	
Demarcation	DM	



Locate is VOID after 30 days

THIS FORM ONLY VALID WITH Primary Locate Form. This sketch is not to scale. Any privately owned services within the located area have not been marked – check with service/property owner.
A copy of this Auxiliary Locate Sheet(s) and the Primary Locate Sheet must be on site and in the hands of the machine operator during work operations. If sketch and markings do not coincide, the Excavator must obtain a new locate.

This form revised: January 2018

Auxiliary Locate Sheet

multiVIEW Locates Inc.
Phone: (905) 629-8959
Fax: 1-866-571-5946
www.multiview.ca

multiVIEW Locate Sheet 3 of 9
OOC Ticket # 20181215262
Date 04/03/2018
Locator's Initials Y. ZERROOK
Type of Work: DRILLING
Address: 14245 HIGHWAY 50

On behalf of Hydro One (Client)
If a buried plant is damaged during excavation, the excavator must cease further excavation and contact multiVIEW Locates Inc. at 1-800-363-3116
Customer: DS Consultants Ltd

☐ Emergency ☑ Standard
☐ Office
City: CALEDON

Marking Method: ☑ Paint ☑ Pin Flags ☐ Wood Stakes ☐ Marker/Crayon ☐ Chalk ☐ Other:

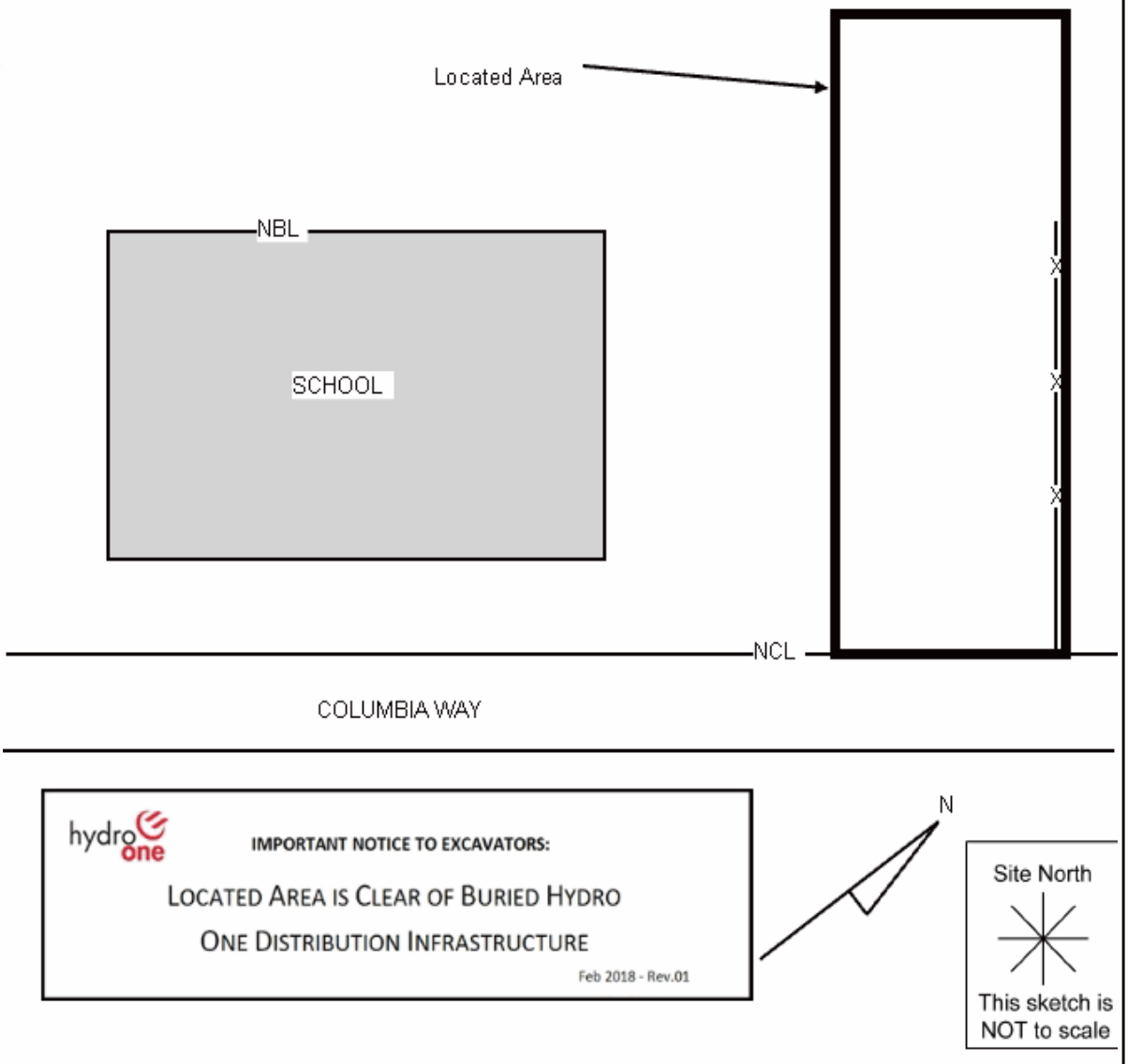
Number of Services marked (Specify building/house numbers):

From: 150.0M N / NBL OF SCHOOL
To: NCL OF COLUMBIA WAY
From: FENCE LINE
To: 80.0M W OF FENCE LINE

HAND DIG WITHIN 1M AS MEASURED HORIZONTALLY FROM THE FIELD MARKINGS UNLESS OTHEWISE NOTED.
DEPTH TO BURIED PLANT VARIES AND MUST BE VERIFIED BY HAND DIGGING.
☐ Locate Area has been altered as per: _____ APPR. _____

Legend

FEATURE	SYMBOL	PAINT
Hydro	---H---	Red
Street Light	--SL--	Red
Unknown	---?---	Pink
Transformer		
Street Light Pole		
Pole		
Pedestal		
Hydrant		
Valve		
Valve Chamber		
Manhole	MH	
Catch Basin	CB	
Curb Line	--CL--	
Building Line	--BL--	
Fence Line	--FL--	
Property Line	--PL--	
Sidewalk	--SW--	
Road Edge	--RE--	
Railway		
Driveway	--DW--	
Demarcation	DM	



Locate is VOID after 60 days

THIS FORM ONLY VALID WITH Primary Locate Form. This sketch is not to scale. Any privately owned services within the located area have not been marked – check with service/property owner.
A copy of this Auxiliary Locate Sheet(s) and the Primary Locate Sheet must be on site and in the hands of the machine operator during work operations. If sketch and markings do not coincide, the Excavator must obtain a new locate.

