

Phase Two Environmental Site Assessment
Concession 1, Part Lot 8, North of Dundas Street
Oakville, Ontario

Prepared For:
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1. EXECUTIVE SUMMARY

DS Consultants Ltd. (DS) was retained by Argo (Joshua Creek) Limited to complete a Phase Two ESA of the Property located at the north of Dundas Street East, Oakville, Regional Municipality of Halton, Ontario (Phase Two Property or the Property). The Phase Two Property covers an area of approximately 38.48 hectares (95.1 acres). and is currently undeveloped.

DS understands that the Property will be developed by Argo (Joshua Creek) Limited and this Phase Two ESA was requested to facilitate development of the Property and for due diligence purposes. It is further understood that the site is intended to be developed for residential use. A Record of Site Condition (RSC) filing will not be required to support the development to a less sensitive land use, in accordance with Ontario Regulation (O. Reg.) 153/04.

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).

DS recently conducted a Phase One ESA for the Property (July 2018). Based on the presence of fill materials at the Property, the historical use of the Property for agricultural purposes, information available for the dumping of unknown materials on the Property and the historical agricultural use of properties located in the Study Area (operator of pesticides and storage of liquid industrial waste), 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.

The Phase Two ESA was conducted in conjunction with a geotechnical investigation and hydrogeological study.

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

- The Phase Two ESA consisted of drilling a total of thirteen (13) 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. Monitoring wells were installed in six (6) selected locations to cover the Property.
- The stratigraphy beneath the investigated areas of the Property generally consisted of a maximum of 460 mm of topsoil followed by native glacial till (primarily clayey silt to silty clay). All boreholes terminated at shale bedrock with the exception of borehole AR-13 located to the northwest of the Property. Silty sand layer was observed from 4.3 m to 7.9 m above a layer of sand and gravel at this location. Depth of shale bedrock encountered at borehole locations varied between 1.5 to 9 m.

- The Property is located within 30 m of a water body. The results of the samples submitted for chemical analysis were compared to the full depth generic site condition standards in a potable ground water condition for coarse textured soil as contained in Table 8 of the Ministry of Environment, Conservation and Parks (MECP) publication "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" for non-potable groundwater condition for all Property Use (industrial/commercial/community and residential/parkland/institutional), April 15, 2011. The Property includes a natural heritage system and wetlands. The chemical analysis results were also compared to the MECP Table 1, background standards.
- A total of eighteen (18) soil samples from the selected 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, metals and inorganic parameters and pH.
- No exceedances of the applicable Standards (Table 1 or Table 8) for parameters analyzed in fine/medium or coarse textured soil were found in any of the soil samples analyzed with the exception of electrical conductivity (EC). Exceedance of EC from the site condition standards (Table 1 or Table 8) was observed at the location of borehole AR7 within 3 m.
- A total of nine (9) ground water samples, including one QC and field and trip blanks samples from a total of six monitoring wells were analysed for metal and inorganics, PHCs, OC pesticides, polychlorinated biphenyls (PCBs) and VOCs.
- No exceedances of the applicable standards for the parameters analyzed were found in any of the ground water samples analyzed. All ground water samples met the MECP Table 1 and 8 site condition standards.
- The measured pH values of soil and ground water samples were within the MECP guideline.

Based on the findings of Phase Two ESA, DS recommends removal of EC-impacted soil during the property development. The extent of EC-impacted soil is recommended to be determined horizontally and vertically prior to offsite disposal. No other 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. (DS) was retained by Argo (Joshua Creek) Limited to complete a Phase Two ESA of the Property located at Dundas Street East with the legal Description of “Part Lot 8, Concession 1, north of Dundas Street, Geographic Township of Trafalgar, now in The Town of Oakville, Regional Municipality of Halton, Ontario” (Phase Two Property or the Property).

DS understands that the Property will be developed for residential purposes by Argo (Joshua Creek) Limited and 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).

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 Phase Two Property is an approximately L shaped parcel of land located on the north side of Dundas Street East, in a mixed agricultural, residential, and commercial area of the Town of Oakville. The Glen Oak Cemetery and Fern School are located further northeast of the Property.

According to the Preliminary Development Concept dated July 19, 2018, prepared by Gerrard Design Associates, the Property covers an area of 38.48 ha. 7.55 ha of land has been marked as a Natural Heritage System (NHS) and 0.3 ha will be used for road widening. The developable area is estimated to be 30.95 ha (76.5 acres). A wooded area is located to the northeast of the Property. The woodlot was excluded from soil and ground water investigation (Phase Two ESA).

The Property is located approximately 0.8 km to the west of Ninth Line. The location of the Property is shown in Figure 1. The Phase Two Property is currently undeveloped.

The information for the Phase Two Property is provided in the following Table.

Phase One Property	Information	Source
Legal Description	Part Lot 8, Concession 1, Parts 4, 5, 6 and 7, HR-892160, Township of Trafalgar, NDS, Now in Town of Oakville, Regional Municipality of Halton	Land Registry Office
Property Identification Number (PIN)	24930-0169 (LT)	Land Registry Office
Legal Description	Part Lot 8, Concession 1, Part 1 20R61, S&E Parts 1, 2, 4, 5, 6 & 7, Township of Trafalgar, NDS, Now in Town of Oakville, Regional	Land Registry Office

Phase One Property	Information	Source
	Municipality of Halton	
Property Identification Numbers (PINs)	24930-0170 (LT) & 24930-0171 (LT)	Land Registry Office
Municipal Address	None	Town of Oakville, online-information
Zoning	Existing Development (ED)	Town of Oakville, online-information

2.2 Property Ownership

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

Property Owner	Address	Contact Name	Source
Diam Contractors Limited	Oakville	Diana Ditomaso (ditomaso@rogers.com) 1-954-925-1753	Land Registry Office

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 residential development is proposed for the Property. This proposed property use does not represent a change to a more sensitive property use, 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 MECP "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" full depth generic site condition standards. The selection of the Table 8 Standards is based on the following rationale:

a) Location:

The Property is located in Town of Oakville. The property uses in the area surrounding the Property is predominantly agricultural, residential, and commercial. The properties located in the Study Area included water wells listed in the MECP's Water Well Information System (WWIS).

b) Residential Property Use:

The proposed use of the Phase Two Property is for a residential development.

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. During the site visit a creek was observed within the Property.

e) *Bedrock:*

Bedrock across the Property is located at a depth of greater than 2 m.

f) *Environmentally Sensitive:*

Based on these considerations, the MECP Standards for 30 m within a water body for residential/parkland/institutional (RPI) property use in a potable ground water condition for coarse textured soils contained in Table 8 of the Soil, Ground Water and Sediment Standards is used to evaluate the environmental quality of the soil encountered at the Property.

Since the Property includes a natural heritage system (NHS), the results were also compared to Table 1, Full Depth Background Site Condition Standards.

3. BACKGROUND INFORMATION

3.1 Physical Setting

3.1.1 Water Bodies and Areas of Natural Significance

The Property is located within 30 m of a water body. Unnamed water bodies were identified on the Property. Unnamed tributaries of Joshua's Creek (seasonal and permanent) are located within the Property. The location of creeks is shown on the topographic survey prepared by Rady-Pentex & Edward Surveying Ltd., Ontario Land Surveyor, dated April 5, 2018. A permanent creek is located within the south portion of the Property.

The Property and Study Area includes no Provincially Significant Life Science or Provincially Significant Earth Science Areas. The Property includes area that will remain as a Natural Heritage System.

3.1.2 Topography and Geology

According to Toporama, an online topographic map provided by Natural Resources Canada, which covers the subject Property, the ground surface at the Property is relatively flat and slopes in a southeasterly direction towards Joshua's Creek, located approximately 0.1 to 0.3 km from the Property. Unnamed tributaries of the creek are located within the property. A permanent creek is located within the south portion of the Phase One Property. Surficial water is anticipated to be directed towards the creeks observed at the Property.

According to the topographic map, April 5, 2018, the Property is located at an elevation of approximately 174 m to the northwest which decreased to 170 m to the northeast and to 163 m to the

southeast (Appendix A). The shallow ground water flow on the Property is expected to be towards the creek present on the Property and southeast towards Joshua's Creek. According to the survey plan wetland areas are located to the north portion of the property, in the vicinity of a woodlot.

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 subject Property consists of glaciolacustrine deposits. This material is generally characterized as a silt and clay with minor sand.

The surficial geology maps available on the Ontario Geological Survey (OGS) Earth website, published by the Ontario Ministry of Northern Development, Mines and Forestry, show the surficial soils in the area of the Phase Two Property to be clay to silt textured till, derived from glaciolacustrine deposits or shale (i.e., medium to fine textured soils are anticipated).

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 of the area consists of Upper Ordovician, Queenston Formation. The Queenston Formation consists of shale with limestone, dolostone, and dolomite. According to Ontario MECP Well Records, the depth to bedrock within the Phase Two Study Area ranges from 3 to 10 mbgs.

Based on the physiography maps available on the OGS Earth website, published by the Ontario Ministry of Northern Development, Mines and Forestry, the Phase Two Property is situated within a drumlinized till plain.

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.

DS concurrently with this Phase Two ESA has prepared reports regarding a geotechnical investigation and hydrogeological study of the Property (April 2018). Details for soil stratigraphy and site hydrogeology are provided in our geotechnical and hydrogeological reports under separate covers.

3.2 Past Investigations

3.2.1 Relevant Past Investigations

According to the owner of the Property, no environmental reports were available for the Property.

DS recently prepared the following Phase One ESA for the Property.

Report Title	Phase One Environmental Site Assessment, Concession 1, Part Lot 8, Oakville
Report Date	July 20, 2018
Prepared By	DS Consultants Ltd.
Prepared For	Argo (Joshua Creek) Limited

According to the report, the following was identified as Potentially Contaminating Activities (PCAs) causing Areas of Potential Environmental Concern (APECs) at the Property and Study Area.

Within Phase One Property

- 1. PCA# 30. Importation of Fill Material of Unknown Quality.** The records review of the Property revealed that the Property has been used for agricultural purposes and includes an uneven surface. Fill materials of unknown quality might have been used at the Property.
- 2. PCA# 40. Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications.** The records review of the Property revealed that the majority of the Property has been used for agricultural purposes. OC pesticides might have been used on the Property for farming purposes.
- 3. Other (Ontario Spill- Unknown Quality Materials Dumped).** According to the Ecolog ERIS report, one record was available for the Property in Ontario Spill data list, dated 1997. The information was regarding 26 barrels of unknown material dumped at the side of the road. According to the report, soil contamination was possible at the Property.

Within Study Area

- 4. PCA# 40. Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications.** According to the Ecolog ERIS report, the adjoining southern property occupied by Arthex Landscape Contractors was listed with the MECP as an operator and storage of pesticides in 2002.
- 5. Other (storage and handling liquid waste).** According to the Ecolog ERIS report, the adjoining southern property (1279 Dundas Street East) occupied by Arthex Landscape Contractors with waste register number ON2958174 was listed for storage of waste oils & lubricants during 2006-2009. The property was also registered with waste register number ON9940070 for the same liquid industrial waste and oily skimmings and sludges and by LMS Group Ltd. From 2012 to 2017. This property is owned by Halton Region.

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 fourteen (14) boreholes and the installation of six (6) monitoring wells in selected boreholes.

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

- Requests to the various utility providers through the Ontario One Call network
- Preparing personnel and equipment to complete the work
- Private utility locating was carried out prior to the subsurface investigation at the location of the investigation
- Review of available previous investigations of the subject Property
- 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
- Measure the ground water levels in all wells present at the Property for identification of the ground water flow direction
- Develop installed monitoring wells
- 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)
 - PCBs
 - OC Pesticides
- Review the analytical results and compare with the current applicable MECP Table 8 and compare to the Table 1 SCS 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 use of fill and pesticides at the Property. Therefore, soil was included for sampling and analysis.
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 on a southern property located within the Study Area. Therefore, ground water was included for sampling and analysis.
Sediment	Excluded	Sediment is not present at the Phase Two property and therefore was not included for sampling and analysis.
Surface Water	Excluded	Surface water bodies were not included for sampling and analysis.

4.2.2 Overview of Field Investigation of Media

During the soil sampling, a split spoon sampling device was used, and ground water was collected from all monitoring wells recently installed within the selected boreholes by DS.

4.3 Phase One Conceptual Site Model

According to the Phase One ESA, the identified environmental concerns included use of the Property for agricultural purposes with fill materials.

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

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
APEC-1	Southwest and southeast of the Property	PCA#30-Importation of Fill Material of Unknown Quality	On Site	Metals, As, Sb, Se, B-HWS, CN Electrical Conductivity CR (VI) Hg SAR	Soil
APEC-2	Open Filed	PCA#40. Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	On Site	OCs	Soil and ground water
APEC-3	South of the Property	Other Dumping unknown materials at the Property	On Site	PHCs VOCs Metals, As, Sb, Se, B-HWS, CN Electrical Conductivity CR (VI) Hg SAR	Soil and ground water
APEC-4	Southern portion of the Property	PCA#40. Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	Off Site	OCs	Soil
APEC - 5	Southern Portion of the Property	Other Storage and handling of Liquid hydrocarbon related Waste	Off Site	PHCs Metals, As, Sb, Se, B-HWS, CN Electrical Conductivity CR (VI) Hg SAR	Soil

The Phase Two ESA was conducted concurrently with geotechnical investigations. The rationale 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)
BH-AR1	At the southwest portion of the Property to assess potential impacts to the Property resulting from historical activity of the Property and the adjoining southern property (1279 Dundas Street East).	OC Pesticides
BH-AR2	At the southwest portion of the Property to assess potential impacts to the Property resulting from historical activity of the Property and the adjoining southern property. To determine the ground water flow direction. This well was used for ground water quality confirmation.	Soil: OC Pesticides Ground Water: Metals and Inorganics, PHC (F1-F4), VOCs
BH-AR3	At the southwest portion of the Property to assess potential impacts to the Property resulting from historical activity of the Property and the adjoining southern property.	Soil: PHCs (F1-F4)
BH-AR4	At the southwest portion of the Property to assess potential impacts to the Property resulting from historical activity of the Property and the adjoining southern property.	Soil: M & I
BH-AR5	At the southeast portion of the Property to assess potential impacts to the Property resulting from historical activity of the Property and the adjoining southern and eastern properties.	Soil : (F1-F4), VOCs
BH-AR6	At the southern portion of the Property to assess potential impacts to the Property resulting from historical activity of the Property. To determine the ground water flow direction. This well was used for ground water quality confirmation.	Soil: OC Pesticides, M & I Ground Water: Metals and Inorganics, PHC (F1-F4), VOCs
BH-AR7	At the southeast portion of the Property boundary to assess potential impacts to the Property resulting from historical activity of the Property and the adjoining southern and eastern properties.	Soil : M & I
BH-AR8	At the mid-south of the Property to assess potential impacts to the Property resulting from historical activity of the Property.	Soil: OC Pesticides
BH-AR9	At the northwest of the south portion of the Property to assess potential impacts to the Property resulting from historical activity of the Property. To determine the ground water flow direction. This well was used for ground water quality confirmation.	Soil: PHCs (F1-F4), M & I Ground Water: Metals and Inorganics, PHC (F1-F4), VOCs
BH-AR10	At the northeast of the south portion of Property to assess potential impacts to the Property resulting from historical activity of the Property. To determine the ground water flow direction. This well was used for ground water quality confirmation.	Soil: VOCs Ground Water: PCBs, OC pesticides

Sample ID	Location	Parameter Analysed (O.Reg. 153/04 as amended)
BH-AR11	At the mid west Property boundary to assess potential impacts to the Property resulting from historical activity of the Property and adjoining eastern property. To determine the ground water flow direction. This well was used for ground water quality confirmation.	Soil: VOCs Ground Water: Metals and Inorganics, OC pesticides
BH-AR12	At the north east property boundary to assess potential impacts to the Property resulting from historical activity of the Property. To determine the ground water flow direction. This well was used for ground water quality confirmation.	Soil: OC pesticides Ground Water: Metals and Inorganics, OC pesticides
BH-AR13	At the northwest portion of the Property to assess potential impacts to the Property resulting from historical activity of the Property. To determine the ground water flow direction. This well was used for ground water quality confirmation.	Soil: M & I Ground Water: Metals and Inorganics, PHC (F1-F4), VOCs

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.

All methods used to complete this Phase Two ESA were in general accordance with O. Reg 153/04 as amended, DS standard operating procedures and generally accepted industry practices. The Phase Two 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. No conflicts between the proposed borehole locations and underground utilities were encountered.

5.2 Drilling and Excavation

The subsurface soil and ground water investigation in conjunction with the geotechnical and hydrogeological investigation included advancing fourteen (14) boreholes during January and February 2018. Drilling dates are provided in logs presented in Appendix B.

Boreholes were advanced to depths ranging from 4.6 m to 9.2 m bgs to confirm soil and ground water conditions at the Property. The location of boreholes is shown in the Borehole Location Plan, Figure 2.

Monitoring wells were installed in six (6) selected boreholes. The wells were denoted as “AR-MW6, AR-MW9 to AR-MW11”. A nested well was installed at the location of borehole AR-12 (shallow to a maximum depth of 4.6 m bgs and deep to a maximum depth of 9.2m bgs). The drilling information by DS is provided in the following Table.

Date of Drilling	January - February 2018
Name of Contractor	Terra Firma Environmental Services Ltd. (Terra Firma), Toronto, Ontario
Equipment Used	CME55T 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.

Measurements 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, AGAT Laboratories (AGAT) of Mississauga, Ontario. The samples were transported/submitted to AGAT 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 MECP'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 the 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 select samples for petroleum hydrocarbon and volatile organic compounds laboratory analysis. The headspace reading is provided in the borehole logs, Appendix B.

5.5 Groundwater: Monitoring Well Installation

Monitoring wells were installed in six (6) selected boreholes by Terra Firma under the supervision of a DS 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 AR-2 was tagged (Well Tag no. A233601) by Terra Firma of Toronto, and well records were completed and filed with the Ontario Ministry of the Environment by the drillers. The details of the individual monitoring wells (well depths, screen lengths and elevations) are shown on the borehole logs in Appendix B.