This form revised: January 2018

multiVIEW Locates Inc.
Phone: (905) 629-8959
Fax: 1-866-571-5946
www.multiview.ca

Auxiliary Locate Sheet

multiVIEW Locate Sheet 4 of 9
OOC Ticket # 20181215262
Date 04/03/2018
Locator's Initials Y. ZERROOK
Type of Work: DRILLING
Address: 14245 HIGHWAY 50

On behalf of Hydro One (Client)

If a buried plant is damaged during excavation, the excavator must cease further excavation and contact multiVIEW Locates Inc. at 1-800-363-3116

Customer: DS Consultants Ltd

☐ Emergency ☑ Standard
☐ Office
City: CALEDON

Marking Method: ☑ Paint ☑ Pin Flags ☐ Wood Stakes ☐ Marker/Crayon ☐ Chalk ☐ Other:

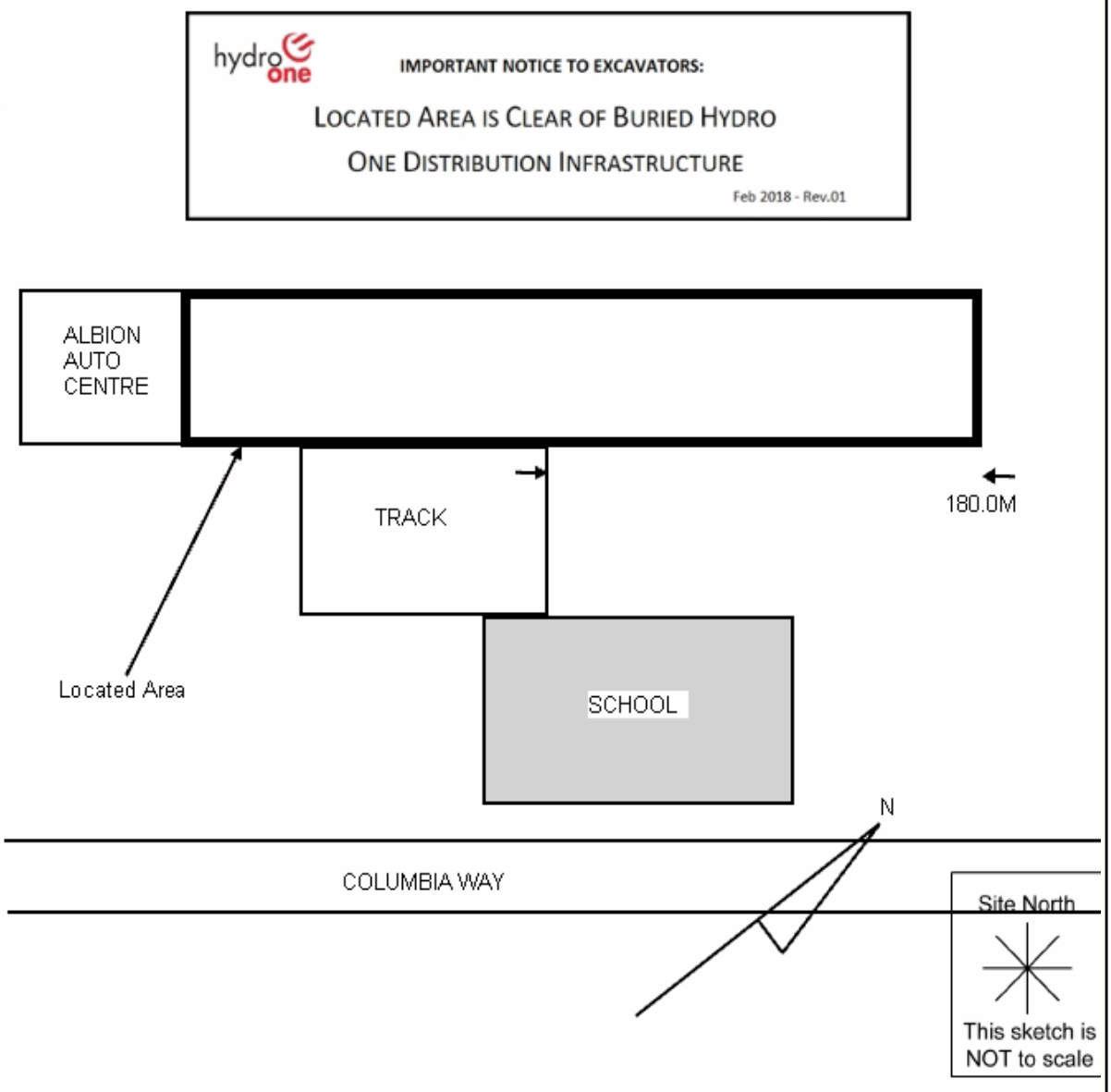
Number of Services marked (Specify building/house numbers):

From: TRACK
To: 75.0M N OF TRACK
From: ALBION AUTO CENTRE
To: 180M E OF TRACK

HAND DIG WITHIN 1M AS MEASURED HORIZONTALLY FROM THE FIELD MARKINGS UNLESS OTHEWISE NOTED.
DEPTH TO BURIED PLANT VARIES AND MUST BE VERIFIED BY HAND DIGGING.
☐ Locate Area has been altered as per: _____ APPR. _____

Legend

FEATURE	SYMBOL	PAINT
Hydro	---H---	Red
Street Light	--SL--	Red
Unknown	---?---	Pink
Transformer		
Street Light Pole		
Pole		
Pedestal		
Hydrant		
Valve		
Valve Chamber		
Manhole	MH	
Catch Basin	CB	
Curb Line	--CL--	
Building Line	--BL--	
Fence Line	--FL--	
Property Line	--PL--	
Sidewalk	--SW--	
Road Edge	--RE--	
Railway		
Driveway	--DW--	
Demarcation	DM	



Locate is VOID after 60 days

THIS FORM ONLY VALID WITH Primary Locate Form. This sketch is not to scale. Any privately owned services within the located area have not been marked – check with service/property owner.
A copy of this Auxiliary Locate Sheet(s) and the Primary Locate Sheet must be on site and in the hands of the machine operator during work operations. If sketch and markings do not coincide, the Excavator must obtain a new locate.

This form revised: January 2018

multiVIEW Locates Inc.
Phone: (905) 629-8959
Fax: 1-866-571-5946
www.multiview.ca

Auxiliary Locate Sheet

multiVIEW Locate Sheet 5 of 9
OOC Ticket # 20181215262
Date 04/03/2018
Locator's Initials Y. ZERROOK
Type of Work: DRILLING
Address: 14245 HIGHWAY 50

On behalf of Enbridge Gas Distribution (Client)
If a buried plant is damaged during excavation, the excavator must cease further excavation and contact multiVIEW Locates Inc. at 1-800-363-3116
Customer: DS Consultants Ltd

☐ Emergency ☑ Standard
☐ Office
City: CALEDON

Marking Method: ☑ Paint ☑ Pin Flags ☐ Wood Stakes ☐ Marker/Crayon ☐ Chalk ☐ Other:

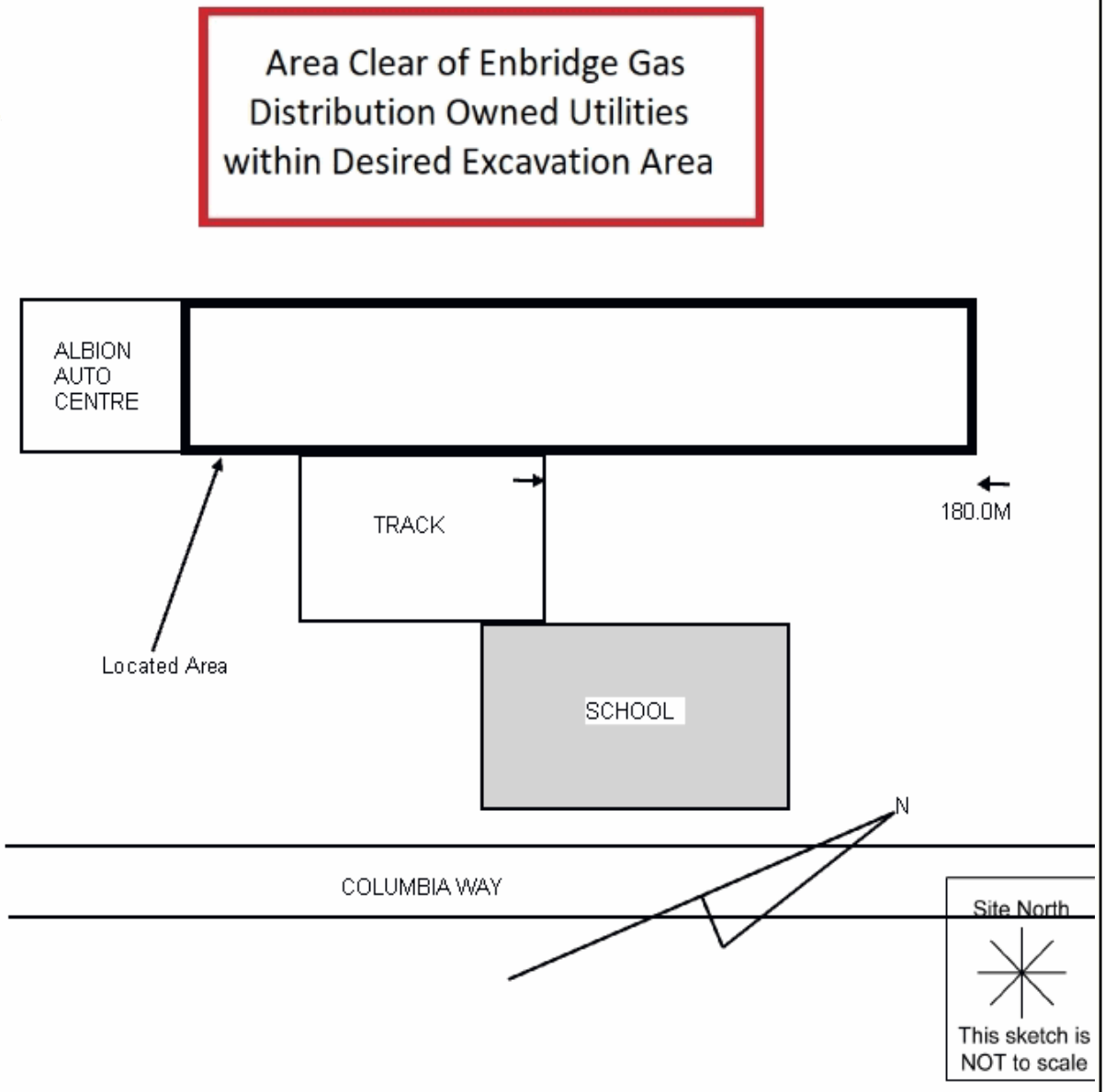
Number of Services marked (Specify building/house numbers):

From: TRACK	To: 75.0M N OF TRACK
From: ALBION AUTO CENTRE	To: 180.0 E OF TRACK

HAND DIG WITHIN 1M AS MEASURED HORIZONTALLY FROM THE FIELD MARKINGS UNLESS OTHEWISE NOTED.
DEPTH TO BURIED PLANT VARIES AND MUST BE VERIFIED BY HAND DIGGING.
☐ Locate Area has been altered as per: _____ APPR. _____

Legend

FEATURE	SYMBOL	PAINT
Gas Main	---GM---	Yellow
Gas Service	--GS--	Yellow
Unknown	---?---	Pink
Transformer		
Street Light Pole		
Pole		
Pedestal		
Hydrant		
Valve		
Valve Chamber		
Manhole	MH	
Catch Basin	CB	
Curb Line	--CL--	
Building Line	--BL--	
Fence Line	--FL--	
Property Line	--PL--	
Sidewalk	--SW--	
Road Edge	--RE--	
Railway		
Driveway	--DW--	
Demarcation	DM	



Locate is VOID after 30 days

THIS FORM ONLY VALID WITH Primary Locate Form. This sketch is not to scale. Any privately owned services within the located area have not been marked – check with service/property owner.
A copy of this Auxiliary Locate Sheet(s) and the Primary Locate Sheet must be on site and in the hands of the machine operator during work operations. If sketch and markings do not coincide, the Excavator must obtain a new locate.