5.6 Groundwater: Field Measurement of Water Quality Parameters

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

5.7 Groundwater: 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 March 21, 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 AGAT Laboratories of Mississauga, Ontario. AGAT 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 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 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 DS. On completion of daily field activities, the samples were returned to DS office and stored in a refrigerator pending selection of samples for analytical testing. DS transferred custody of the samples that had been selected for analysis to AGAT 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, trip blanks and spiked trip blanks 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 were 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 overlying shale bedrock. 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. Detailed information for site stratigraphy is provided in DS's geotechnical report (April 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 460 mm.

Fill

Disturbed soil/earth fill was observed beneath topsoil in the borehole locations.

Native Soil

Underlying the surficial materials, all boreholes encountered native undisturbed firm to hard, very dense fine-grained clayey silt to silty clay till, to a maximum depth of 8.2 mbgs. Silty sand was observed at the location of borehole AR-13 from 4.9 m to 7.9 m. Sand and gravel was observed beneath silty sand that extended to 8.2 m, the maximum depth of the borehole.

Bedrock

Highly weathered shale bedrock was encountered in all boreholes 1.5 m to 9 m bgs with the exception of AR-13 located to the northwest of the Property that terminated within layers of silty sand, sand and gravel at a depth of 8.2 m bgs.

6.2 Groundwater: Elevations and Flow Direction

6.2.1 Rationale for Monitoring Well Locations and Screen Intervals

The location of monitoring wells installed by DS were chosen to provide full site coverage. The monitoring wells were screened 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 Groundwater Elevation

Water levels were measured on February 13 and March 22, 2018. The local groundwater flow is generally in a southeasterly direction toward Joshua's Creek located to the southeast of the Property.

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)		Well Depth	Water Elevation (mbgs)
				1 st Reading Feb 13, 2018	2 nd Reading March 21, 2018		
AR-MW2	164.5	6.2 m	Jan. 30, 2018	2.6	2.6	6.17 m	158.3
AR-MW6	165	5.2 m	Jan. 31, 2018	1	0.83	4.7 m	160.3
AR-MW9	169	4.9 m	Feb. 01, 2018	1.9	1.5	4.8 1m	164.2
AR-MW10	165.5	6.2 m	Feb. 01, 2018	1.4	0.9	6.2 m	159.3
AR-MW11	167.5	6.4 m	Feb. 01, 2018	0.4	0.1	6.05 m	161.44
AR-MW12	170	9.2 m	Jan. 31, 2018	na	8.5	9.09 m	160.9
AR-MW12A	170	4.6 m	Jan. 31, 2018	na	4.1	4.51 m	165.5
Note: <ul style="list-style-type: none"> • Ground water depth is meter below ground surface (mbgs) • The ground surface elevations and elevations of water were obtained from 2018 survey 							

Ground water elevations in the monitoring wells were 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 depending on seasonal weather conditions.

6.3 Groundwater: 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 2 months 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 (less than 2 months 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 (clayey silt) 10^{-8} m/s to 10^{-9} m/s

Bedrock (Queenston Formation) 10^{-7} m/s to 10^{-8} m/s

6.4 Fine Medium Soil Texture

The native soil deposits encountered at the Property were identified to generally consist of clayey silt to silty clay till overlying shale bedrock. Based on visual assessment of soil texture, the assessor determined that at least one-third of the site soil by volume is comprised of clayey silt to silty clay (i.e. fine textured).

Grain size analysis were conducted on two silty clay till samples (BH-AR1/SS2 and BH-AR14/SS2) and one sample of silty sand layer (BH-AR13/SS6). The results are presented in Appendix C, with the following fractions:

(BH-AR1/SS2 and BH-AR14/SS2)

- Clay: 25 to 32%
- Silt: 62 to 72%
- Sand: 3 to 5%
- Gravel: 0 to 1%

(BH-AR13/SS6)

- Clay: 6%
- Silt: 19%
- Sand: 73%
- Gravel: 2%

Section 42(2) of O.Reg. 153/04 defines soil texture as follows:

- “coarse textured soil” means soil that contains more than 50 per cent by mass of particles that are 75 micrometres or larger in mean diameter; and,
- “medium and fine textured soil” means soil that contains 50 per cent or more by mass of particles that are smaller than 75 micrometres in mean diameter.

For the determination of applicable soil standards, the Property was classified as coarse textured, as per O. Reg. 153/04 as amended (Appendix C).

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 MECP.

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 14 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 - 3 and are discussed below. Copies of the laboratory certificates of analyses are provided in Appendix D.

Based on the scope of work and field screening DS submitted 20 soil samples including duplicate samples for quality control (QC) from 13 borehole locations for chemical analyses of PHCs (F1-F4), VOCs, OC pesticides and metal and inorganics to AGAT Laboratories.

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)
AR-1-SS-2	0.8-1.4 m	OC Pesticides
AR-2-SS-3	1.5-2.1 m	OC Pesticides
AR-3-SS-7	6.1-6.7 m	PHCs
AR-4-SS-1	0-0.6 m	M & I
AR-5-SS-2	0.8-1.4 m	PHCs
AR-6-SS-1	0-0.6 m	OC Pesticides
AR-6-SS-2	0.8-1.4 m	M & I
AR-7-SS-2	0.8-1.4 m	M & I
AR-8-SS-3	1.5-2.1 m	OC Pesticides

Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)
AR-9-SS-2	0.8-1.4 m	PHCs
AR-9-SS-1	0-0.6 m	M & I
AR-10-SS-2	0.8-1.4 m	VOC
AR-11-SS-7	6.1-6.7 m	VOC
AR-12-SS-2	0.8-1.4 m	OC Pesticides
AR-13-SS-3	1.5-2.1 m	M & I
DUP-1	(duplicate of AR-5 - SS-2) 0.8-1.4 m	PHCs
DUP -2	(duplicate of AR-4 - SS-1) 0-0.6 m	M & I
DUP-3	(duplicate of AR-12-SS-2) 0.8-1.4 m	OC Pesticides
Note: M & I Metals and Inorganics EC Electrical Conductivity OC Pesticides Organochlorine Pesticieds PHCs Petroleum Hydrocarbons VOCs Volatile Organic Compounds M & I Metals and Inorganics		

6.6.2 Analytical Test Results

Metals and Inorganics in Soil

All of the soil samples submitted for analysis of metals and inorganic parameters were reported to have no exceedances of the applicable MECP Table 1 Full Depth, Background Site Condition Standards for all Property Use with the exception of samples collected from the location of AR7 that exceeded Electrical Conductivity (EC). In addition, EC and Sodium Adsorption Ratio (SAR) were detected in all sampled locations.

The exceedance of EC from the MECP Table 1 Full Depth, Background Site Condition Standards or the MECP Table 8 within 30 m of water body in a potable ground water condition was observed at the location of Borehole AR7 within 0.8 to 1.4 m. Trace Sodium Adsorption Ratio observed at the sample locations, however, met the site condition standards. The summary of exceedance of EC and trace of SAR are presented in the following Table.

Sample Description (depth)	Unit	T1 (T8)		AR-4-SS- 1 (0-0.6 m)	AR-6-SS- 2 0.8-1.4 m	AR-9-SS- 1 (0-0.6 m)	AR-13- SS-3 (1.5-2.1 m)	AR-7-SS- 2 0.8-1.4 m	Dup-2 AR-4-SS- 1 0-0.6 m
Date Sampled				01/30/1 8	01/31/1 8	01/31/1 8	02/01/1 8	01/31/1 8	01/30/1 8
Parameter		G / S	RDL	9051255	9051262	9051268	9051289	9051299	9051302

Sample Description (depth)	Unit	T1 (T8)		AR-4-SS-1 (0-0.6 m)	AR-6-SS-2 0.8-1.4 m	AR-9-SS-1 (0-0.6 m)	AR-13-SS-3 (1.5-2.1 m)	AR-7-SS-2 0.8-1.4 m	Dup-2 AR-4-SS-1 0-0.6 m
EC	mS/cm	0.57 (07)	0.005	0.115	0.125	0.183	0.357	0.805	0.129
SAR	NA	2.4 (5)	NA	0.162	2.13	0.858	0.214	2.09	0.151
Notes: Bold and highlighted = exceeds MECP Table 1 and Table 8 Standards for all property use. T1.= MECP Table 1 Full Depth Background Standards (T8) = MECP Table 8 within 30 m of Water Body									

Complete laboratory results are provided in Appendix D.

Petroleum Hydrocarbons (PHCs) in Soil

None of the soil samples submitted for analysis of PHC parameters were reported to have exceedances of the applicable MECP Table 1 or Table 8 Site Condition Standards.

Volatile Organic Compounds (VOCs) in Soil

None of the soil samples submitted for analysis of VOC parameters including; benzene, toluene, ethylbenzene, xylene (BTEX), were reported to have exceedances of the applicable MECP Table 1 or Table 8 site condition standards.

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 MECP T Table 1 or Table 8 site condition standards.

The laboratory Certificates of Analysis are provided in Appendix D.

Soil pH

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

CaCl2 Extraction	AR-4-SS-1	AR-6-SS-2	AR-9-SS-1	AR-7-SS-2	Dup-2 AR-4-SS-1	AR-13-SS-3
pH Unit N/A	01/30/18	01/31/18	01/31/18	01/31/18	01/30/18	02/01/2018
0 to 9 for surface soil (depth less than 1.5 m)	0-0.6 m	0.8-1.4 m	0-0.6 m	0.8-1.4 m	0-0.6 m	1.5-2.1 m
5.0 to 11 for sub-surface soil (depth more than 1.5 m)	Soil	Soil	Soil	Soil	Soil	Soil
	7.81	7.98	7.88	8.00	7.81	7.87

Based on the above noted Table, the pH for the surface soil is within 7.81 to 8 and for subsurface soil was 7.87 at the Property and does not exceed the MECP applicable Standard. Complete laboratory results are provided in Appendix D.

6.6.3 Contaminants of Concern

On the basis of the analytical testing, with the exception of EC, 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 nine (9) ground water samples, including one QC and field and trip blanks samples from a total of six installed monitoring wells by DS on the Property, were analysed for metal and inorganics, petroleum hydrocarbons (PHCs), OC pesticides, PCBs and volatile organic compounds (VOCs) as shown on the following Table.

Sample ID	Parameter Analysed
AR-MW2	Metals and Inorganics, PHC (F1-F4), VOCs
AR-MW6	Metals and Inorganics, PHC (F1-F4), VOCs
AR-MW9	Metals and Inorganics, PHC (F1-F4), VOCs
AR-MW10	PCBs, OC pesticides
AR-MW11	Metals and Inorganics, OC pesticides
AR-MW12	Metals and Inorganics, OC pesticides
QC-1 (AR-MW6) (Dup)	Metals and Inorganics, PHC (F1-F4), VOCs
Field Blank	VOCs
Trip Blank	VOCs

The laboratory Certificates of Analysis are provided in Appendix D.

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 4 - 8 and are discussed below. Copies of the laboratory certificates of analyses are provided in Appendix D.

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 1 and 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 1 and Table 8).

Metals and Inorganics in Ground Water

No exceedances of the MECP Table 1 Site Condition Standards (SCS) for ground water were observed for the parameters analysed for metals and inorganics. All samples met the MECP Table 1 or 8 SCS.

Polychlorinated Biphenyl 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 1 and Table 8).

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 1 and Table 8).

According to the Certificate of Analysis, the pH of the ground water samples were within the acceptable values of the MECP Standards of 5 to 9 (7.93-8.15).

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 groundwater 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.

In addition to field duplicates, laboratory-prepared trip blanks and spiked trip blanks were provided for group water.

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 AGAT 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 AGAT 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 D 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 4 – Soil Characterization
 - Identifies soil results pass or fail the MECP SCS
- Figure 5 – Ground water Characterization
 - Identifies Ground water results pass or fail the MECP 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 was observed within 1.8 to 9 m. The depth to the shallow water table is within 0.1 m to 4.1 m bgs at the Property (within wells at depth maximum 6.4 m). Ground water in the deep well (9.2 m depth) was at 8 m bgs.

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 D, all analytical sample results met the MECP Table 1 Full Depth, Background Standards, all property use and within 30 m of a water body (Table 8) in a potable ground water condition for the soil and ground water samples analyzed at the Property with the exception of Electrical Conductivity that exceeded the MECP Table 1 and Table 8 SCS at the location of borehole AR-7.

6.10.2 Physical Setting of the Phase Two Property

Stratigraphy

The detailed stratigraphy at the Phase Two Property is presented in 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.

Below the native soil, all boreholes terminated in highly weathered bedrock shale.

Ground water

Two aquifers were identified in this investigation. Ground water levels were measured on February and March 2018 and found to range between 0.1 mbgs and 4.1 mbgs. Based on the ground water levels observed during this investigation and topography of the area, the direction of shallow ground water flow is expected to be towards creeks on the Property.

Bedrock

Shale bedrock was observed beneath 1.5 m to 9 m.

Depth to Ground Water Table

Based on the short-term ground water level monitoring the shallow ground water table is located at a depth of approximately 0.1 to 4.1 m below ground surface.

Imported Fill

The site investigation identified no imported fill materials at the location of boreholes. Disturbed soil was observed at the borehole locations to a maximum depth of 0.9 m consists of clayey silt, trace to some sand, with trace organic matters.

Proposed Buildings

The proposed use of the Property is to be residential use (Residential Subdivision).

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 1 Standards as presented in the MECP document "Soil, Ground Water and Sediments Standards for Use Under Part XV.1 of the Environmental Protection Act" (2011).

Chemical analyses were conducted by AGAT Laboratories. AGAT 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 there were no exceedances of the MECP Table 1 and Table 8 SCS for soil and ground water.

Source of Contaminants

AR-7 is located along the eastern property boundary. The source of contamination is possible to be from offsite impact. Stockpile of fill materials were observed on the eastern adjoining property.

Contaminant Migration

There are no indications of the migration of the contaminants of concern. No elevated value of EC was observed within ground water at the location AR-6, a downgradient location from AR-7 based on ground water flow towards the creek present at the Property.

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

There were no visual or olfactory observations that would suggest possible impact to the soil and expected to contribute to any significant soil vapour intrusion into the proposed building.

6.10.4 Contaminant Distribution

All soil and ground water samples meet the MECP Table 1 and 8 SCS with exception of minor exceedance of EC in AR-7 that extends to 1.4 m.

7. CONCLUSIONS

7.1 Summary

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

- The Phase Two ESA in conjunction with DS's Geotechnical Investigation, consisted of drilling a total of thirteen (13) boreholes on the Property. These boreholes were drilled to varying depths to a maximum of 9.2 m bgs to investigate the soil and ground water conditions at the Property. Monitoring wells were installed in six (6) selected locations to cover the Property.
- The stratigraphy beneath the investigated areas of the Property generally consisted of a maximum of 460 mm of topsoil followed by native glacial till (primarily clayey silt to silty clay). All boreholes terminated at shale bedrock with the exception of borehole AR-13 located to the northwest of the Property. Silty sand layer was observed from 4.3 m to 7.9 m above a layer of sand and gravel at this location. Depth of shale bedrock encountered at borehole locations varied between 1.5 to 9 m.
- The Property is located within 30 m of a water body. The results of the samples submitted for chemical analysis were compared to the generic site condition standards in a potable ground water condition for all type of property use as contained in Table 8 of the Ministry of Environment, Conservation and Parks (MECP) publication "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*", April 15, 2011. The Property includes a natural heritage system and wetlands. The chemical analysis results were also compared to the MECP Table 1 full depth background site condition standards.
- A total of twenty (20) soil samples from the selected 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, metals and inorganic parameters and pH.
- No exceedances of the applicable standards (Table 1 or Table 8) for parameters analyzed in fine/medium or coarse textured soil were found in any of the soil samples analyzed with the exception of electrical conductivity (EC). Exceedance of EC from the site condition standards (Table 1 and 8) was observed at the location of borehole AR-7 within 1.4 m.
- A total of nine (9) ground water samples, including one QC and field and trip blanks samples from a total of six monitoring wells installed by DS on the Property, were analyzed for metal and inorganics, petroleum hydrocarbons (PHCs), OC pesticides, PCBs and volatile organic compounds (VOCs).

- No exceedances of the applicable standards for the parameters analyzed were found in any of the ground water samples. All ground water samples met the MECP Table 1 and 8 site condition standards.
- The measured pH values of soil and ground water samples were within the MECP guideline.

7.2 Recommendations

Based on the findings of Phase Two ESA, DS recommends the following:

- Based on the available information, it is concluded that soil and ground water at the Property meet the MECP Table 8 site condition standards within 30 m of surface water in a potable ground water condition and Table 1 background site conditions with the exception of Electrical Conductivity (EC) that exceeds the site condition standards for soil at the location of borehole AR-7. Based on the findings of Phase Two ESA, DS recommends removal of EC-impacted soil during the property development. The extent of EC-impacted soil is recommended to be determined horizontally and vertically prior to offsite disposal. No other 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_{ESA-RA}
Senior Project Manager



Martin Gedeon, M.Sc., P.Geo. QP_{ESA}
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.1 of 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, Concession 1, PT, Lot 8, NDS, Oakville, Ontario, July 20, 2018, Prepared for Argo (Joshua Creek) Limited by DS Consultants Ltd.
10. Geotechnical Investigation, Proposed Residential Subdivision – Diam Property, Dundas Street East, Oakville, Ontario, April 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.

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 **Argo (Joshua Creek) Limited** 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

SOIL

Table 1: Summary of Analytical Results for Metals and Inorganics in Soil

Client Sample ID				AR-4-SS-1	AR-6-SS-2	AR-9-SS-1	AR-13-SS-3	AR-7-SS-2	DUP-2
Date Sampled				01/30/2018	01/31/2018	01/31/2018	02/01/2018	01/31/2018	01/30/2018
AGAT Sample ID				9051255	9051262	9051268	9051289	9051299	9051302
Parameter	Units	G / S	RDL	Soil	Soil	Soil	Soil	Soil	Soil
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	5	6	11	6	6	6
Barium	µg/g	220	2	76	107	85	100	76	79
Beryllium	µg/g	2.5	0.5	0.9	0.8	0.8	0.7	0.8	1.0
Boron	µg/g	36	5	18	18	14	12	15	20
Boron (Hot Water Soluble)	µg/g	NA	0.10	0.19	1.26	0.22	0.24	1.24	0.23
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	70	2	23	21	19	20	20	24
Cobalt	µg/g	21	0.5	13.7	12.6	12.9	12.6	12.9	13.2
Copper	µg/g	92	1	8	35	22	28	30	9
Lead	µg/g	120	1	9	9	9	10	9	10
Molybdenum	µg/g	2	0.5	0.8	0.9	0.7	0.7	0.8	1.1
Nickel	µg/g	82	1	33	29	28	29	28	32
Selenium	µg/g	1.5	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Silver	µg/g	0.5	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	µg/g	1	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Uranium	µg/g	2.5	0.5	<0.5	1.1	0.6	0.8	0.8	<0.5
Vanadium	µg/g	86	1	25	27	26	24	24	26
Zinc	µg/g	290	5	62	61	56	62	60	65
Chromium VI	µg/g	0.66	0.2	0.3	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity	mS/cm	0.57	0.005	0.115	0.125	0.183	0.357	0.805	0.129
Sodium Adsorption Ratio	NA	2.4	NA	0.162	2.13	0.858	0.214	2.09	0.151
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.81	7.98	7.88	7.87	8.00	7.81
pH 2:1 Extr.	N/A		N/A	Y	Y	Y	Y	Y	Y

Table 2: Summary of Analytical Results for VOCs in Soil

Client Sample ID				AR-10 - SS-2	AR-11 - SS-7
Date Sampled				02/01/2018	02/01/2018
AGAT Sample ID				9051271	9051282
Parameter	Units	G / S	RDL	Soil	Soil
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.05	0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04
Toluene	ug/g	0.2	0.02	<0.02	<0.02
Dibromochloromethane	ug/g	0.05	0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.05	0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04	<0.04
Chlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05

Client Sample ID				AR-10 - SS-2	AR-11 - SS-7
Bromoform	ug/g	0.05	0.05	<0.05	<0.05
Styrene	ug/g	0.05	0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
Xylene Mixture	ug/g	0.05	0.05	<0.05	<0.05
1,3-Dichloropropene	µg/g	0.05	0.04	<0.04	<0.04
n-Hexane	µg/g	0.05	0.05	<0.05	<0.05
Toluene-d8	% Recovery			87	85
4-Bromofluorobenzene	% Recovery			87	87
Moisture Content	%		0.1	11.1	8.4

Table 3: Summary of Analytical Results for PHCs in Soil

Client Sample ID				AR-3 - SS-7	AR-5 - SS-2	AR-9 - SS-2	DUP-1
Date Sampled				01/30/2018	01/31/2018	01/31/2018	01/31/2018
AGAT Sample ID				9051253	9051256	9051265	9051300
Parameter	Units	G / S	RDL	Soil	Soil	Soil	Soil
Benzene	µg/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	0.2	0.08	<0.08	<0.08	<0.08	<0.08
Ethylbenzene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Xylene Mixture	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g	25	5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA	NA
Moisture Content	%		0.1	9.8	13.6	11.7	11.5
Terphenyl	%			99	76	96	93

Table 4: Summary of Analytical Results for OC Pesticides in Soil

Client Sample ID				AR-1 - SS-2	AR-2 - SS-3	AR-8 - SS-3	AR-12 - SS-2	AR-6 - SS-1	Dup-3
Date Sampled				01/30/2018	01/30/2018	02/01/2018	02/02/2018	01/31/2018	-
AGAT Sample ID				9051250	9051251	9051263	9051287	9051298	9051303
Parameter	Units	G/S	RDL	Soil	Soil	Soil	Soil	Soil	Soil
Hexachloroethane	µg/g	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Gamma-Hexachlorocyclohexane	µg/g	0.01	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Aldrin	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT	µg/g	1.4	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Methoxychlor	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	µg/g	0.01, 0.02	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	µg/g	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Moisture Content	%		0.1	9.2	8.4	6.6	14.2	17.0	10.8
TCMX	%			70	66	62	80	76	66
Decachlorobiphenyl	%			84	70	74	92	80	70

GROUND WATER

Table 5: Summary of Analytical Results for Metal and Inorganics in Water

Client Sample ID				AR-MW2	AR-MW6	AR-MW9	AR-MW11	AR-MW12	QA/QC1
Date Sampled				03/21/2018	03/21/2018	03/21/2018	03/21/2018	03/21/2018	03/21/2018
AGAT Sample ID				9144184	9144186	9144187	9144192	9144198	9144201
Parameter	Units	G / S	RDL	Water	Water	Water	Water	Water	Water
Antimony	µg/L	1.5	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	µg/L	13	1.0	<1.0	4.9	4.7	3.1	4.5	3.4
Barium	µg/L	610	2.0	260	30.6	31.4	34.1	30.1	33.1
Beryllium	µg/L	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	µg/L	1700	10.0	99.2	1290	1260	1300	1290	1290
Cadmium	µg/L	0.5	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	11	2.0	2.8	2.3	<2.0	<2.0	<2.0	<2.0
Cobalt	µg/L	3.8	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Copper	µg/L	5	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lead	µg/L	1.9	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Molybdenum	µg/L	23	0.5	1.7	8.2	8.8	8.4	8.1	8.1
Nickel	µg/L	14	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Selenium	µg/L	5	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	µg/L	0.3	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	µg/L	0.5	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Uranium	µg/L	8.9	0.5	5.5	0.7	0.7	0.8	0.7	0.7
Vanadium	µg/L	3.9	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Zinc	µg/L	160	5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	µg/L	0.1	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	25	5	<5	<5	<5	<5	<5	<5
Cyanide	µg/L	5	2	<2	<2	<2	<2	<2	<2
Sodium	µg/L	490000	1000	51600	100000	102000	100000	100000	101000
Chloride	µg/L	790000	500	184000	22900	22900	23500	23400	23500
Electrical Conductivity	uS/cm		2	1170	1070	1070	1080	1080	1080
pH	pH Units		NA	7.93	8.15	8.10	8.04	8.01	8.09

Client Sample ID				AR-MW2	AR-MW6	AR-MW9	QA/QC1	Trip Blank	Field Blank
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylene Mixture	µg/L	72	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene-d8	% Recovery			95	98	95	94	93	93
4-Bromofluorobenzene	% Recovery			93	95	91	91	81	83

Table 8: Summary of Analytical Results for PHCs in Water

Client Sample ID				AR-MW2	AR-MW6	AR-MW9	QA/QC1
Date Sampled				03/21/2018	03/21/2018	03/21/2018	03/21/2018
AGAT Sample ID				9144184	9144186	9144187	9144201
Parameter	Units	G / S	RDL	Water	Water	Water	Water
F1 (C6 to C10)	µg/L	420	25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	NA	NA	NA
Terphenyl	%			82	74	80	81

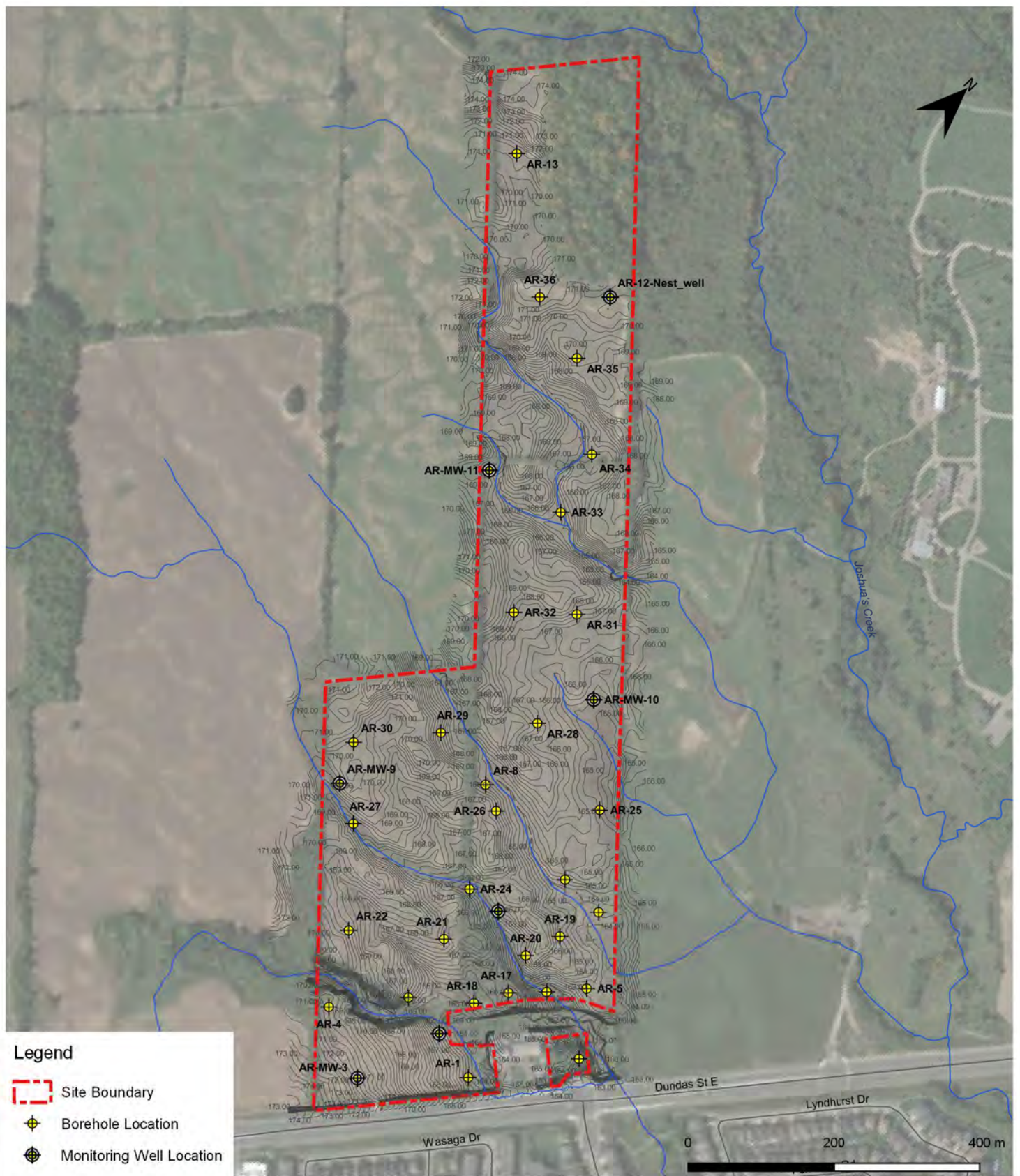
Table 9: Summary of Analytical Results for OC Pesticides in Water

Client Sample ID				AR-MW10	AR-MW11	AR-MW12
Date Sampled				03/21/2018	03/21/2018	03/21/2018
AGAT Sample ID				9144188	9144192	9144198
Parameter	Units	G / S	RDL	Water	Water	Water
Gamma-Hexachlorocyclohexane	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Heptachlor	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Aldrin	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Heptachlor Epoxide	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Endosulfan	µg/L	0.05	0.05	<0.05	<0.05	<0.05
Chlordane	µg/L	0.06	0.04	<0.04	<0.04	<0.04
DDE	µg/L	10	0.01	<0.01	<0.01	<0.01
DDD	µg/L	1.8	0.05	<0.05	<0.05	<0.05
DDT	µg/L	0.05	0.04	<0.04	<0.04	<0.04
Dieldrin	µg/L	0.05	0.02	<0.02	<0.02	<0.02
Endrin	µg/L	0.05	0.05	<0.05	<0.05	<0.05
Methoxychlor	µg/L	0.05	0.04	<0.04	<0.04	<0.04
Hexachlorobenzene	ug/L	0.01	0.01	<0.01	<0.01	<0.01
Hexachlorobutadiene	ug/L	0.01	0.01	<0.01	<0.01	<0.01
Hexachloroethane	ug/L	0.01	0.01	<0.01	<0.01	<0.01
TCMX	%			95	66	72
Decachlorobiphenyl	%			78	95	67

FIGURES



 <p>DS CONSULTANTS LTD. 6221 Highway 7, UNIT 16 Vaughan, Ontario L4H 0K8 Telephone: (905) 264-9393 www.dsconsultants.ca</p>	Project: PHASE TWO- ENVIRONMENTAL SITE ASSESSMENT CONCESSION1, LOT8. NDS. OAKVILLE, ON		
	Title: SITE LOCATION PLAN		
Client: <p style="text-align: center;">AGRO (JOSHUA CREEK) LIMITED</p>	Approved By: S.A	Drawn By: S.Y	Date: July 2018
	Scale: As Shown	Project No.: 18-518-20	Figure No.: 1



Legend

- Site Boundary
- + Borehole Location
- Monitoring Well Location



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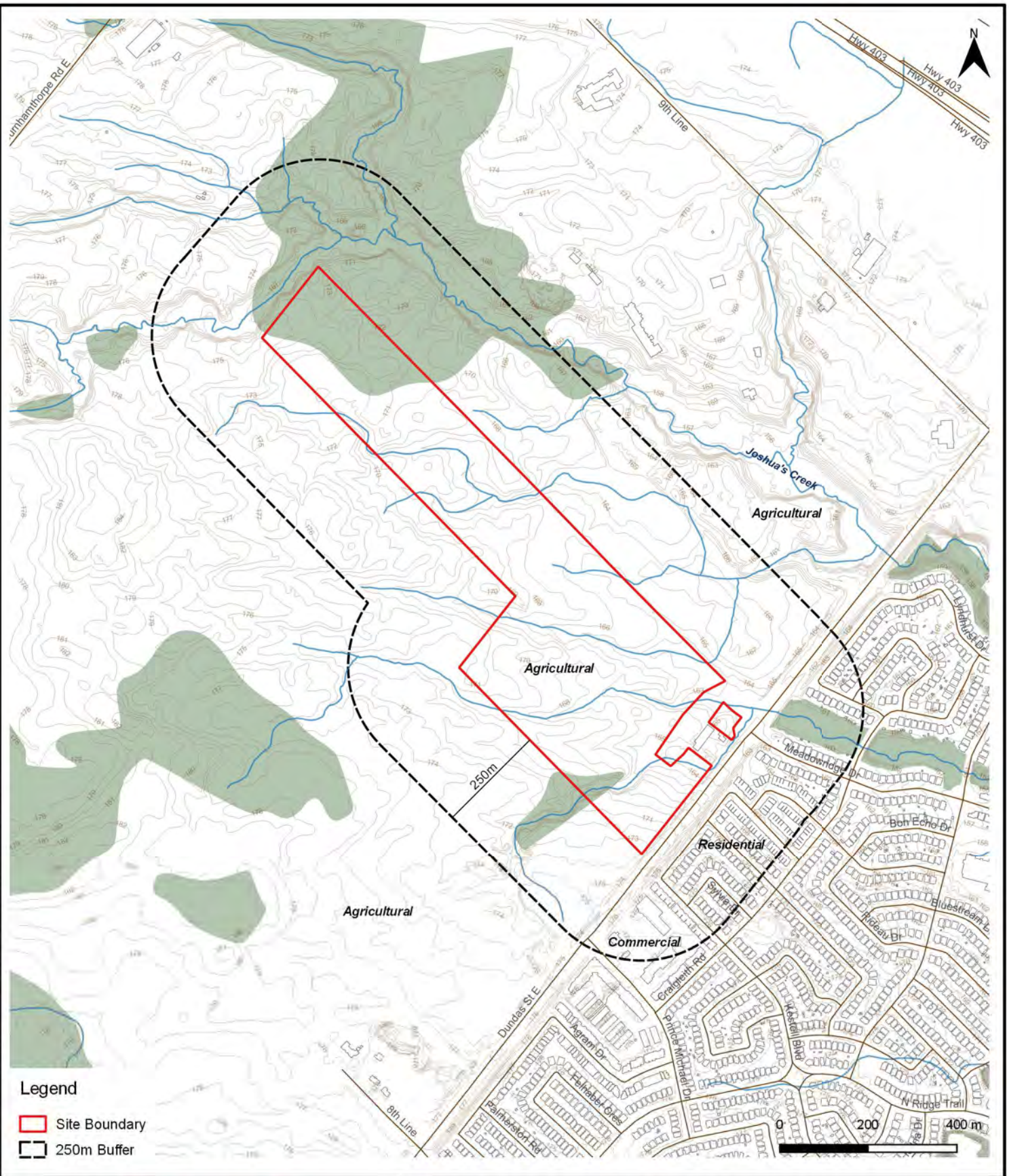
Project: PHASE TWO- ENVIRONMENTAL SITE ASSESSMENT
 CONCESSION 1, LOT 8, NDS, OAKVILLE, ON