This form revised: January 2018

Auxiliary Locate Sheet

multiVIEW Locates Inc.
Phone: (905) 629-8959
Fax: 1-866-571-5946
www.multiview.ca

multiVIEW Locate Sheet 6 of 9
OOC Ticket # 20181215262
Date 04/03/2018
Locator's Initials Y. ZERROOK
Type of Work: DRILLING
Address: 14245 HIGHWAY 50

On behalf of Enbridge Gas Distribution (Client)
If a buried plant is damaged during excavation, the excavator must cease further excavation and contact multiVIEW Locates Inc. at 1-800-363-3116
Customer: DS Consultants Ltd

☐ Emergency ☑ Standard
☐ Office
City: CALEDON

Marking Method: ☑ Paint ☑ Pin Flags ☐ Wood Stakes ☐ Marker/Crayon ☐ Chalk ☐ Other:

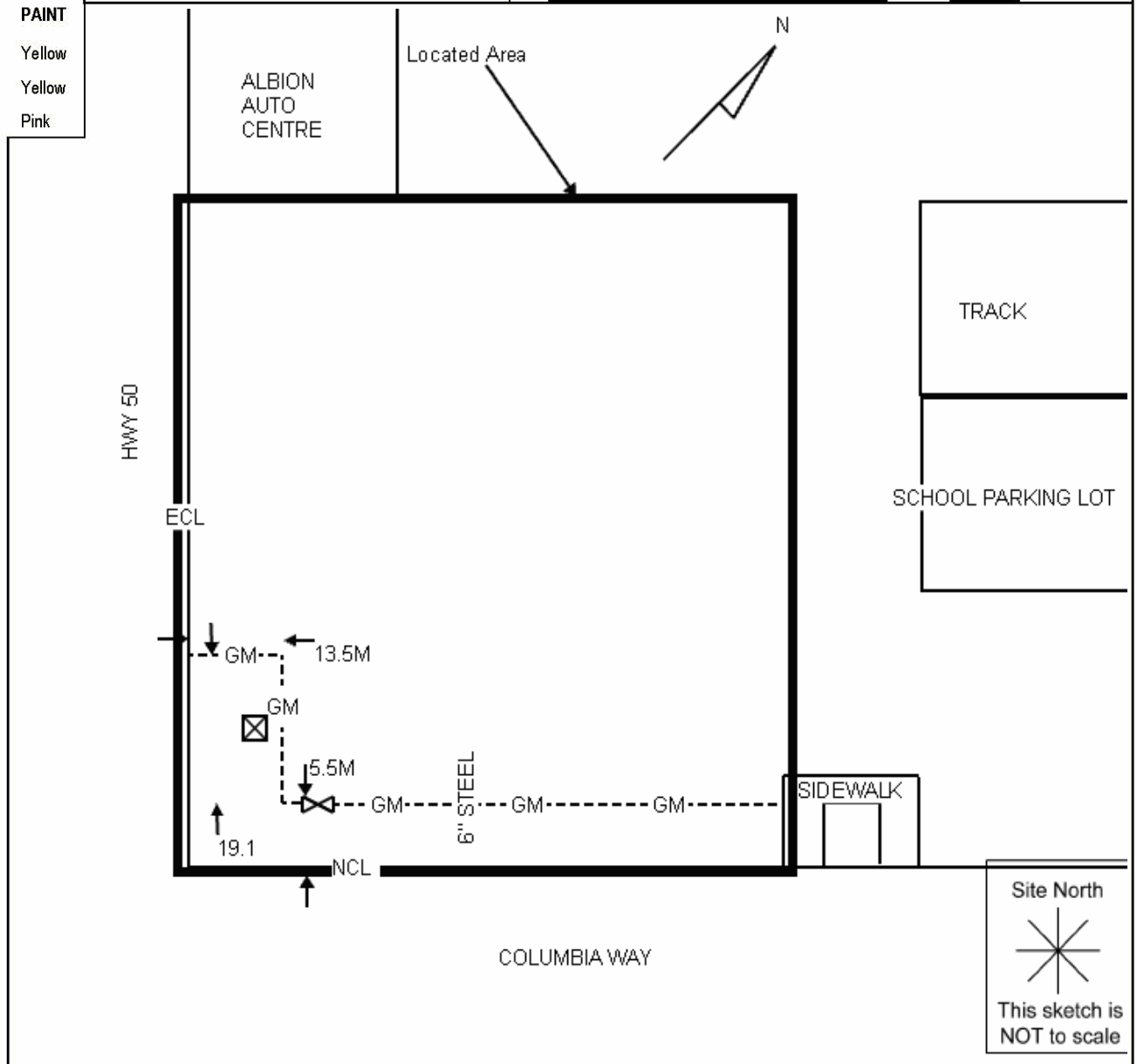
Number of Services marked (Specify building/house numbers):

From: ALBION AUTO CENTRE
To: NCL OF COLUMBIA WAY
From: ECL OF HWY 50
To: W OF SIDE WALK

HAND DIG WITHIN 1M AS MEASURED HORIZONTALLY FROM THE FIELD MARKINGS UNLESS OTHEWISE NOTED.
DEPTH TO BURIED PLANT VARIES AND MUST BE VERIFIED BY HAND DIGGING.
☐ Locate Area has been altered as per: _____ APPR. _____

Legend

FEATURE	SYMBOL	PAINT
Gas Main	---GM---	Yellow
Gas Service	--GS--	Yellow
Unknown	---?---	Pink
Transformer		
Street Light Pole		
Pole		
Pedestal		
Hydrant		
Valve		
Valve Chamber		
Manhole	MH	
Catch Basin	CB	
Curb Line	--CL--	
Building Line	--BL--	
Fence Line	--FL--	
Property Line	--PL--	
Sidewalk	--SW--	
Road Edge	--RE--	
Railway		
Driveway	--DW--	
Demarcation	DM	



Locate is VOID after 30 days

THIS FORM ONLY VALID WITH Primary Locate Form. This sketch is not to scale. Any privately owned services within the located area have not been marked – check with service/property owner.
A copy of this Auxiliary Locate Sheet(s) and the Primary Locate Sheet must be on site and in the hands of the machine operator during work operations. If sketch and markings do not coincide, the Excavator must obtain a new locate.

This form revised: January 2018

Auxiliary Locate Sheet

multiVIEW Locates Inc.
Phone: (905) 629-8959
Fax: 1-866-571-5946
www.multiview.ca

multiVIEW Locate Sheet 7 of 9
OOC Ticket # 20181215262
Date 04/03/2018
Locator's Initials Y. ZERROOK
Type of Work: DRILLING
Address: 14245 HIGHWAY 50

On behalf of Hydro One (Client)

If a buried plant is damaged during excavation, the excavator must cease further excavation and contact multiVIEW Locates Inc. at 1-800-363-3116

Customer: DS Consultants Ltd

☐ Emergency ☑ Standard
☐ Office
City: CALEDON

Marking Method: ☑ Paint ☑ Pin Flags ☐ Wood Stakes ☐ Marker/Crayon ☐ Chalk ☐ Other:

Number of Services marked (Specify building/house numbers):

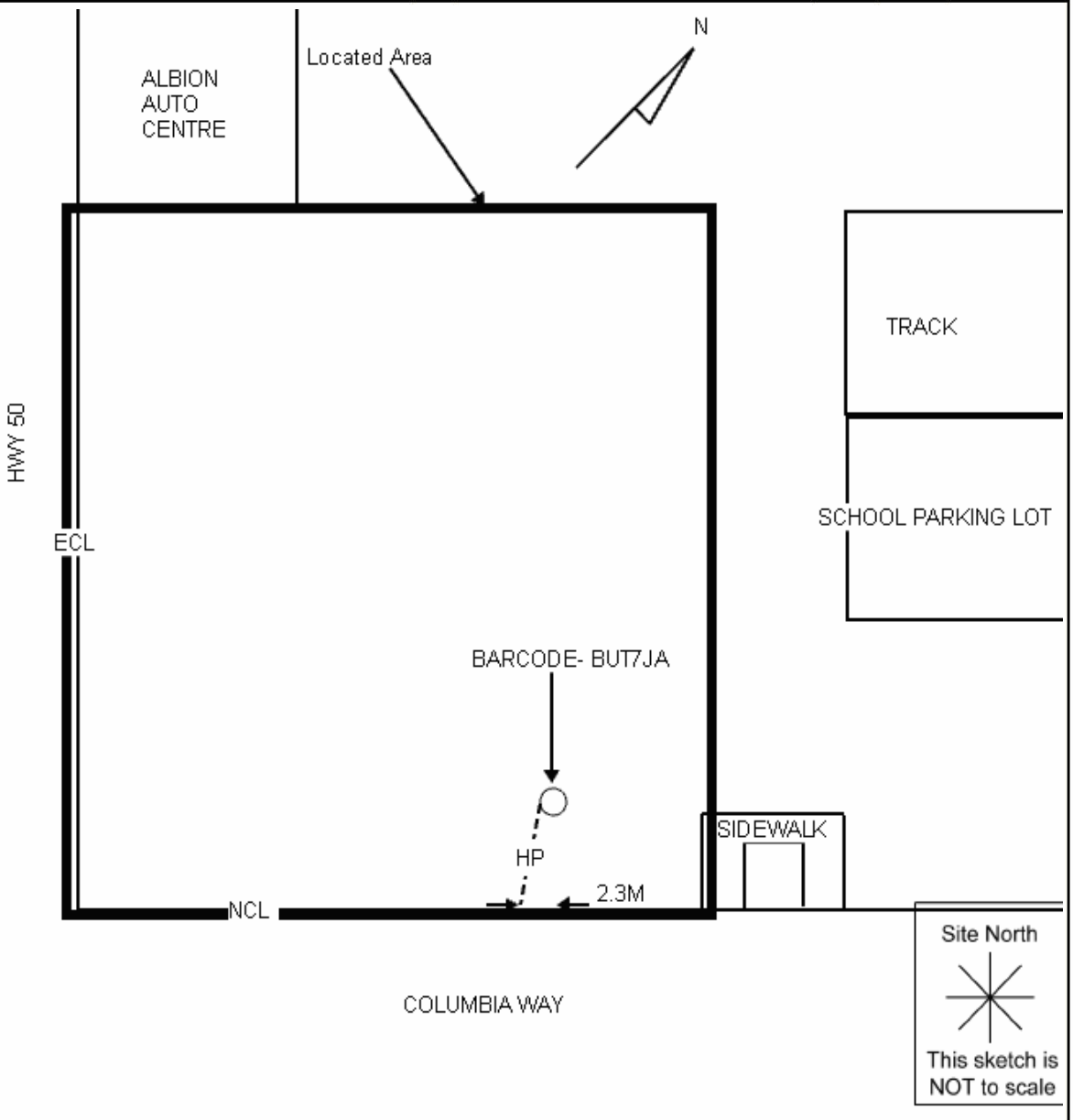
From: ALBION AUTO CENTRE
To: NCL OF COLUMBIA WAY
From: ECL OF HWY 50
To: W OF SIDEWALK

HAND DIG WITHIN 1M AS MEASURED HORIZONTALLY FROM THE FIELD MARKINGS UNLESS OTHEWISE NOTED.
DEPTH TO BURIED PLANT VARIES AND MUST BE VERIFIED BY HAND DIGGING.

☐ Locate Area has been altered as per: _____ APPR. _____

Legend

FEATURE	SYMBOL	PAINT
Hydro	---H---	Red
Street Light	--SL--	Red
Unknown	---?---	Pink
Transformer		
Street Light Pole		
Pole		
Pedestal		
Hydrant		
Valve		
Valve Chamber		
Manhole	MH	
Catch Basin	CB	
Curb Line	--CL--	
Building Line	--BL--	
Fence Line	--FL--	
Property Line	--PL--	
Sidewalk	--SW--	
Road Edge	--RE--	
Railway		
Driveway	--DW--	
Demarcation	DM	



Locate is VOID after 60 days

THIS FORM ONLY VALID WITH Primary Locate Form. This sketch is not to scale. Any privately owned services within the located area have not been marked – check with service/property owner.
A copy of this Auxiliary Locate Sheet(s) and the Primary Locate Sheet must be on site and in the hands of the machine operator during work operations. If sketch and markings do not coincide, the Excavator must obtain a new locate.