Title: **BOREHOLE AND MONITORING WELL
 LOCATION PLAN**

Client:
 AGRO (JOSHUA CREEK) LIMITED

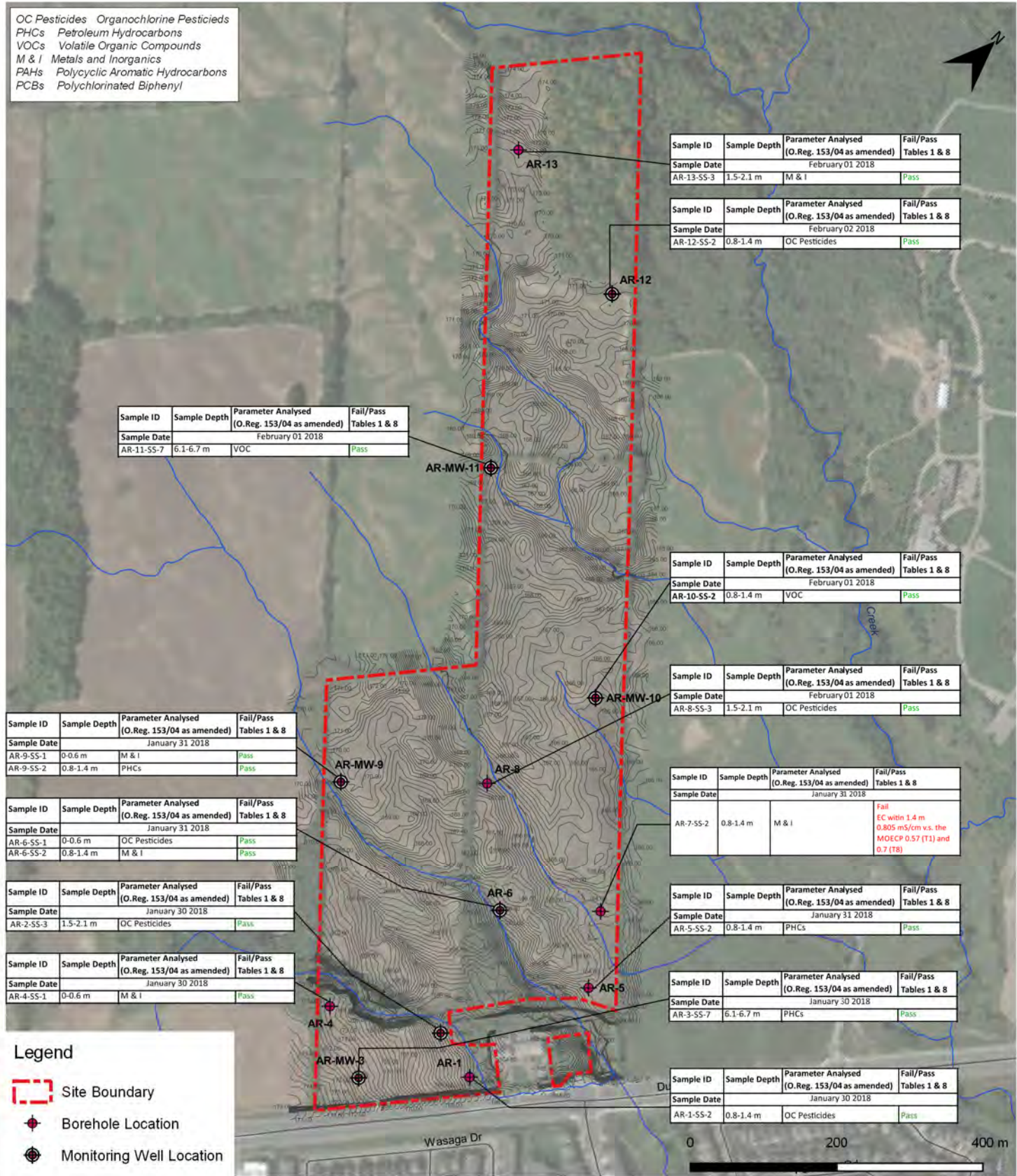
Approved By: S.A **Drawn By:** S.Y **Date:** July 2018

Scale: As Shown **Project No.:** 18-518-20 **Figure No.:** **2**



 <p>DS CONSULTANTS LTD. 6221 Highway 7, UNIT 16 Vaughan, Ontario L4H 0K8 Telephone: (905) 264-9393 www.dsconsultants.ca</p>	Project: PHASE ONE- ENVIRONMENTAL SITE ASSESSMENT CONCESSION1, LOT8. NDS. OAKVILLE, ON		
	Title: CONCEPTUAL SITE MODEL		
Client: AGRO (JOSHUA CREEK) LIMITED	Approved By: S.A	Drawn By: S.Y	Date: July 2018
	Scale: As Shown	Project No.: 18-518-20	Figure No.: 3

OC Pesticides Organochlorine Pesticides
 PHCs Petroleum Hydrocarbons
 VOCs Volatile Organic Compounds
 M & I Metals and Inorganics
 PAHs Polycyclic Aromatic Hydrocarbons
 PCBs Polychlorinated Biphenyl



Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)	Fail/Pass Tables 1 & 8
Sample Date	February 01 2018		
AR-11-SS-7	6.1-6.7 m	VOC	Pass

Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)	Fail/Pass Tables 1 & 8
Sample Date	February 01 2018		
AR-13-SS-3	1.5-2.1 m	M & I	Pass

Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)	Fail/Pass Tables 1 & 8
Sample Date	February 02 2018		
AR-12-SS-2	0.8-1.4 m	OC Pesticides	Pass

Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)	Fail/Pass Tables 1 & 8
Sample Date	January 31 2018		
AR-9-SS-1	0-0.6 m	M & I	Pass
AR-9-SS-2	0.8-1.4 m	PHCs	Pass

Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)	Fail/Pass Tables 1 & 8
Sample Date	February 01 2018		
AR-10-SS-2	0.8-1.4 m	VOC	Pass

Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)	Fail/Pass Tables 1 & 8
Sample Date	January 31 2018		
AR-6-SS-1	0-0.6 m	OC Pesticides	Pass
AR-6-SS-2	0.8-1.4 m	M & I	Pass

Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)	Fail/Pass Tables 1 & 8
Sample Date	February 01 2018		
AR-8-SS-3	1.5-2.1 m	OC Pesticides	Pass

Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)	Fail/Pass Tables 1 & 8
Sample Date	January 30 2018		
AR-2-SS-3	1.5-2.1 m	OC Pesticides	Pass

Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)	Fail/Pass Tables 1 & 8
Sample Date	January 31 2018		
AR-7-SS-2	0.8-1.4 m	M & I	Fail EC w/in 1.4 m 0.805 mS/cm v.s. the MOECP 0.57 (T1) and 0.7 (T8)

Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)	Fail/Pass Tables 1 & 8
Sample Date	January 30 2018		
AR-4-SS-1	0-0.6 m	M & I	Pass

Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)	Fail/Pass Tables 1 & 8
Sample Date	January 31 2018		
AR-5-SS-2	0.8-1.4 m	PHCs	Pass

Legend

- Site Boundary
- Borehole Location
- Monitoring Well Location

Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)	Fail/Pass Tables 1 & 8
Sample Date	January 30 2018		
AR-3-SS-7	6.1-6.7 m	PHCs	Pass

Sample ID	Sample Depth	Parameter Analysed (O.Reg. 153/04 as amended)	Fail/Pass Tables 1 & 8
Sample Date	January 30 2018		
AR-1-SS-2	0.8-1.4 m	OC Pesticides	Pass

J:\GIS\18-518-40 Argo Diam Property, Oakville\1-QGIS\Phase Two\Figure 4 - Soil Characterization.qgs



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 Vaughan, Ontario L4H 0K8
 Telephone: (905) 264-9393
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Project:	PHASE TWO- ENVIRONMENTAL SITE ASSESSMENT CONCESSION1, LOT8. NDS. OAKVILLE, ON		
Title:	SOIL CHARACTERIZATION		
Client:	Approved By: S.A	Drawn By: S.Y	Date: July 2018
	Scale: As Shown	Project No.: 18-518-20	Figure No.: 4

OC Pesticides Organochlorine Pesticides
 PHCs Petroleum Hydrocarbons
 VOCs Volatile Organic Compounds
 M & I Metals and Inorganics
 PAHs Polycyclic Aromatic Hydrocarbons
 PCBs Polychlorinated Biphenyl



Sample ID	Parameter Analysed	C.Reg. 153/04 (as amended) Table 1 and Table 8
Sample Date	March 21, 2018	
AR-MW12	M&I, OC pesticides	Pass

Sample ID	Parameter Analysed	O.Reg. 153/04 (as amended) Table 1 and Table 8
Sample Date	March 21, 2018	
AR-MW11	M&I, OC pesticides	Pass

Sample ID	Parameter Analysed	C.Reg. 153/04 (as amended) Table 1 and Table 8
Sample Date	March 21, 2018	
AR-MW10	PCBs, OC pesticides	Pass

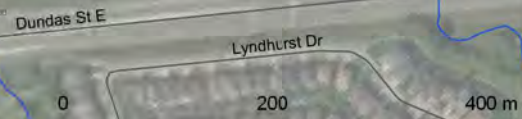
Sample ID	Parameter Analysed	O.Reg. 153/04 (as amended) Table 1 and Table 8
Sample Date	March 21, 2018	
AR-MW9	M&I, PHC (F1-F4), VOCs	Pass

Sample ID	Parameter Analysed	O.Reg. 153/04 (as amended) Table 1 and Table 8
Sample Date	March 21, 2018	
AR-MW6	M&I, PHC (F1-F4), VOCs	Pass

Sample ID	Parameter Analysed	O.Reg. 153/04 (as amended) Table 1 and Table 8
Sample Date	March 21, 2018	
AR-MW2	M&I, PHC (F1-F4), VOCs	Pass

Legend

- Site Boundary
- Monitoring Well Location



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 Vaughan, Ontario L4H 0K8
 Telephone: (905) 264-9393
 www.dsconsultants.ca

Project: PHASE TWO- ENVIRONMENTAL SITE ASSESSMENT
 CONCESSION1, LOT8. NDS. OAKVILLE, ON

Title: **GROUNDWATER CHARACTERIZATION**

Client: **AGRO (JOSHUA CREEK) LIMITED**

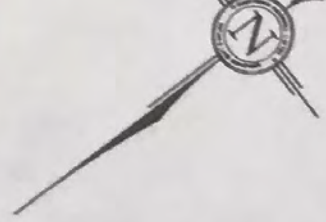
Approved By: S.A Drawn By: S.Y Date: July 2018

Scale: As Shown Project No.: 18-518-20 Figure No.: **5**

APPENDICES

Appendix A

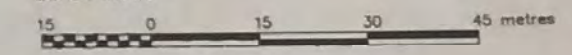
Survey Plan



SCHEDULE				
PART	DESCRIPTION	AREA	OWNER	PIN
1		0.307 HA.		PART OF 24930-0022 (LT)
2	PART OF LOT 8 CONCESSION 1 NORTH OF DUNDAS STREET (TRAFALGAR)	0.118 HA.	DIAM CONTRACTORS LIMITED	PART OF 24930-0022 (LT)
3		0.870 HA.		PART OF 24930-0022 (LT)
4		0.101 HA.		PART OF 24930-0022 (LT)
5		0.018 HA.		PART OF 24930-0022 (LT)

PARTS 1, 2, 3, 4 & 5 COMPRISE PART OF 24930-0022 (LT)

PLAN OF SURVEY OF
PART OF LOT 8, CONCESSION 1
NORTH OF DUNDAS STREET, TRAFALGAR
TOWN OF OAKVILLE
REGIONAL MUNICIPALITY OF HALTON
SCALE 1:750



GRAPHIC SCALE
CUNNINGHAM McCONNELL LIMITED
ONTARIO LAND SURVEYOR

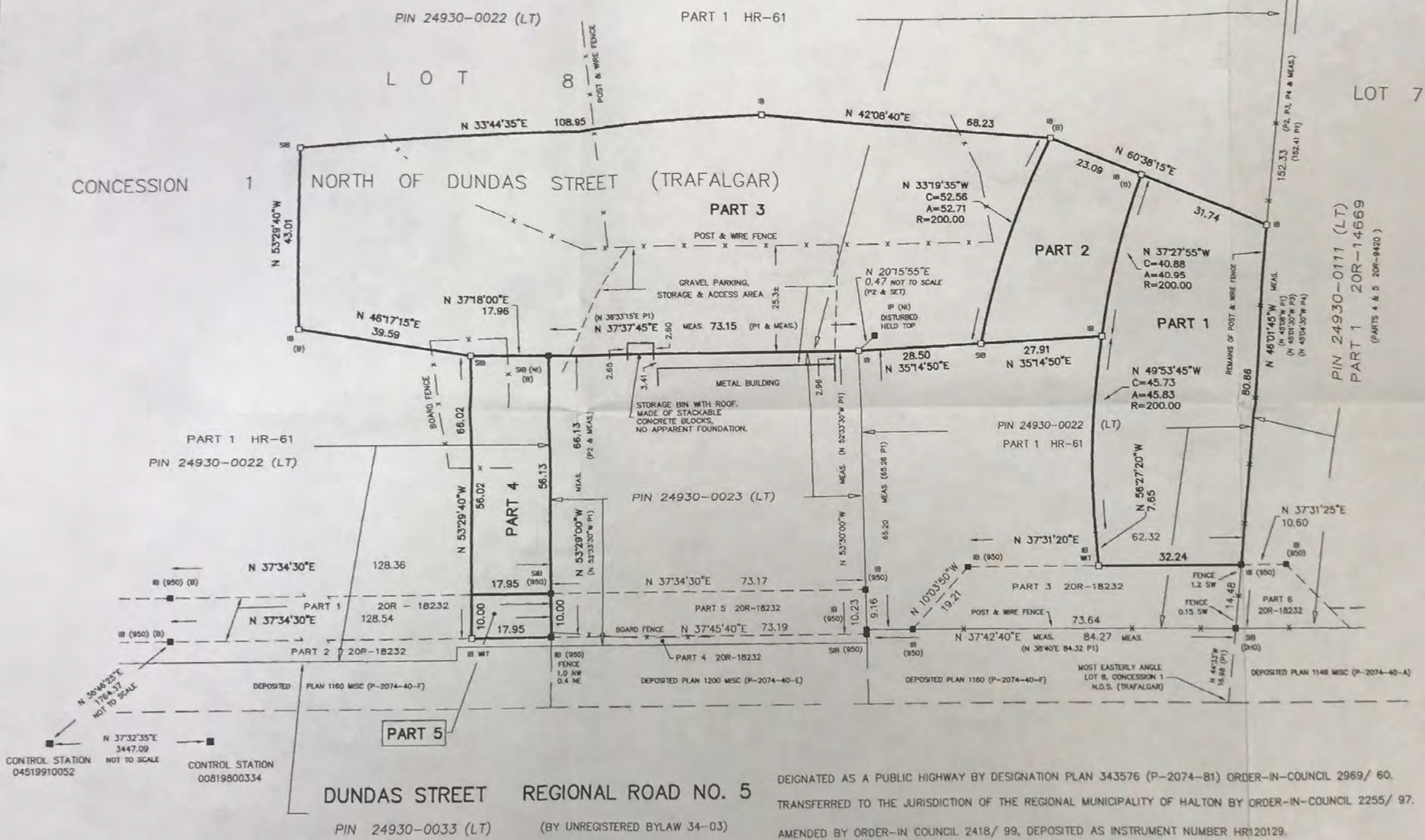
METRIC
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND
CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

FENCE NOTE:
ALL LIMITS SHOWN HEREON ARE NOT FENCED UNLESS STATED OTHERWISE.

- LEGEND
- DENOTES SURVEY MONUMENT FOUND
 - SURVEY MONUMENT SET
 - SB STANDARD IRON BAR
 - SSB SHORT STANDARD IRON BAR
 - IB IRON BAR
 - IP IRON PIPE
 - WT WITNESS
 - 950 CUNNINGHAM McCONNELL LIMITED
 - (N) NO IDENTIFICATION
 - PIN PROPERTY IDENTIFIER NUMBER
 - DHO DEPARTMENT OF HIGHWAYS OF ONTARIO
 - (B) 0.3 BELOW GROUND LEVEL
 - P1 PLAN HR-61
 - P2 PLAN 20R-18232
 - P3 PLAN 20R-9420
 - P4 PLAN 20R-14669

SURVEYOR'S CERTIFICATE
I CERTIFY THAT:
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON AUGUST 25, 2010.

DATE: AUG 25, 2010
Thomas J. Pakowski
THOMAS J. PAKOWSKI
ONTARIO LAND SURVEYOR



BEARING NOTE:
ALL BEARINGS HEREON ARE GRID, NAD 83, 6° U.T.M., ZONE 17, CENTRAL MERIDIAN 81° WEST LONGITUDE BEING RELATED TO CONTROL STATIONS 04519910052 & 00819800334.

DISTANCE NOTE:
ALL DISTANCES SHOWN HEREON ARE GROUND AND MAY BE CONVERTED TO GRID BY MULTIPLYING BY THE SCALE FACTOR 0.9997217.