This form revised: January 2018

Auxiliary Locate Sheet

multiVIEW Locates Inc.
Phone: (905) 629-8959
Fax: 1-866-571-5946
www.multiview.ca

multiVIEW Locate Sheet 8 of 9
OOC Ticket # 20181215262
Date 04/03/2018
Locator's Initials Y. ZERROOK
Type of Work: DRILLING
Address: 14245 HIGHWAY 50

On behalf of Enbridge Gas Distribution (Client)
If a buried plant is damaged during excavation, the excavator must cease further excavation and contact multiVIEW Locates Inc. at 1-800-363-3116
Customer: DS Consultants Ltd

☐ Emergency ☑ Standard
☐ Office
City: CALEDON

Marking Method: ☑ Paint ☑ Pin Flags ☐ Wood Stakes ☐ Marker/Crayon ☐ Chalk ☐ Other:

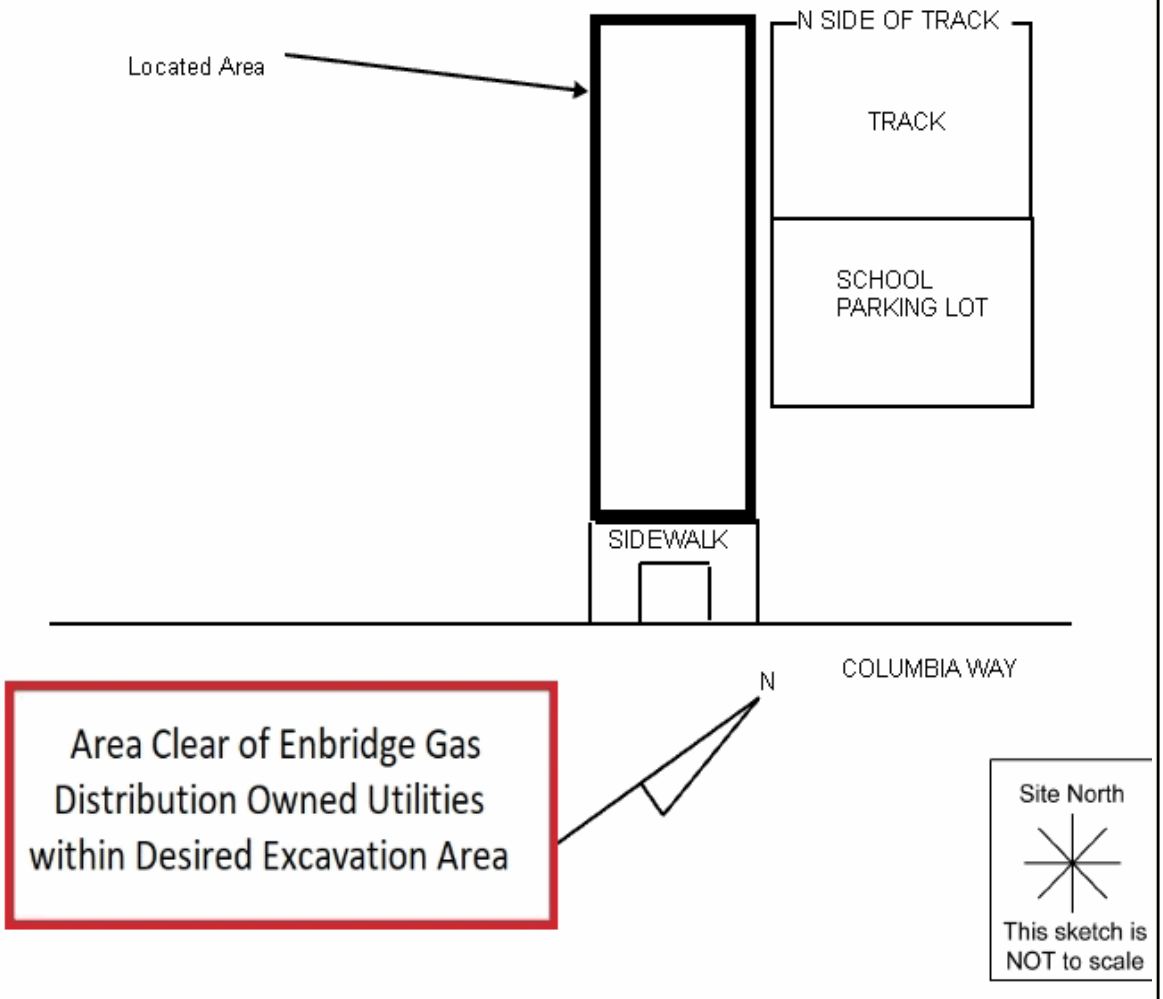
Number of Services marked (Specify building/house numbers):

From: 10.0M W OF TRACK To: 35.0M W OF TRACK
From: N SIDE OF TRACK To: N OF SIDEWALK

HAND DIG WITHIN 1M AS MEASURED HORIZONTALLY FROM THE FIELD MARKINGS UNLESS OTHEWISE NOTED.
DEPTH TO BURIED PLANT VARIES AND MUST BE VERIFIED BY HAND DIGGING.
☐ Locate Area has been altered as per: _____ APPR. _____

Legend

FEATURE	SYMBOL	PAINT
Gas Main	---GM---	Yellow
Gas Service	--GS--	Yellow
Unknown	---?---	Pink
Transformer		
Street Light Pole		
Pole		
Pedestal		
Hydrant		
Valve		
Valve Chamber		
Manhole	MH	
Catch Basin	CB	
Curb Line	--CL--	
Building Line	--BL--	
Fence Line	--FL--	
Property Line	--PL--	
Sidewalk	--SW--	
Road Edge	--RE--	
Railway		
Driveway	--DW--	
Demarcation	DM	



Locate is VOID after 30 days

THIS FORM ONLY VALID WITH Primary Locate Form. This sketch is not to scale. Any privately owned services within the located area have not been marked – check with service/property owner.
A copy of this Auxiliary Locate Sheet(s) and the Primary Locate Sheet must be on site and in the hands of the machine operator during work operations. If sketch and markings do not coincide, the Excavator must obtain a new locate.