COORDINATE TABLE

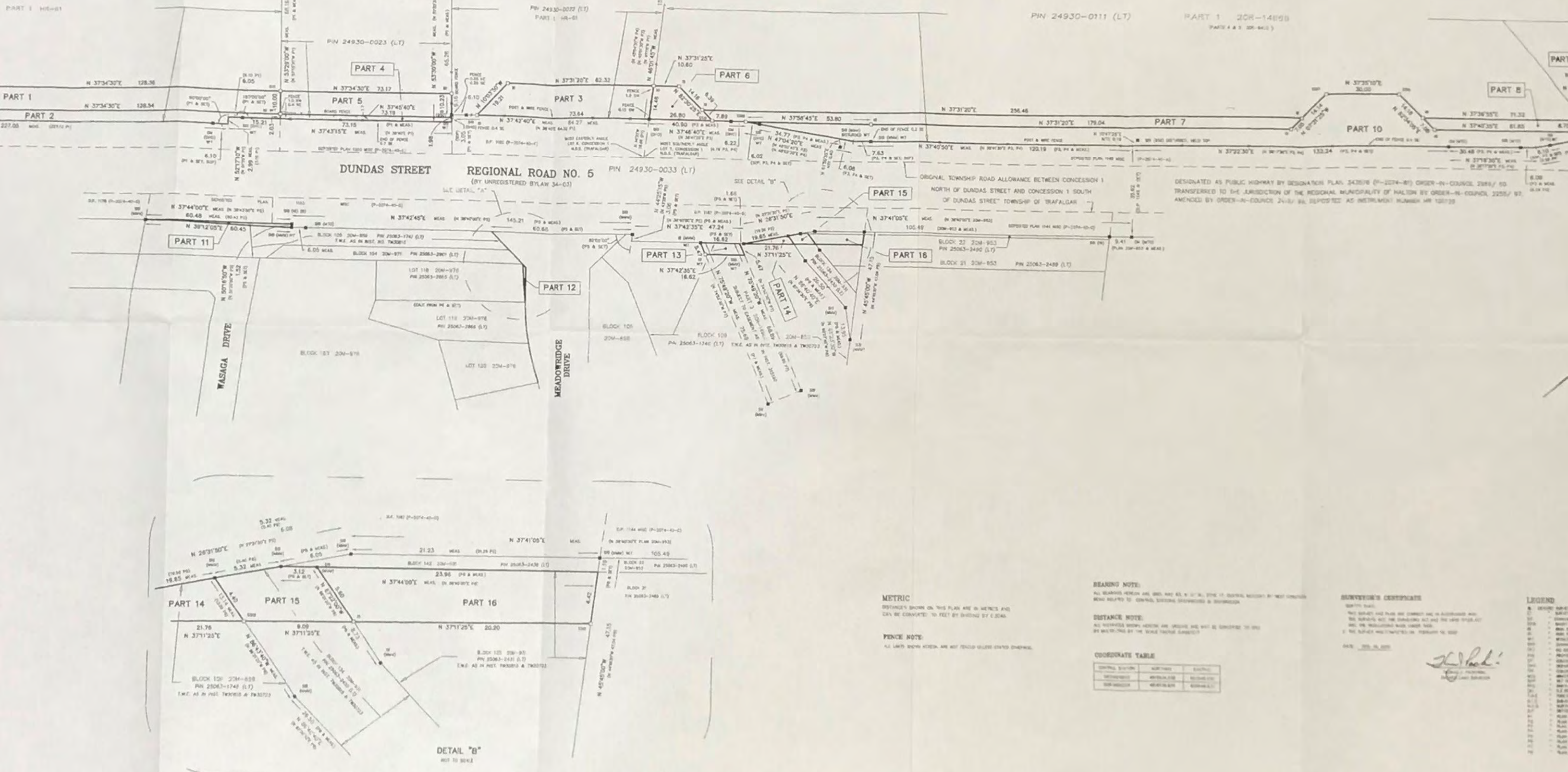
CONTROL STATION	NORTHING	EASTING
04519910052	4815804.238	603545.056
00819800334	4818536.856	605644.930

DEIGNATED AS A PUBLIC HIGHWAY BY DESIGNATION PLAN 343576 (P-2074-81) ORDER-IN-COUNCIL 2969/ 60.
TRANSFERRED TO THE JURISDICTION OF THE REGIONAL MUNICIPALITY OF HALTON BY ORDER-IN-COUNCIL 2255/ 97.
AMENDED BY ORDER-IN COUNCIL 2418/ 99, DEPOSITED AS INSTRUMENT NUMBER HR120129.

CUNNINGHAM McCONNELL LIMITED
ONTARIO LAND SURVEYORS
205 MAIN STREET MILTON, ONTARIO L9T 1N7
PHONE (905) 878-6672
FAX (905) 878-6672
EMAIL ADDRESS: cml@primus.ca
1200 SPEERS ROAD, UNIT 38 OAKVILLE, ONTARIO L6L 2X4
PHONE (905) 845-3497
FAX (905) 845-3519
EMAIL ADDRESS: cmls@cogeco.net
O.L.S. FILE # 10-80

LOT 6 CONCESSION 1 NORTH OF DUNDAS STREET (TRAFALGAR)

LOT 7 CONCESSION 1 NORTH OF DUNDAS STREET (TRAFALGAR)



REGIONAL ROAD NO. 5
(BY UNREGISTERED BYLAW 34-03)

DESIGNATED AS PUBLIC HIGHWAY BY DESIGNATION PLAN 243876 (P-2024-87) ORDER-IN-COUNCIL 2089/150 TRANSFERRED TO THE JURISDICTION OF THE REGIONAL MUNICIPALITY OF HALTON BY ORDER-IN-COUNCIL 2255/157 AMENDED BY ORDER-IN-COUNCIL 24-157 AS DEPOSITED AS INSTRUMENT NUMBER HP 120720

DETAIL "B"
NOT TO SCALE

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

FENCE NOTE
ALL LOTS SHOWN HEREIN ARE NOT FENCED UNLESS SHOWN OTHERWISE.

BEARING NOTE
ALL BEARINGS HEREON ARE TRUE AND EXCEPT WHERE SHOWN OTHERWISE ARE REFERRED TO AS BEARINGS TO THE CENTRAL MERIDIAN BY THE METHOD OF THE CANADIAN SYSTEM OF SURVEYING.

DISTANCE NOTE
ALL DISTANCES SHOWN HEREON ARE IN METRES AND MAY BE CONVERTED TO FEET BY DIVIDING BY THE SCALE FACTOR 0.3048.

COORDINATE TABLE

CONTROL SYSTEM	NORTHING	EASTING
1983 CANADIAN	4925000.00	750000.00
1983 U.S.	4925000.00	750000.00
1983 U.S. (NAD 83)	4925000.00	750000.00

SURVEYOR'S CERTIFICATE
I, the undersigned, being a duly qualified and licensed Surveyor of the Province of Ontario, do hereby certify that the foregoing is a true and correct copy of the original plan as deposited in my office, and that the same has been examined and found to conform with the provisions of the Survey Act, R.S.O. 1990, c. S. 1, and the Regulations made thereunder.

DATE: 2024, 10, 20

[Signature]
Surveyor

- LEGEND**
- 1. BOUNDARY
 - 2. FENCE
 - 3. ROAD
 - 4. DRIVE
 - 5. LOT
 - 6. BLOCK
 - 7. CONCESSION
 - 8. TOWNSHIP
 - 9. COUNTY
 - 10. PROVINCE
 - 11. CANADA

PLAN OF SURVEY OF
 PART OF LOT 8, CONCESSION I,
 NORTH OF DUNDAS STREET
 TOWNSHIP OF TRAFALGAR
 NOW IN THE
 TOWN OF OAKVILLE
 COUNTY OF HALTON

Scale 200ft = 1in.
 J.R. DUNNING O.L.S. - 1967

PLAN HR. 61
 Approved Sept. 25th 1968
 James N. Dunning
 Ass't Examiner of Surveys

Plan HR. 61
 Recorded under No. D-44
 Registered 30-9-68
 W. L. A. ...
 Part 1 - Plan HR. 61 Section 112
 1968 Deputy Director of Titles

J 7350



SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY
 1. That this survey and plan are correct and in accordance with
 The Survey's Act and the Land Titles Act and the regulations
 made thereunder;
 2. That I was present at and did personally supervise the survey
 represented by this plan;
 3. That this plan contains a true copy of the field notes of survey;
 4. That the survey was completed on the 26th day of July 1967.

Dated: 26 July 1967
 J.R. Dunning
 J.R. Dunning Ontario Land Surveyor

Note:
 Bearings hereon are derived from the N38°40'E of the
 Post-Industrial Limit of Highway No 5 as shown on Deposited
 Plan No. 1160.
 + LT denotes Iron tube 1 1/2" x 2" long.
 o SIA denotes Iron Bar 1 1/2" x 4" long.
 o C.M. denotes Concrete Monument.

CON. 1 S.D.S.

DUNNING & TAYLOR
 Ontario Land Surveyors
 1140 The Queensway
 Toronto 18 251-6803

TOPOGRAPHIC SURVEY

SCALE 1:1200
 0m 20m 40m 60m 80m 100m 120m 140m 160m 180m 200m
 RADY-PENTEK & EDWARD SURVEYING LTD., O.L.S.
 METRIC
 DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES
 AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

NOTES

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO MINISTRY OF TRANSPORTATION ONTARIO FIRST-ORDER VERTICAL BENCH MARK NUMBER 00819818109 HAVING AN ORTHOMETRIC ELEVATION OF 160.216 METRES. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1928, 1978 ADJUSTMENT (CGVD-1928:1978).

BRASS TABLET SET IN CONCRETE CULVERT UNDER HWY 5, 0.8 KM WEST OF THE JCT OF HWY 5 AND NINTH LINE RD IN OAKVILLE, 62.0 M WEST OF ENTRANCE TO RED BRICK HOUSE #1350 AND 18.1 M SOUTH OF CENTRELINE OF HWY 5. TABLET IS SET VERTICALLY IN TOP OF SOUTH END OF CULVERT, 59 CM NORTH OF SOUTH END OF CULVERT AND 75 CM EAST OF WEST FACE OF CULVERT.

THIS IS NOT A PLAN OF SURVEY AND BOUNDARIES ARE NOT CERTIFIED. THIS PLAN IS NOT TO BE USED FOR MORTGAGE OR TRANSACTION PURPOSES.

BOUNDARY INFORMATION HAS BEEN TAKEN FROM RADY-PENTEK & EDWARD SURVEYING LTD. CAD FILE No. 18059r01.

BENCHMARK NOTE

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO MINISTRY OF TRANSPORTATION ONTARIO FIRST-ORDER VERTICAL BENCH MARK NUMBER 00819818109 HAVING AN ORTHOMETRIC ELEVATION OF 160.216 METRES. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1928, 1978 ADJUSTMENT (CGVD-1928:1978).

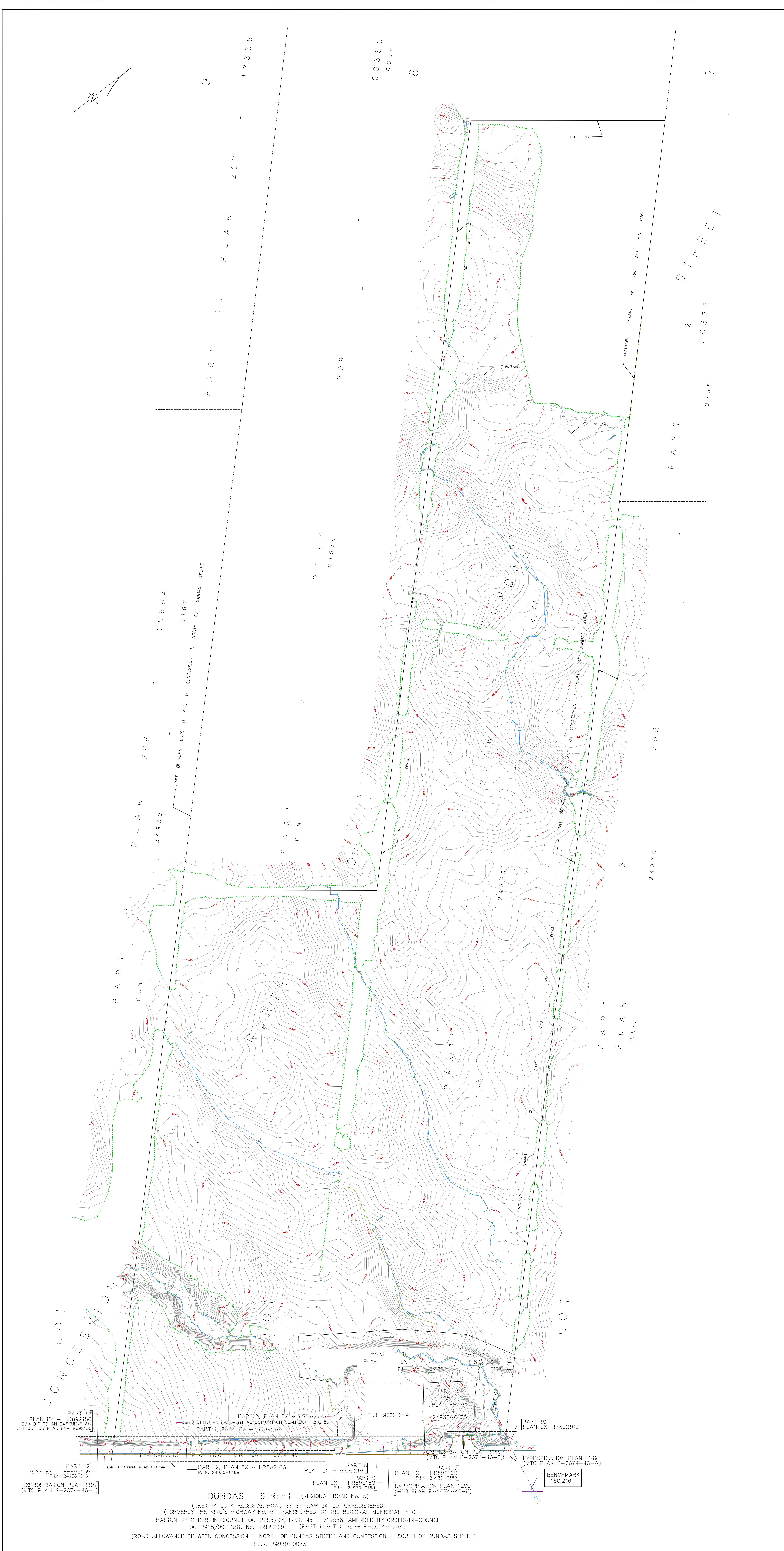
BRASS TABLET SET IN CONCRETE CULVERT UNDER HWY 5, 0.8 KM WEST OF THE JCT OF HWY 5 AND NINTH LINE RD IN OAKVILLE, 62.0 M WEST OF ENTRANCE TO RED BRICK HOUSE #1350 AND 18.1 M SOUTH OF CENTRELINE OF HWY 5. TABLET IS SET VERTICALLY IN TOP OF SOUTH END OF CULVERT, 59 CM NORTH OF SOUTH END OF CULVERT AND 75 CM EAST OF WEST FACE OF CULVERT.

SURVEYOR'S CERTIFICATE

THE FIELD OBSERVATIONS REPRESENTED ON THIS PLAN WERE COMPLETED ON THE 28th DAY OF FEBRUARY, 2018
 DATE APRIL 05, 2018

PHILLIP S. SWIFT
 ONTARIO LAND SURVEYOR

rpe RADY-PENTEK & EDWARD SURVEYING LTD.
 ONTARIO LAND SURVEYORS
 643 Christie Road, Suite 7
 Woodbridge, Ontario L4L 8A3
 Tel: (416) 635-5000 Fax: (416) 635-5001
 Tel: (905) 264-0881 Fax: (905) 264-2099
 Website: www.r-pe.ca
 DRAWN: A.K./P.S.S. CHECKED: R.D.
 JOB No. 18-050 CAD FILE No. 18059r1b
 Apr. 05, 2018 - 16:00:00



PART 1 PLAN EX - HRR82160
 SUBJECT TO AN EASEMENT AS SET OUT ON PLAN EX-HRR82160

PART 2 PLAN EX - HRR82160
 PLAN 24930-0168

PART 3 PLAN EX - HRR82160
 PLAN 24930-0164

PART 4 PLAN EX - HRR82160
 PLAN 24930-0170

PART 5 PLAN EX - HRR82160
 PLAN 24930-0168

PART 6 PLAN EX - HRR82160
 PLAN 24930-0168

PART 7 PLAN EX - HRR82160
 PLAN 24930-0168

PART 8 PLAN EX - HRR82160
 PLAN 24930-0168

PART 9 PLAN EX - HRR82160
 PLAN 24930-0168

PART 10 PLAN EX - HRR82160

EXPROPRIATION PLAN 1187 (MTO PLAN P-2074-40-L)

EXPROPRIATION PLAN 1188 (MTO PLAN P-2074-40-L)

EXPROPRIATION PLAN 1189 (MTO PLAN P-2074-40-A)

EXPROPRIATION PLAN 1200 (MTO PLAN P-2074-40-E)

BENCHMARK 160.216

DUNDAS STREET (REGIONAL ROAD No. 5)
 (DESIGNATED A REGIONAL ROAD BY BY-LAW 34-03, UNREGISTERED)
 (FORMERLY THE KING'S HIGHWAY No. 5, TRANSFERRED TO THE REGIONAL MUNICIPALITY OF HALTON BY ORDER-IN-COUNCIL OC-2258/97, INST. No. 177185B, AMENDED BY ORDER-IN-COUNCIL OC-2418/99, INST. No. HR12012B) (PART 1, M.T.O. PLAN P-2074-173A)

(ROAD ALLOWANCE BETWEEN CONCESSION 1, NORTH OF DUNDAS STREET AND CONCESSION 1, SOUTH OF DUNDAS STREET)
 PLAN 24930-0033

Appendix B

Borehole Logs

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Jan-30-2018
 REF. NO.: 518-10
 ENCL NO.: 2

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)						
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			SHEAR STRENGTH (kPa)							WATER CONTENT (%)					
168.0	TOPSOIL: 125mm																			
167.1	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)		1	SS	6															
166.5	SILTY CLAY TILL: some sand to sandy, trace gravel, occasional cobble/boulder, trace shale fragments, reddish brown, moist, hard		2	SS	57															1 5 62 32
165.7	TILL/SHALE COMPLEX: silty clay till mixed with shale fragments, reddish brown, moist, hard		3	SS	50/100mm															
	SHALE: Queenston Formation, highly weathered, reddish brown, moist		4	SS	50/75mm															
			5	SS	50/100mm															
	wet below 4.6m		6	SS	50/50mm															wet spoon
161.8	auger refusal at 6.2m		7	SS	50/75mm															
6.2	END OF BOREHOLE Notes: 1) Water level at 4.9m upon completion of borehole.																			

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Feb-01-2018
 REF. NO.: 518-10
 ENCL NO.: 11

SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
165.0	TOPSOIL: 150mm													
164.9	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)	1	SS	8										
164.2	SILTY CLAY TILL: some sand to sandy, trace gravel, occasional cobble/boulder, trace shale fragments, reddish brown, moist, hard	2	SS	23										
		3	SS	30										
		4	SS	45										
		5	SS	46										
		6	SS	39										
158.9	SHALE: Queenston Formation, highly weathered, reddish brown, moist	7	SS	50										
158.3	END OF BOREHOLE Notes: 1) 50mm dia. monitoring well installed upon completion. 2) Water Level Readings Date Water Depth (mbgs) March 21, 2018 0.9 February 13, 2018 1.4													

W. L. 164.1 m
Mar 21, 2018

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Feb-01-2018
 REF. NO.: 518-10
 ENCL NO.: 12

SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)					
(m) ELEV DEPTH	DESCRIPTION	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40	60	80				100	PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	GR
167.0	TOPSOIL: 460mm	1	SS	14														
166.5	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed) SILTY CLAY TILL: some sand to sandy, trace gravel, occasional cobble/boulder, trace shale fragments, reddish brown, moist, very stiff to hard	2	SS	28														
166.2		3	SS	29														
166.0		4	SS	50/75mm														
165.8		5	SS	50/25mm														
165.6		6	SS	50/100mm														
162.4	SHALE: Queenston Formation, highly weathered, reddish brown	7	SS	50/100mm														
160.6	END OF BOREHOLE																	
6.4	Notes: 1) Auger refusal at 6.4m 2) 50mm dia. monitoring well installed upon completion. 3) Water Level Readings Date Water Depth (mbgs) March 21, 2018 0.1 February 13, 2018 0.4																	

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ_DS.GDT_18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Jan-31-2018
 REF. NO.: 518-10
 ENCL NO.: 13

SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
170.0														
169.9	TOPSOIL: 175mm													
0.2	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, very stiff (weathered/disturbed)	1	SS	17										
169.1														
0.9	SILTY CLAY TILL: some sand to sandy, trace gravel, occasional cobble/boulder, trace shale fragments, reddish brown, moist, hard	2	SS	27										
		3	SS	26										
		4	SS	53										
		5	SS	38										
		6	SS	37										
		7	SS	25										
162.4	TILL/SHALE COMPLEX: silty clay till mixed with shale fragments, reddish brown, moist, hard	8	SS	50/ 25mm										
7.6														
161.0														
160.0	SHALE: Queenston Formation, highly weathered, reddish brown, moist	9	SS	50/ 75mm										
9.2	END OF BOREHOLE Notes: 1) 50mm dia. monitoring well installed upon completion. 2) Water Level Readings Date: March 21, 2018 Water Depth (mbgs): 8.5													

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST. E, OAKVILLE-ARGO.GPJ_DS.GDT_18-4-19

W. L. 161.5 m
Mar 21, 2018

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Jan-31-2018
 REF. NO.: 518-10
 ENCL NO.: 13A

SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT NUMBER	TYPE	"N" BLOWS 0.3 m			20 40 60 80 100	20 40 60 80 100						
170.0														
0.0	Staright augered to 4.6m without soil sampling to install a shallow monitoring well adjacent to BH-AR12 (D)													
1														
2														
3														
4														
165.4														
4.6	END OF BOREHOLE Notes: 1) 50mm dia. monitoring well installed at 4.6m, adjacent to BH-AR12 (D). 2) Water Level Readings Date March 21, 2018 Water Depth (mbgs) 4.1													

W. L. 166.0 m
Mar 21, 2018

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ_DS.GDT_18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Feb-01-2018
 REF. NO.: 518-10
 ENCL NO.: 14

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)				
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40	60	80				100	PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L
171.0																		
170.9	TOPSOIL: 175mm																	
0.2	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)		1	SS	4													
170.1	SILTY CLAY TILL: some sand to sandy, trace gravel, occasional cobble/boulder, trace shale fragments, reddish brown, moist, hard		2	SS	25													
1			3	SS	29													
2			4	SS	39													
3			5	SS	38													
4																		
166.7	SILTY SAND: occasional layers/interbeds of silt, trace clay, grey, wet, very dense		6	SS	90													2 73 19 6
4.3			7	SS	54													
163.1	SAND & GRAVEL: trace silt, grey, wet, very dense		8	SS	44													
7.9 162.8																		
8.2	END OF BOREHOLE Notes: 1) Water level at 4.3m upon completion of borehole.																	

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO, GPJ_DS_GDT_18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Feb-02-2018
 REF. NO.: 518-10
 ENCL NO.: 15

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL	
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40							60
166.0	TOPSOIL: 125mm															
166.0 0.1	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)		1	SS	5											
165.2 0.8	SILTY CLAY TILL: some sand to sandy, trace gravel, occasional cobble/boulder, trace shale fragments, reddish brown, moist, hard		2	SS	54										0	3 72 25
164.5 1.5	TILL/SHALE COMPLEX: silty clay till mixed with shale fragments, reddish brown, moist, hard		3	SS	50/ 25mm											
163.7 2.3	SHALE: Queenston Formation, highly weathered, reddish brown		4	SS	50/ 100mm											
			5	SS	50/ 25mm											
			6	SS	50/ 75mm											
159.8 6.2	END OF BOREHOLE Notes: 1) Water level at 6.1m upon completion of borehole.		7	SS	50/ 25mm											

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property CLIENT: Argo Development Corporation PROJECT LOCATION: Dundas Street East, Oakville, ON DATUM: Geodetic BH LOCATION: See Drawing 1	DRILLING DATA Method: Solid Stem Augers Diameter: 150mm Date: Mar-16-2018 REF. NO.: 518-10 ENCL NO.: 16
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SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)		
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE			"N" BLOWS 0.3 m	SHEAR STRENGTH (kPa)									WATER CONTENT (%)	
162.0																		
0.0 161.8	TOPSOIL: 250mm		1	SS	4													
0.3 161.3	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)		2	SS	18													
0.7 161.0	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff		3	SS	23													
2.1 159.9	SHALE: Queenston Formation, highly weathered, reddish brown		4	SS	50/ 50mm													
3.2 158.8	END OF BOREHOLE Notes: 1) Water level at 3.0m upon completion.		5	SS	50/ 50mm													

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-16-2018
 REF. NO.: 518-10
 ENCL NO.: 17

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL	
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40							60
162.0	TOPSOIL: 150mm		1	SS	11											
160.0	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, stiff (weathered/disturbed)															
161.3	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff		2	SS	22											
159.6	TILL/SHALE COMPLEX: silty clay till mixed with shale fragments, reddish brown, moist, hard		4	SS	50/ 50mm											
158.5	END OF BOREHOLE Notes: 1) Water level at 3.4m upon completion.		5	SS	70											

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-16-2018
 REF. NO.: 518-10
 ENCL NO.: 18

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)	
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			SHEAR STRENGTH (kPa)							WATER CONTENT (%)
163.0							20	40	60	80	100	10	20	30	GR SA SI CL
162.9	TOPSOIL: 175mm		1	SS	6										
0.2	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)														
162.3			2	SS	16										
0.7	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff to hard														
1			3	SS	32										
2			4	SS	36										
3			5	SS	31										
4			6	SS	50/										
158.6	SHALE: Queenston Formation, highly weathered, reddish brown														
4.4															
158.3															
4.7	END OF BOREHOLE Notes: 1) Water level at 4.6m upon completion.														

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property CLIENT: Argo Development Corporation PROJECT LOCATION: Dundas Street East, Oakville, ON DATUM: Geodetic BH LOCATION: See Drawing 1	DRILLING DATA Method: Solid Stem Augers Diameter: 150mm Date: Mar-15-2018 REF. NO.: 518-10 ENCL NO.: 19
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SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40	60	80						
164.0																
163.9	TOPSOIL: 150mm	1	SS	6												
0.2	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)															
163.3	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff to hard	2	SS	16												
0.7																
161.8	SHALE: Queenston Formation, highly weathered, reddish brown	4	SS	50/ 100mm												
2.2																
160.8	END OF BOREHOLE Notes: 1) Borehole open and dry upon completion.	5	SS	50/ 75mm												
3.2																

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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





PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-15-2018
 REF. NO.: 518-10
 ENCL NO.: 20

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
165.0															
164.0	TOPSOIL: 125mm		1	SS	7										
164.3	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)		2	SS	20										
164.3	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff to hard		3	SS	31										
164.3			4	SS	38										
164.3			5	SS	41										
160.7	TILL/SHALE COMPLEX: silty clay till mixed with shale fragments, reddish brown, moist, hard		6	SS	98										
159.0	SHALE: Queenston Formation, highly weathered, reddish brown		7	SS	50/50mm										
158.8	END OF BOREHOLE Notes: 1) Borehole open and dry upon completion.														

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS

Measurement    

GRAPH NOTES

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Hollow Stem Augers
 Diameter: 200mm
 Date: Jan-30-2018
 REF. NO.: 518-10
 ENCL NO.: 3

SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
166.0	TOPSOIL: 125mm													
166.0 0.1	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)	1	SS	7										
165.2 0.8	SILTY CLAY TILL: some sand to sandy, trace gravel, occasional cobble/boulder, trace shale fragments, reddish brown, moist, hard	2	SS	44										
164.2 1.8	SHALE: Queenston Formation, highly weathered, reddish brown, moist	3	SS	50/ 75 mm										
		4	SS	50/ 100mm										
		5	SS	50/ 100 mm										
		6	SS	50/ 125 mm										
159.8 6.2	END OF BOREHOLE Notes: 1) Auger refusal at 6.2m. 2) 50mm dia. monitoring well installed upon completion. 3) Water Level Readings Date Water Depth (mbgs) March 21, 2018 2.6 February 13, 2018 2.6	7	SS	50/ 50 mm										

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

W. L. 163.4 m
Mar 21, 2018

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-15-2018
 REF. NO.: 518-10
 ENCL NO.: 21

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
164.0	TOPSOIL: 125mm														
163.5	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, stiff (weathered/disturbed)		1	SS	9										
163.0	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff to hard		2	SS	21										
162.5			3	SS	24										
162.0			4	SS	33										
161.5			5	SS	26										
159.6	SHALE: Queenston Formation, highly weathered, reddish brown		6	SS	50/25mm										
159.3	END OF BOREHOLE Notes: 1) Borehole open and dry upon completion.														

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property CLIENT: Argo Development Corporation PROJECT LOCATION: Dundas Street East, Oakville, ON DATUM: Geodetic BH LOCATION: See Drawing 1	DRILLING DATA Method: Solid Stem Augers Diameter: 150mm Date: Mar-15-2018 REF. NO.: 518-10 ENCL NO.: 22
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SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL	
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40	60	80							100
167.0																		
166.9	TOPSOIL: 100mm		1	SS	7													
166.3	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)		2	SS	24													
166.3	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff to hard		3	SS	39													
164.0			4	SS	43													
163.8	SHALE: Queenston Formation, highly weathered, reddish brown		5	SS	50/75mm													
3.2	END OF BOREHOLE Notes: 1) Borehole open and dry upon completion.																	

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-15-2018
 REF. NO.: 518-10
 ENCL NO.: 23

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL	
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40							60
169.0	TOPSOIL: 125mm CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed) TILL/SHALE COMPLEX: silty clay till mixed with shale fragments, reddish brown, moist, hard		1	SS	5											
168.3			2	SS	28											
168.0			3	SS	73											
166.8			4	SS	50/ 25mm											
165.8			5	SS	50/ 50mm											
3.2	END OF BOREHOLE Notes: 1) Water level at 3.1m upon completion.															

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-15-2018
 REF. NO.: 518-10
 ENCL NO.: 24

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
164.0															
160.0	TOPSOIL: 175mm		1	SS	7										
0.2	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)														
163.3	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff to hard		2	SS	16										
0.7															
1															
2															
3															
4															
5	grey to reddish brown at 3.1m														
159.6															
154.4	SHALE: Queenston Formation, highly weathered, reddish brown		6	SS	50/50mm										
4.6	END OF BOREHOLE Notes: 1) Water level at 4.5m upon completion.														

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property CLIENT: Argo Development Corporation PROJECT LOCATION: Dundas Street East, Oakville, ON DATUM: Geodetic BH LOCATION: See Drawing 1	DRILLING DATA Method: Solid Stem Augers Diameter: 150mm Date: Mar-15-2018 REF. NO.: 518-10 ENCL NO.: 25
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SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE			"N" BLOWS 0.3 m	20						
167.0														
166.8	TOPSOIL: 200mm		1	SS	5									
0.2	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)													
166.3			2	SS	25									
0.7	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff													
164.8			3	SS	29									
2.2	SHALE: highly weathered, grey		4	SS	50/ 25mm									
163.8	grey to reddish brown at 3.0m		5	SS	50/ 5mm									
3.2	END OF BOREHOLE Notes: 1) Water level at 2.7m upon completion.													

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-14-2018
 REF. NO.: 518-10
 ENCL NO.: 26

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
165.0															
164.9	TOPSOIL: 100mm		1	SS	8										
164.2	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, stiff (weathered/disturbed)		2	SS	28										
164.1	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff to hard		3	SS	24										
164.0			4	SS	47										
163.5			5	SS	39										
163.0			6	SS	16										
162.5			7	SS	50/ 25mm										
159.4	TILL/SHALE COMPLEX: silty clay till mixed with shale fragments, grey to reddish brown, moist, hard		8	SS	50/ 75mm										
157.7	SHALE: Queenston Formation, highly weathered, reddish brown														
157.3	END OF BOREHOLE Notes: 1) Water level at 7.6m upon completion.														

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ_DS.GDT_18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-14-2018
 REF. NO.: 518-10
 ENCL NO.: 27

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
167.0															
166.9	TOPSOIL: 125mm		1	SS	7										
166.6	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)		2	SS	21										
0.4	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown to brown, moist, very stiff to hard		3	SS	20										
1															
2															
164.8	SHALE: highly weathered, grey to reddish brown		4	SS	31										
2.2			5	SS	52										
3															
4															
162.3	END OF BOREHOLE Notes: 1) Borehole dry and open upon completion.		6	SS	50/75mm										
4.7															

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property CLIENT: Argo Development Corporation PROJECT LOCATION: Dundas Street East, Oakville, ON DATUM: Geodetic BH LOCATION: See Drawing 1	DRILLING DATA Method: Solid Stem Augers Diameter: 150mm Date: Mar-15-2018 REF. NO.: 518-10 ENCL NO.: 28
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SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				PLASTIC LIMIT	NATURAL MOISTURE CONTENT	LIQUID LIMIT	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)	
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40	60	80							100
169.0																		
168.9	TOPSOIL: 175mm		1	SS	5													
0.2	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)																	
168.3	TILL/SHALE COMPLEX: silty clay till mixed with shale fragments, reddish brown, moist, very stiff to hard		2	SS	22													
0.7																		
1																		
2																		
167			3	SS	50/150mm													
166			4	SS	50/150mm													
166.0																		
166.8	SHALE: highly weathered, grey to reddish brown		5	SS	50/150mm													
3.2	END OF BOREHOLE Notes: 1) Borehole dry and open upon completion.																	

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-13-2018
 REF. NO.: 518-10
 ENCL NO.: 29

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)	
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40	60	80				100
167.0															
166.9	TOPSOIL: 150mm		1	SS	8										
166.6	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, stiff (weathered/disturbed)		2	SS	20										
0.4	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff		3	SS	26										
1			4	SS	24										
2			5	SS	18										
3			6	SS	29										
4															
5															
6															
161.1															
166.9	SHALE: Queenston Formation, highly weathered, reddish brown		7	SS	50/25mm										
6.1	END OF BOREHOLE Notes: 1) Borehole dry and open upon completion.														

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-14-2018
 REF. NO.: 518-10
 ENCL NO.: 30

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
168.0	TOPSOIL: 200mm														
167.0	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, stiff (weathered/disturbed)		1	SS	8										
167.3	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff to hard		2	SS	18										
165.8	TILL/SHALE COMPLEX: silty clay till mixed with shale fragments, reddish brown, moist, hard		3	SS	32										
165.0	SHALE: highly weathered, grey to reddish brown		4	SS	72										
164.8	END OF BOREHOLE Notes: 1) Borehole dry and open upon completion.		5	SS	50/25mm										

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Jan-30-2018
 REF. NO.: 518-10
 ENCL NO.: 4

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (C _u) (kPa)	NATURAL UNIT WT. (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
172.0															
170.0 0.1	TOPSOIL: 125mm		1	SS	6										
171.1 1.0	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)														
170.5 0.9	SILTY CLAY TILL: some sand to sandy, trace gravel, occasional cobble/boulder, trace shale fragments, reddish brown, moist, hard		2	SS	83/ 250mm										
170.5 1.5	TILL/SHALE COMPLEX: silty clay till mixed with shale fragments, reddish brown, moist, hard		3	SS	63										
169.4 2.0	SHALE: Queenston Formation, highly weathered, reddish brown, moist		4	SS	74										
169.4 2.6			5	SS	50/ 75 mm										
168.0 3.0			6	SS	50/ 75mm										
166.8 5.4	auger refusal at 6.2m		7	SS	50/ 75mm										
165.8 6.2	END OF BOREHOLE Notes: 1) Auger refusal at 6.2m. 2) Water level at 5.5m upon completion of borehole.														

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ_DS.GDT_18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-15-2018
 REF. NO.: 518-10
 ENCL NO.: 31

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
170.0															
169.9	TOPSOIL: 150mm		1	SS	5										
0.2	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)		2	SS	16										
169.3	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff to hard		3	SS	24										
0.7			4	SS	39										
1			5	SS	81										
166.8	SHALE: highly weathered, grey to reddish brown														
166.6	END OF BOREHOLE Notes: 1) Borehole dry and open upon completion.														
3.4															

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-13-2018
 REF. NO.: 518-10
 ENCL NO.: 32

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
167.0	TOPSOIL: 125mm														
166.9	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, stiff (weathered/disturbed)		1	SS	8										
166.3	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff to hard		2	SS	24										
166.0			3	SS	20										
165.7			4	SS	41										
165.4			5	SS	34										
165.1			6	SS	22										
164.8			7	SS	26										
164.5			8	SS	50/25mm										
159.6	SHALE: highly weathered, grey to reddish brown														
159.4	END OF BOREHOLE Notes: 1) Borehole dry and open upon completion.														

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ_DS.GDT_18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-13-2018
 REF. NO.: 518-10
 ENCL NO.: 33

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			SHEAR STRENGTH (kPa)						
168.0	TOPSOIL: 175mm													GR SA SI CL
167.3	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)		1	SS	7									
167.3	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff to hard		2	SS	20									
			3	SS	27									
			4	SS	54									
			5	SS	42									
163.1	grey at 4.6m		6	SS	73									
161.9	reddish brown at 6.0m		7	SS	50/25mm									
6.1	END OF BOREHOLE Notes: 1) Borehole dry and open upon completion.													