This form revised: January 2018

multiVIEW Locates Inc.
Phone: (905) 629-8959
Fax: 1-866-571-5946
www.multiview.ca

Auxiliary Locate Sheet

multiVIEW Locate Sheet 9 of 9
OOC Ticket # 20181215262
Date 04/03/2018
Locator's Initials Y. ZERROOK
Type of Work: DRILLING
Address: 14245 HIGHWAY 50

On behalf of Hydro One (Client)
If a buried plant is damaged during excavation, the excavator must cease further excavation and contact multiVIEW Locates Inc. at 1-800-363-3116
Customer: DS Consultants Ltd

☐ Emergency ☑ Standard
☐ Office
City: CALEDON

Marking Method: ☑ Paint ☑ Pin Flags ☐ Wood Stakes ☐ Marker/Crayon ☐ Chalk ☐ Other:

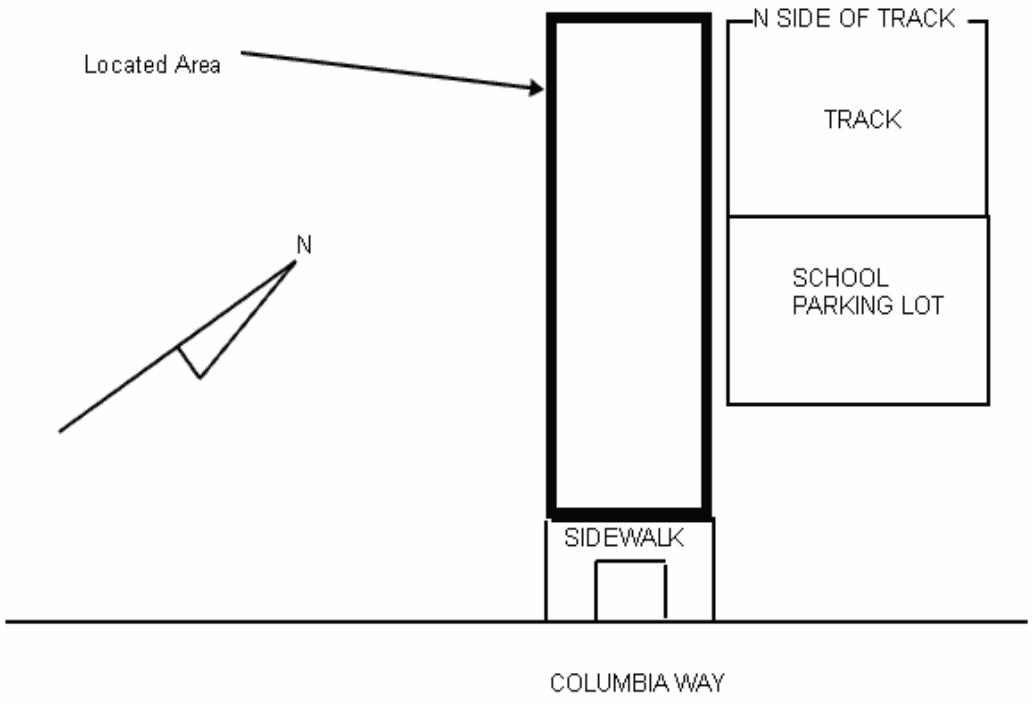
Number of Services marked (Specify building/house numbers):

From: 10.0M W OF TRACK
To: 35.0M W OF TRACK
From: N SIDE OF TRACK
To: N OF SIDEWALK

HAND DIG WITHIN 1M AS MEASURED HORIZONTALLY FROM THE FIELD MARKINGS UNLESS OTHEWISE NOTED.
DEPTH TO BURIED PLANT VARIES AND MUST BE VERIFIED BY HAND DIGGING.
☐ Locate Area has been altered as per: _____ APPR. _____

Legend

FEATURE	SYMBOL	PAINT
Hydro	---H---	Red
Street Light	--SL--	Red
Unknown	---?---	Pink
Transformer		
Street Light Pole		
Pole		
Pedestal		
Hydrant		
Valve		
Valve Chamber		
Manhole	MH	
Catch Basin	CB	
Curb Line	--CL--	
Building Line	--BL--	
Fence Line	--FL--	
Property Line	--PL--	
Sidewalk	--SW--	
Road Edge	--RE--	
Railway		
Driveway	--DW--	
Demarcation	DM	



hydro one

IMPORTANT NOTICE TO EXCAVATORS:

LOCATED AREA IS CLEAR OF BURIED HYDRO ONE DISTRIBUTION INFRASTRUCTURE

Feb 2018 - Rev.01

Site North

This sketch is NOT to scale

Locate is VOID after 60 days

THIS FORM ONLY VALID WITH Primary Locate Form. This sketch is not to scale. Any privately owned services within the located area have not been marked – check with service/property owner.
A copy of this Auxiliary Locate Sheet(s) and the Primary Locate Sheet must be on site and in the hands of the machine operator during work operations. If sketch and markings do not coincide, the Excavator must obtain a new locate.

This form revised: January 2018

Terms and Conditions for Field Services

A. Technical Limitations

A.1 The Customer acknowledges that the laws of fundamental physics apply and do not enable multiVIEW Locates Inc. (multiVIEW) locating equipment to detect all utilities, objects, features and structures or to provide all coordinates of the position thereof. Pipe, cable, conduit, utilities, objects, features or structures which are not detectable (i.e. not "Locatable") because of the laws of fundamental physics cannot be located by multiVIEW and are not the subject of the provision of the Service pursuant to this contract.

A.2 The "Service" to be provided pursuant to this contract is the location, laterally and longitudinally, of Locatable Utilities, objects, features or structures and the subsequent marking of the site according to standard subsurface utility locating industry practice. The depth and/or size of pipe, cable, conduits, utilities, objects, features and structures is Non-Locatable and is not part of the Service.