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-12-2018
 REF. NO.: 518-10
 ENCL NO.: 34

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)			
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40	60	80				100	PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w
166.0	TOPSOIL: 275mm		1	SS	9												
165.7	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed) CLAYEY SILT: trace sand, trace gravel, brown, moist, firm CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff to hard		2	SS	6												
165.3																	
164.6																	
161.6																	
161.6																	
161.6	TILL/SHALE COMPLEX: silty clay till mixed with shale fragments, reddish brown, moist, hard		6	SS	50/50mm												
160.0																	
159.0																	
158.4	END OF BOREHOLE Notes: 1) Borehole dry and open upon completion.																

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ_DS.GDT_18-4-19

GROUNDWATER ELEVATIONS
 Measurement

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-13-2018
 REF. NO.: 518-10
 ENCL NO.: 35

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)				
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			SHEAR STRENGTH (kPa)							WATER CONTENT (%)			
						20	40	60	80	100	W _p	w	W _L	GR	SA	SI	CL	
167.0	TOPSOIL: 125mm		1	SS	8													
166.9	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, stiff (weathered/disturbed)		2	SS	18													
166.3	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff to hard		3	SS	24													
			4	SS	30													
			5	SS	42													
			6	SS	34													
161.1	SHALE: Queenston Formation, highly weathered, reddish brown		7	SS	50/													
160.8	END OF BOREHOLE Notes: 1) Borehole dry and open upon completion.																	

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-13-2018
 REF. NO.: 518-10
 ENCL NO.: 36

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)	
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40	60	80				100
170.0															
169.9	TOPSOIL: 175mm		1	SS	7										
0.2	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, stiff (weathered/disturbed)														
169.3			2	SS	22										
0.7	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, reddish brown, moist, very stiff to hard														
1			3	SS	50/75mm										
2			4	SS	19										
3			5	SS	18										
4			6	SS	13										
5			7	SS	21										
6			8	SS	39										
7															
8.0	END OF BOREHOLE Notes: 1) Borehole dry and open upon completion.														

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ_DS.GDT_18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-13-2018
 REF. NO.: 518-10
 ENCL NO.: 37

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
171.0															
170.9	TOPSOIL: 175mm		1	SS	6										
0.2	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)														
170.3	CLAYEY SILT TILL: some sand to sandy, trace gravel, occasional cobble/boulder, brown, moist, very stiff to hard		2	SS	23										
0.7			3	SS	22										
1			4	SS	30										
2			5	SS	26										
3	reddish brown below 3.0m		6	SS	10										
4			7	SS	49										
5	grey and stiff at 4.6m		8	SS	43										
6			9	SS	39										
7	grey to reddish brown at 6.1m		10	SS	disturbed										
8															
163.7	SILTY SAND: grey, wet, dense														
7.3															
162.2	SAND: grey, wet, compact to dense														
8.8															
9															
10															
11															
12															

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ_DS.GDT_18-4-19

Continued Next Page

GROUNDWATER ELEVATIONS

Measurement 1st 2nd 3rd 4th

GRAPH NOTES

+ 3, × 3: Numbers refer to Sensitivity
 ○ ● = 3% Strain at Failure

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Mar-13-2018
 REF. NO.: 518-10
 ENCL NO.: 37

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT					PLASTIC LIMIT	NATURAL MOISTURE CONTENT	LIQUID LIMIT	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			SHEAR STRENGTH (kPa)										
158.5	SAND: grey, wet, compact to dense(Continued)		11	SS	11													
12.5	END OF BOREHOLE Notes: 1) Water level at 6.1m upon completion.																	

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Jan-30-2018
 REF. NO.: 518-10
 ENCL NO.: 5

SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE			"N" BLOWS 0.3 m	SHEAR STRENGTH (kPa)								
171.0																
170.0	TOPSOIL: 150mm															
0.2	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)		1	SS	6											
170.1																
0.9	SILTY CLAY TILL: some sand to sandy, trace gravel, occasional cobble/boulder, trace shale fragments, reddish brown, moist, hard		2	SS	29											
169.5																
1.5	SHALE: Queenston Formation, highly weathered, reddish brown, moist		3	SS	74											
			4	SS	50/100mm											
			5	SS	50/25mm											
			6	SS	50/125mm											
	wet below 4.6m		7	SS	50/75mm											
164.8	auger refusal at 6.2m															
6.2	END OF BOREHOLE Notes: 1) Water level at 3.7m upon completion of borehole.															

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Jan-31-2018
 REF. NO.: 518-10
 ENCL NO.: 6

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)						
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			SHEAR STRENGTH (kPa)							WATER CONTENT (%)					
							20	40	60	80	100	W _p	w	W _L	GR	SA	SI	CL		
163.0	TOPSOIL: 175mm																			
162.9	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)		1	SS	9															
162.1	SILTY CLAY TILL: some sand to sandy, trace gravel, occasional cobble/boulder, trace shale fragments, reddish brown, moist, hard		2	SS	28															
161.9			3	SS	36															
161.7			4	SS	33															
161.5			5	SS	49															
161.3																				
158.4	SHALE: Queenston Formation, highly weathered, reddish brown, moist		6	SS	50/ 25mm															
156.8	auger refusal at 6.2m		7	SS	50/ 50mm															
6.2	END OF BOREHOLE Notes: 1) Water level at 4.3m upon completion of borehole.																			

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ_DS.GDT_18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Hollow Stem Augers
 Diameter: 200mm
 Date: Jan-31-2018
 REF. NO.: 518-10
 ENCL NO.: 7

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20 40 60 80 100	20 40 60 80 100						
165.0															
164.0	TOPSOIL: 150mm		1	SS	7										
0.2	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)														
164.2	SILTY CLAY TILL: some sand to sandy, trace gravel, occasional cobble/boulder, trace shale fragments, reddish brown, moist, hard		2	SS	33										
0.8															
162.7	SHALE: Queenston Formation, highly weathered, reddish brown, moist		3	SS	33										
2.3															
162.7			4	SS	50/ 75mm										
2.3															
162.7			5		50/ 50mm										wet spoon
2.3															
162.7			6		50/ 50mm										
2.3															
162.7															
160															
160	END OF BOREHOLE Notes: 1) Auger refusal at 5.2m. 2) 50mm dia. monitoring well installed upon completion. 3) Water Level Readings Date Water Depth (mbgs) March 21, 2018 0.8 February 13, 2018 1.0														

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Jan-31-2018
 REF. NO.: 518-10
 ENCL NO.: 8

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%)
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			SHEAR STRENGTH (kPa)						
						20 40 60 80 100 ○ UNCONFINED + FIELD VANE & Sensitivity ● QUICK TRIAXIAL × LAB VANE				W _p	w	W _L	GR SA SI CL	
164.0	TOPSOIL: 100mm													
163.1	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)		1	SS	10									
163.1	SILTY CLAY TILL: some sand to sandy, trace gravel, occasional cobble/boulder, trace shale fragments, reddish brown, moist, hard		2	SS	35									
162.0			3	SS	23									
161.0			4	SS	46									
160.0			5	SS	57									
159.0			6	SS	27									
158.2														
157.6	TILL/SHALE COMPLEX: silty clay till mixed with shale, reddish brown, moist, hard		7	SS	93/275mm									
156.4	SHALE: Queenston Formation, highly weathered, reddish brown, moist													
6.6	END OF BOREHOLE Notes: 1) Borehole open and dry upon completion.													

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Feb-01-2018
 REF. NO.: 518-10
 ENCL NO.: 9

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT				PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40	60	80						
167.0	TOPSOIL: 200mm																
166.8	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)		1	SS	7												
166.2	SILTY CLAY TILL: some sand to sandy, trace gravel, occasional cobble/boulder, trace shale fragments, reddish brown, moist, hard		2	SS	47												
165.5	TILL/SHALE COMPLEX: silty clay till mixed with shale fragments, reddish brown, moist, hard		3	SS	91/ 225mm												
164.7	SHALE: Queenston Formation, highly weathered, reddish brown		4	SS	50/ 50mm												
164.0			5	SS	50/ 75mm												
163.0			6	SS	50/ 50mm												
162.0			7	SS	50/ 25m												
160.8	auger refusal at 6.2m																
6.2	END OF BOREHOLE Notes: 1) Water level at 6.0m upon completion of borehole.																

DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

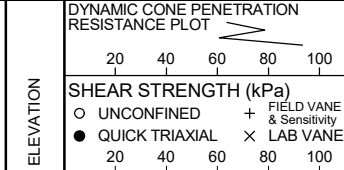
GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

PROJECT: Geotechnical Investigation- Diam Property
 CLIENT: Argo Development Corporation
 PROJECT LOCATION: Dundas Street East, Oakville, ON
 DATUM: Geodetic
 BH LOCATION: See Drawing 1

DRILLING DATA
 Method: Solid Stem Augers
 Diameter: 150mm
 Date: Jan-31-2018
 REF. NO.: 518-10
 ENCL NO.: 10

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W _L	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m ³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
169.0	TOPSOIL: 150mm														
168.0	CLAYEY SILT: trace topsoil/organics, trace to some sand, trace gravel, reddish brown, moist, firm (weathered/disturbed)		1	SS	9										
168.1	SILTY CLAY TILL: some sand to sandy, trace gravel, occasional cobble/boulder, trace shale fragments, reddish brown, moist, hard		2	SS	32										
168.1			3	SS	36										
167.0			4	SS	50/ 25mm										
165.9			5	SS	50/ 25mm										
164.1	SHALE: Queenston Formation, highly weathered, reddish brown		6	SS	50/ 25mm										
164.1	END OF BOREHOLE Notes: 1) Auger refusal at 4.9m. 2) 50mm dia. monitoring well installed upon completion. 3) Water Level Readings Date Water Depth (mbgs) March 21, 2018 1.5 February 13, 2018 1.9														



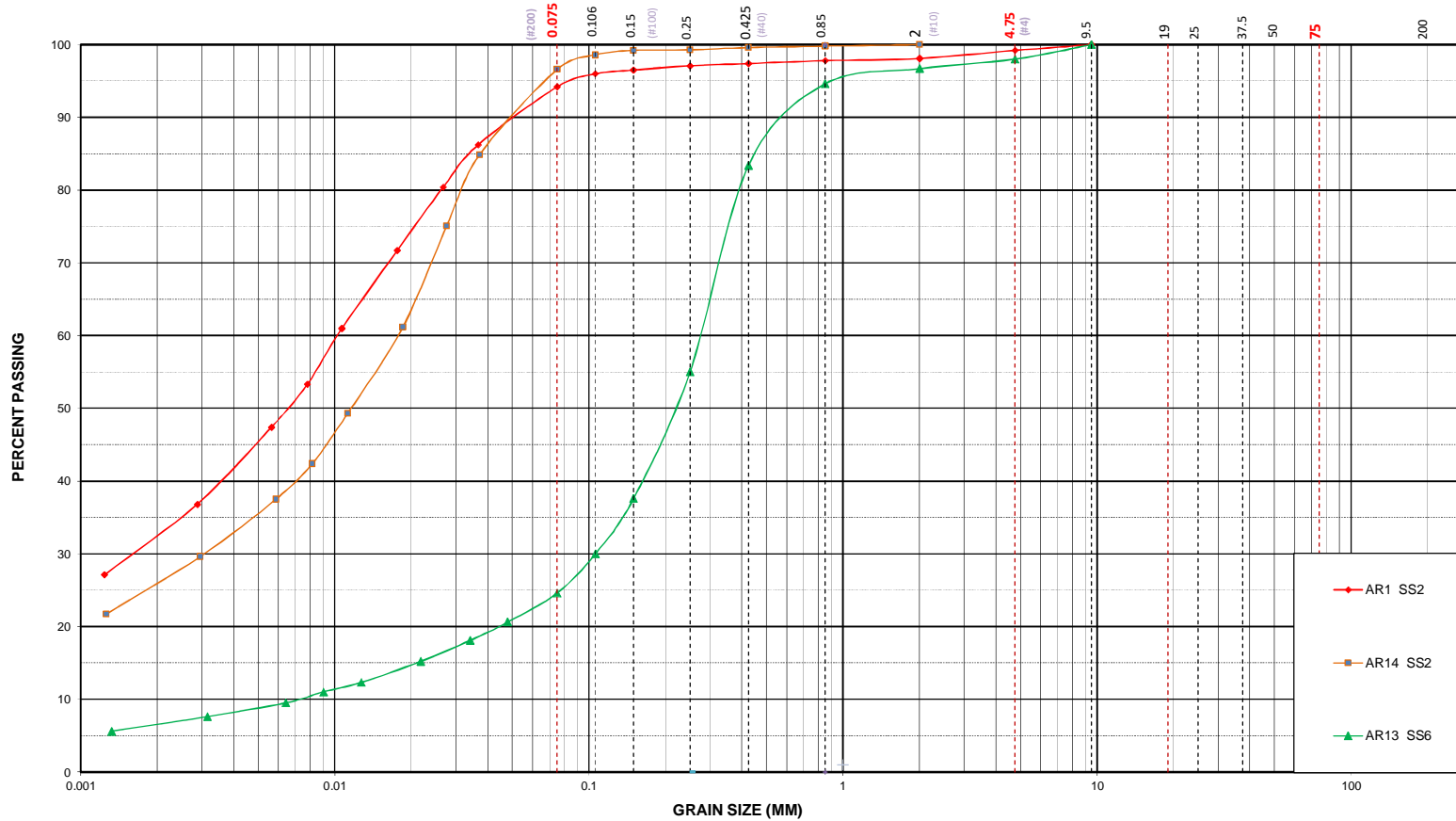
DS SOIL LOG- DIAM PROPERTY- DUNDAS ST E, OAKVILLE-ARGO.GPJ DS.GDT 18-4-19

GROUNDWATER ELEVATIONS
 Measurement 1st 2nd 3rd 4th

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

Appendix C
Grain Size Analysis

Particle Size Distribution (ASTM-D421/D422)



Silt and Clay		Sand			Gravel		Cobble +
Clay	Silt	Fine	Medium	Coarse	Fine	Coarse	
Specification and Comments:							
 Geotechnical • Environmental • Materials • Hydrogeology		Project: Diam Property ,Oakville			Project No.: 18-518-10		
		Client: ARGO			Date: March-19-2018		
		Location: Oakville, ON.			Figure No.: 1/1		

Appendix D
Certificates of Analysis

**CLIENT NAME: DS CONSULTING
6221 HIGHWAY 7 WEST, UNIT #16
VAUGHAN, ON L4H 0K8
905-264-9393**

ATTENTION TO: Shafi Andseta

PROJECT: 518-20

AGAT WORK ORDER: 18T308900

SOIL ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

TRACE ORGANICS REVIEWED BY: Gyulhan Yalamova, Report Reviewer

DATE REPORTED: Feb 13, 2018

PAGES (INCLUDING COVER): 16

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

Certificate of Analysis

AGAT WORK ORDER: 18T308900

PROJECT: 518-20

CLIENT NAME: DS CONSULTING

SAMPLING SITE: Dundas St, Oakville

ATTENTION TO: Shafi Andseta

SAMPLED BY: Simarjeet S

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2018-02-06

DATE REPORTED: 2018-02-13

Parameter	Unit	SAMPLE DESCRIPTION:		RDL	AR-4 - SS-1	AR-6 - SS-2	AR-9 - SS-1	AR-13 - SS-3	AR-7 - SS-2	Dup-2
		SAMPLE TYPE:			Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:			2018-01-30	2018-01-31	2018-01-31	2018-02-01	2018-01-31	2018-01-30
		G / S: A	G / S: B		9051255	9051262	9051268	9051289	9051299	9051302
Antimony	µg/g	1.3	1.3	0.8	<0.8[<A]	<0.8[<A]	<0.8[<A]	<0.8[<A]	<0.8[<A]	<0.8[<A]
Arsenic	µg/g	18	18	1	5[<A]	6[<A]	11[<A]	6[<A]	6[<A]	6[<A]
Barium	µg/g	220	220	2	76[<A]	107[<A]	85[<A]	100[<A]	76[<A]	79[<A]
Beryllium	µg/g	2.5	2.5	0.5	0.9[<A]	0.8[<A]	0.8[<A]	0.7[<A]	0.8[<A]	1.0[<A]
Boron	µg/g	36	36	5	18[<A]	18[<A]	14[<A]	12[<A]	15[<A]	20[<A]
Boron (Hot Water Soluble)	µg/g	NA	1.5	0.10	0.19[<B]	1.26[<B]	0.22[<B]	0.24[<B]	1.24[<B]	0.23[<B]
Cadmium	µg/g	1.2	1.2	0.5	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]
Chromium	µg/g	70	70	2	23[<A]	21[<A]	19[<A]	20[<A]	20[<A]	24[<A]
Cobalt	µg/g	21	22	0.5	13.7[<A]	12.6[<A]	12.9[<A]	12.6[<A]	12.9[<A]	13.2[<A]
Copper	µg/g	92	92	1	8[<A]	35[<A]	22[<A]	28[<A]	30[<A]	9[<A]
Lead	µg/g	120	120	1	9[<A]	9[<A]	9[<A]	10[<A]	9[<A]	10[<A]
Molybdenum	µg/g	2	2	0.5	0.8[<A]	0.9[<A]	0.7[<A]	0.7[<A]	0.8[<A]	1.1[<A]
Nickel	µg/g	82	82	1	33[<A]	29[<A]	28[<A]	29[<A]	28[<A]	32[<A]
Selenium	µg/g	1.5	1.5	0.4	<0.4[<A]	<0.4[<A]	<0.4[<A]	<0.4[<A]	<0.4[<A]	<0.4[<A]
Silver	µg/g	0.5	0.5	0.2	<0.2[<A]	<0.2[<A]	<0.2[<A]	<0.2[<A]	<0.2[<A]	<0.2[<A]
Thallium	µg/g	1	1	0.4	<0.4[<A]	<0.4[<A]	<0.4[<A]	<0.4[<A]	<0.4[<A]	<0.4[<A]
Uranium	µg/g	2.5	2.5	0.5	<0.5[<A]	1.1[<A]	0.6[<A]	0.8[<A]	0.8[<A]	<0.5[<A]
Vanadium	µg/g	86	86	1	25[<A]	27[<A]	26[<A]	24[<A]	24[<A]	26[<A]
Zinc	µg/g	290	290	5	62[<A]	61[<A]	56[<A]	62[<A]	60[<A]	65[<A]
Chromium VI	µg/g	0.66	0.66	0.2	0.3[<A]	<0.2[<A]	<0.2[<A]	<0.2[<A]	<0.2[<A]	<0.2[<A]
Cyanide	µg/g	0.051	0.051	0.040	<0.040[<A]	<0.040[<A]	<0.040[<A]	<0.040[<A]	<0.040[<A]	<0.040[<A]
Mercury	µg/g	0.27	0.27	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
Electrical Conductivity	mS/cm	0.57	0.7	0.005	0.115[<A]	0.125[<A]	0.183[<A]	0.357[<A]	0.805[>B]	0.129[<A]
Sodium Adsorption Ratio	NA	2.4	5	NA	0.162[<A]	2.13[<A]	0.858[<A]	0.214[<A]	2.09[<A]	0.151[<A]
pH, 2:1 CaCl2 Extraction	pH Units			NA	7.81	7.98	7.88	7.87	8.00	7.81
pH 2:1 Extr.	N/A			N/A	Y	Y	Y	Y	Y	Y

Certified By:

Jris Veraestegui



Certificate of Analysis

AGAT WORK ORDER: 18T308900

PROJECT: 518-20

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: DS CONSULTING

SAMPLING SITE: Dundas St, Oakville

ATTENTION TO: Shafi Andseta

SAMPLED BY: Simarjeet S

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2018-02-06

DATE REPORTED: 2018-02-13

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use, B Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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9051255-9051302 EC & SAR were determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl₂ extract prepared at 2:1 ratio.