A.3 Locatable buried utilities are normally defined as:

(a) metallic pipes, cables and conduits which are capable of carrying an electrical current, are accessible for direct coupling or inductive coupling of an energizing current or naturally are actively carrying an identifiable electric current and such current is sufficiently large to be detectable by instruments according to the laws of fundamental physics;

(b) non-metallic pipes, cables and conduits which have continuous associated tracer wire capable of carrying an electric current, which is accessible for direct coupling of an energizing current or naturally are actively carrying an identifiable electric current and such current is sufficiently large to be detectable by instruments according to the laws of fundamental physics;

(c) As in A.3 (a) or (b) above, provided that the material either surrounding and/or enclosing and/or above the pipe, cable or conduit does not interfere with the energizing current and the operation of the locating instrument.

A.4 "Non-Locatable Utilities" are defined as all utilities which are not locatable. Examples of Non-Locatable Utilities include, but are not limited to, the following:

(a) pipes, cables and conduits whose depth of burial is too great and/or overlain by or in proximity to metallic material which results in signal distortion thus preventing physically measurable signals at the surface or where burial material interferes with current generation and signal emissions;

(b) normally locatable utilities as defined in section A.3 situated in, or emerging from, an area which is an Inaccessible Area (as defined in Section A.4 and A.10);

(c) normally locatable utilities as defined in section A.3 with a break or breaks to the electrical continuity of any metallic pipe, cable or tracer wire (i.e. segmented lengths, corroded connections, sections of plastic repair, etc.);

(d) non-metallic pipe, cable and conduits other than those described in Sections A.6, A.7 and A.8;

(e) individual pipes, cables and conduits in an area where there are Clustered Utilities (as defined in Section A.5).

A.5 Specific pipes, cables, conduits, utilities, objects, features and structures are Non-Locatable where numerous pipes, cables, conduits, utilities, objects, features and structures are clustered together either vertically and/or horizontally ("Clustered Utilities").

A.6 Non-metallic pipe and cable (i.e. fibre-optic systems, etc.) are Non-Locatable unless either an unbroken tracer wire or continuous metallic sheathing surrounding such buried plant is easily accessible from the surface.

A.7 Non-metallic pipe and conduits (i.e. plastic, concrete, asbestos, clay, etc.) under pressure (i.e. water, gas, forcemain systems, etc.) are Non-Locatable unless an unbroken tracer wire is attached to the pipe and this tracer wire is easily accessible from the surface.

A.8 Non-pressurized, non-metallic (i.e. plastic, concrete, asbestos, clay, etc.) conduits or pipe (i.e. sewers, drains, empty ducts, etc.) are Non-Locatable unless a transmitting sonde can be inserted throughout the full length of the pipe or conduit.

A.9 Areas considered to be inaccessible (an "Inaccessible Area") for the Service include, but are not limited to, the following: those of physically restricted access; those covered by a structure or object (i.e. building walls, vehicles, equipment, debris, stockpiles of material or snow, etc.); those covered by open water; those covered by woods or vegetation too thick to permit easy walking; those with surface terrain slopes steeper than 1:3; and, those where the safety of the operator is jeopardized (i.e. unstable footing, environmental hazards, uncontrolled roads, etc.). The judgment of the multiVIEW operator will prevail on accessibility decisions. Inaccessible Areas will be marked on the sketch map of the work area.

B. Limits on multiVIEW Liability

B.1 multiVIEW's marking of underground utilities is only for the convenience of the Customer, and this does not relieve the Customer, or any other person, or corporation, from liability for damages for personal injury including death, or for property damage or liability caused to or from any underground utility, within the area on the property where the underground utility and/or clearance was marked, or any other property, by reason of the Customer, its representatives, or any other person, or corporation having relied upon the surface marking or clearing provided by multiVIEW.

B.2 multiVIEW is not liable for damages resulting from physical exposure of any underground utilities by the Customer, its representatives, their sub-contractors or any other person or corporation.

B.3 multiVIEW accepts no responsibility and is not liable for damages suffered by any third party as a result of decisions or actions based on the performance of the Service or multiVIEW's failure to perform the Service.

B.4 multiVIEW accepts no responsibility and is not liable for conduit blockage, or restoration of the site to pre-survey conditions, as a result of survey practices needed to fulfill the objectives of the Service provided.

B.5 The Service completed by multiVIEW is based on information provided by the Customer at or prior to the earlier of the time when the Service is described in this contract or the performance of the Service. The Service provided by multiVIEW regarding the location of any underground utility, object or structure, is on a best effort and best practices basis. The sketch map provided by multiVIEW to the Customer at the time of the Service defines the extent of the area investigated.

B.6 The Customer agrees that excavation (defined as digging, drilling or disturbing the ground in any fashion) work required within a minimum of 1.0 metre (or greater if indicated by multiVIEW at the time of the Service) of the ground surface markings provided by multiVIEW will be completed by hand digging only. The Customer acknowledges the risk of damage to underground utilities and structures and the possibility of resultant injury to persons, damage to property and businesses if the Customer or its representatives or sub-contractors or any other person or corporation does not perform its covenant to excavate by hand digging only within a minimum of 1.0 metre (or greater if indicated by multiVIEW at the time of the Service) of the ground surface markings provided by multiVIEW.

B.7 A re-mark of surficial markings placed on the site by multiVIEW must be obtained prior to any excavation, if:

(a) markings become unclear, disappear, are disturbed or displaced;

(b) 60 days have elapsed since the Service was provided;

(c) the sketch and site markings do not coincide;

(d) the work location has changed;

(e) the nature of the work to be performed at the site has changed; or

(f) anything occurs which may indicate that a new or better or different locate service is needed.

B.8 If the Customer excavates outside the limit of the sketched map area or under any of the circumstances identified in Section B.9, multiVIEW accepts no responsibility.

B.9 Except as written in this contract, multiVIEW disclaims any and all promises, representations, warranties and covenants, express, implied, statutory or otherwise.

B.10 The Customer warrants that multiVIEW Locates Inc. will not be liable for any claims for damages to any underground plant where multiVIEW Locates Inc. was not notified of such damage within a reasonable time such that multiVIEW Locates Inc. can complete a damage investigation to physically view any such damaged underground plant whether or not any such damage may be attributed to errors or omissions committed by multiVIEW Locates Inc. in performing this work.

B.13 If a signature of an authorized representative of the Customer is not recorded on the reverse side of this form, multiVIEW Locates Inc.'s liability for the use of the information provided to the Customer is limited to a maximum of the amount of fees received for carrying out said work.