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 18T308900

PROJECT: 518-20

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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<http://www.agatlabs.com>

CLIENT NAME: DS CONSULTING

SAMPLING SITE: Dundas St, Oakville

ATTENTION TO: Shafi Andseta

SAMPLED BY: Simarjeet S

O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2018-02-06

DATE REPORTED: 2018-02-13

Parameter	Unit	SAMPLE DESCRIPTION:		RDL	AR-1 - SS-2	AR-2 - SS-3	AR-8 - SS-3	AR-12 - SS-2	AR-6 - SS-1	Dup-3
		SAMPLE TYPE:			Soil	Soil	Soil	Soil	Soil	Soil
		G / S: A	G / S: B		2018-01-30	2018-01-30	2018-02-01	2018-02-02	2018-01-31	2018-02-02
Hexachloroethane	µg/g	0.01	0.01	0.01	<0.01[<A]	<0.01[<A]	<0.01[<A]	<0.01[<A]	<0.01[<A]	<0.01[<A]
Gamma-Hexachlorocyclohexane	µg/g	0.01	0.01	0.005	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]
Heptachlor	µg/g	0.05	0.05	0.005	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]
Aldrin	µg/g	0.05	0.05	0.005	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]
Heptachlor Epoxide	µg/g	0.05	0.05	0.005	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]
Endosulfan	µg/g	0.04	0.04	0.005	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]
Chlordane	µg/g	0.05	0.05	0.007	<0.007[<A]	<0.007[<A]	<0.007[<A]	<0.007[<A]	<0.007[<A]	<0.007[<A]
DDE	µg/g	0.05	0.05	0.007	<0.007[<A]	<0.007[<A]	<0.007[<A]	<0.007[<A]	<0.007[<A]	<0.007[<A]
DDD	µg/g	0.05	0.05	0.007	<0.007[<A]	<0.007[<A]	<0.007[<A]	<0.007[<A]	<0.007[<A]	<0.007[<A]
DDT	µg/g	1.4	1.4	0.007	<0.007[<A]	<0.007[<A]	<0.007[<A]	<0.007[<A]	<0.007[<A]	<0.007[<A]
Dieldrin	µg/g	0.05	0.05	0.005	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]
Endrin	µg/g	0.04	0.04	0.005	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]
Methoxychlor	µg/g	0.05	0.05	0.005	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]
Hexachlorobenzene	µg/g	0.01	0.02	0.005	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]	<0.005[<A]
Hexachlorobutadiene	µg/g	0.01	0.01	0.01	<0.01[<A]	<0.01[<A]	<0.01[<A]	<0.01[<A]	<0.01[<A]	<0.01[<A]
Moisture Content	%			0.1	9.2	8.4	6.6	14.2	17.0	10.8
Surrogate	Unit	Acceptable Limits								
TCMX	%	50-140			70	66	62	80	76	66
Decachlorobiphenyl	%	60-130			84	70	74	92	80	70

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use, B Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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9051250-9051303 Results are based on the dry weight of the soil.
Note: DDT applies to the total of op'DDT and pp'DDT, DDD applies to the total of op'DDD and pp'DDD and DDE applies to the total of op'DDE and pp'DDE. Endosulfan applies to the total of Endosulfan I and Endosulfan II.
Chlordane applies to the total of Alpha-Chlordane and Gamma-Chlordane.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18T308900

PROJECT: 518-20

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CLIENT NAME: DS CONSULTING

SAMPLING SITE: Dundas St, Oakville

ATTENTION TO: Shafi Andseta

SAMPLED BY: Simarjeet S

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

DATE RECEIVED: 2018-02-06

DATE REPORTED: 2018-02-13

Parameter	Unit	SAMPLE DESCRIPTION:		RDL	AR-3 - SS-7	AR-5 - SS-2	AR-9 - SS-2	Dup-1
		SAMPLE TYPE:			Soil	Soil	Soil	Soil
		DATE SAMPLED:			2018-01-30	2018-01-31	2018-01-31	2018-01-31
		G / S: A	G / S: B		9051253	9051256	9051265	9051300
Benzene	µg/g	0.02	0.02	0.02	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]
Toluene	µg/g	0.2	0.2	0.08	<0.08[<A]	<0.08[<A]	<0.08[<A]	<0.08[<A]
Ethylbenzene	µg/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Xylene Mixture	µg/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
F1 (C6 to C10)	µg/g	25		5	<5[<A]	<5[<A]	<5[<A]	<5[<A]
F1 (C6 to C10) minus BTEX	µg/g	25	25	5	<5[<A]	<5[<A]	<5[<A]	<5[<A]
F2 (C10 to C16)	µg/g	10	10	10	<10[<A]	<10[<A]	<10[<A]	<10[<A]
F3 (C16 to C34)	µg/g	240	240	50	<50[<A]	<50[<A]	<50[<A]	<50[<A]
F4 (C34 to C50)	µg/g	120	120	50	<50[<A]	<50[<A]	<50[<A]	<50[<A]
Gravimetric Heavy Hydrocarbons	µg/g	120	120	50	NA[<A]	NA[<A]	NA[<A]	NA[<A]
Moisture Content	%			0.1	9.8	13.6	11.7	11.5
Surrogate	Unit	Acceptable Limits						
Terphenyl	%	60-140			99	76	96	93

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use, B Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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9051253-9051300 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18T308900

PROJECT: 518-20

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CLIENT NAME: DS CONSULTING

SAMPLING SITE: Dundas St, Oakville

ATTENTION TO: Shafi Andseta

SAMPLED BY: Simarjeet S

O. Reg. 153(511) - VOCs (Soil)

DATE RECEIVED: 2018-02-06

DATE REPORTED: 2018-02-13

Parameter	Unit	SAMPLE DESCRIPTION:		RDL	AR-10 - SS-2	AR-11 - SS-7
		SAMPLE TYPE:			Soil	Soil
		DATE SAMPLED:			2018-02-01	2018-02-01
		G / S: A	G / S: B		9051271	9051282
Dichlorodifluoromethane	µg/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
Vinyl Chloride	ug/g	0.02	0.02	0.02	<0.02[<A]	<0.02[<A]
Bromomethane	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
Trichlorofluoromethane	ug/g	0.25	0.25	0.05	<0.05[<A]	<0.05[<A]
Acetone	ug/g	0.5	0.5	0.50	<0.50[<A]	<0.50[<A]
1,1-Dichloroethylene	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
Methylene Chloride	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
Methyl tert-butyl Ether	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
1,1-Dichloroethane	ug/g	0.05	0.05	0.02	<0.02[<A]	<0.02[<A]
Methyl Ethyl Ketone	ug/g	0.5	0.5	0.50	<0.50[<A]	<0.50[<A]
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.05	0.02	<0.02[<A]	<0.02[<A]
Chloroform	ug/g	0.05	0.05	0.04	<0.04[<A]	<0.04[<A]
1,2-Dichloroethane	ug/g	0.05	0.05	0.03	<0.03[<A]	<0.03[<A]
1,1,1-Trichloroethane	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
Carbon Tetrachloride	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
Benzene	ug/g	0.02	0.02	0.02	<0.02[<A]	<0.02[<A]
1,2-Dichloropropane	ug/g	0.05	0.05	0.03	<0.03[<A]	<0.03[<A]
Trichloroethylene	ug/g	0.05	0.05	0.03	<0.03[<A]	<0.03[<A]
Bromodichloromethane	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
Methyl Isobutyl Ketone	ug/g	0.5	0.5	0.50	<0.50[<A]	<0.50[<A]
1,1,2-Trichloroethane	ug/g	0.05	0.05	0.04	<0.04[<A]	<0.04[<A]
Toluene	ug/g	0.2	0.2	0.02	<0.02[<A]	<0.02[<A]
Dibromochloromethane	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
Ethylene Dibromide	ug/g	0.05	0.05	0.04	<0.04[<A]	<0.04[<A]
Tetrachloroethylene	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.05	0.04	<0.04[<A]	<0.04[<A]
Chlorobenzene	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
Ethylbenzene	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
m & p-Xylene	ug/g			0.05	<0.05	<0.05

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18T308900

PROJECT: 518-20

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CLIENT NAME: DS CONSULTING

SAMPLING SITE: Dundas St, Oakville

ATTENTION TO: Shafi Andseta

SAMPLED BY: Simarjeet S

O. Reg. 153(511) - VOCs (Soil)

DATE RECEIVED: 2018-02-06

DATE REPORTED: 2018-02-13

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S: A		G / S: B		RDL
		2018-02-01		2018-02-01		2018-02-01
		9051271		9051282		9051282
Bromoform	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
Styrene	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
o-Xylene	ug/g			0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
1,4-Dichlorobenzene	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
1,2-Dichlorobenzene	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
Xylene Mixture	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
1,3-Dichloropropene	µg/g	0.05	0.05	0.04	<0.04[<A]	<0.04[<A]
n-Hexane	µg/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]
Moisture Content	%			0.1	11.1	8.4
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140			87	85
4-Bromofluorobenzene	% Recovery	50-140			87	87

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use, B Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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9051271-9051282 The sample was analysed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Certified By:





Guideline Violation

AGAT WORK ORDER: 18T308900

PROJECT: 518-20

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CLIENT NAME: DS CONSULTING

ATTENTION TO: Shafi Andseta

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
9051299	AR-7 - SS-2	ON T1 S RPI/ICC	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity	mS/cm	0.57	0.805
9051299	AR-7 - SS-2	ON T8 S RPI/ICC	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity	mS/cm	0.7	0.805

Quality Assurance

CLIENT NAME: DS CONSULTING

AGAT WORK ORDER: 18T308900

PROJECT: 518-20

ATTENTION TO: Shafi Andseta

SAMPLING SITE: Dundas St, Oakville

SAMPLED BY: Simarjeet S

Soil Analysis															
RPT Date: Feb 13, 2018			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - Metals & Inorganics (Soil)

Antimony	9050534		<0.8	<0.8	NA	< 0.8	110%	70%	130%	108%	80%	120%	86%	70%	130%
Arsenic	9050534		5	5	0.0%	< 1	115%	70%	130%	106%	80%	120%	111%	70%	130%
Barium	9050534		89	87	2.3%	< 2	115%	70%	130%	101%	80%	120%	120%	70%	130%
Beryllium	9050534		0.7	0.8	NA	< 0.5	93%	70%	130%	111%	80%	120%	108%	70%	130%
Boron	9050534		8	8	NA	< 5	81%	70%	130%	107%	80%	120%	94%	70%	130%
Boron (Hot Water Soluble)	9055256		0.25	0.24	NA	< 0.10	106%	60%	140%	100%	70%	130%	98%	60%	140%
Cadmium	9050534		<0.5	<0.5	NA	< 0.5	109%	70%	130%	102%	80%	120%	113%	70%	130%
Chromium	9050534		20	19	5.1%	< 2	86%	70%	130%	94%	80%	120%	96%	70%	130%
Cobalt	9050534		11.6	11.5	0.9%	< 0.5	91%	70%	130%	93%	80%	120%	93%	70%	130%
Copper	9050534		30	30	0.0%	< 1	98%	70%	130%	101%	80%	120%	114%	70%	130%
Lead	9050534		13	13	0.0%	< 1	109%	70%	130%	90%	80%	120%	100%	70%	130%
Molybdenum	9050534		0.6	0.6	NA	< 0.5	100%	70%	130%	96%	80%	120%	104%	70%	130%
Nickel	9050534		24	24	0.0%	< 1	102%	70%	130%	102%	80%	120%	101%	70%	130%
Selenium	9050534		0.6	0.6	NA	< 0.4	113%	70%	130%	105%	80%	120%	109%	70%	130%
Silver	9050534		<0.2	<0.2	NA	< 0.2	80%	70%	130%	92%	80%	120%	88%	70%	130%
Thallium	9050534		<0.4	<0.4	NA	< 0.4	92%	70%	130%	105%	80%	120%	108%	70%	130%
Uranium	9050534		0.5	<0.5	NA	< 0.5	89%	70%	130%	98%	80%	120%	108%	70%	130%
Vanadium	9050534		25	25	0.0%	< 1	89%	70%	130%	97%	80%	120%	88%	70%	130%
Zinc	9050534		65	69	6.0%	< 5	104%	70%	130%	100%	80%	120%	115%	70%	130%
Chromium VI	9050970		<0.2	<0.2	NA	< 0.2	77%	70%	130%	93%	80%	120%	94%	70%	130%
Cyanide	9048844		<0.040	<0.040	NA	< 0.040	105%	70%	130%	92%	80%	120%	98%	70%	130%
Mercury	9050534		<0.10	<0.10	NA	< 0.10	113%	70%	130%	102%	80%	120%	106%	70%	130%
Electrical Conductivity	9050548		0.787	0.813	3.2%	< 0.005	99%	90%	110%	NA			NA		
Sodium Adsorption Ratio	9050548		17.3	18.2	5.1%	NA	NA			NA			NA		
pH, 2:1 CaCl2 Extraction	9048844		7.82	7.91	1.1%	NA	102%	80%	120%	NA			NA		

Comments: NA signifies Not Applicable.

Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Certified By: _____

Jris Verastegui

Quality Assurance

CLIENT NAME: DS CONSULTING

AGAT WORK ORDER: 18T308900

PROJECT: 518-20

ATTENTION TO: Shafi Andseta

SAMPLING SITE: Dundas St, Oakville

SAMPLED BY: Simarjeet S

Trace Organics Analysis (Continued)

RPT Date: Feb 13, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,1,1-Trichloroethane	9055339		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	100%	60%	130%	94%	50%	140%
Carbon Tetrachloride	9055339		< 0.05	< 0.05	NA	< 0.05	73%	50%	140%	96%	60%	130%	93%	50%	140%
Benzene	9055339		< 0.02	< 0.02	NA	< 0.02	88%	50%	140%	91%	60%	130%	98%	50%	140%
1,2-Dichloropropane	9055339		< 0.03	< 0.03	NA	< 0.03	80%	50%	140%	90%	60%	130%	87%	50%	140%
Trichloroethylene	9055339		< 0.03	< 0.03	NA	< 0.03	73%	50%	140%	91%	60%	130%	92%	50%	140%
Bromodichloromethane	9055339		< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	100%	60%	130%	99%	50%	140%
Methyl Isobutyl Ketone	9055339		< 0.50	< 0.50	NA	< 0.50	72%	50%	140%	85%	50%	140%	81%	50%	140%
1,1,2-Trichloroethane	9055339		< 0.04	< 0.04	NA	< 0.04	96%	50%	140%	97%	60%	130%	94%	50%	140%
Toluene	9055339		< 0.02	< 0.02	NA	< 0.02	84%	50%	140%	87%	60%	130%	87%	50%	140%
Dibromochloromethane	9055339		< 0.05	< 0.05	NA	< 0.05	79%	50%	140%	90%	60%	130%	83%	50%	140%
Ethylene Dibromide	9055339		< 0.04	< 0.04	NA	< 0.04	87%	50%	140%	91%	60%	130%	85%	50%	140%
Tetrachloroethylene	9055339		< 0.05	< 0.05	NA	< 0.05	79%	50%	140%	90%	60%	130%	85%	50%	140%
1,1,1,2-Tetrachloroethane	9055339		< 0.04	< 0.04	NA	< 0.04	103%	50%	140%	89%	60%	130%	82%	50%	140%
Chlorobenzene	9055339		< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	91%	60%	130%	90%	50%	140%
Ethylbenzene	9055339		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	84%	60%	130%	82%	50%	140%
m & p-Xylene	9055339		< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	92%	60%	130%	92%	50%	140%
Bromoform	9055339		< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	90%	60%	130%	79%	50%	140%
Styrene	9055339		< 0.05	< 0.05	NA	< 0.05	73%	50%	140%	81%	60%	130%	75%	50%	140%
1,1,2,2-Tetrachloroethane	9055339		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	103%	60%	130%	89%	50%	140%
o-Xylene	9055339		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	95%	60%	130%	93%	50%	140%
1,3-Dichlorobenzene	9055339		< 0.05	< 0.05	NA	< 0.05	83%	50%	140%	82%	60%	130%	79%	50%	140%
1,4-Dichlorobenzene	9055339		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	95%	60%	130%	88%	50%	140%
1,2-Dichlorobenzene	9055339		< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	85%	60%	130%	82%	50%	140%
1,3-Dichloropropene	9055339		< 0.04	< 0.04	NA	< 0.04	86%	50%	140%	90%	60%	130%	102%	50%	140%
n-Hexane	9055339		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	92%	60%	130%	91%	50%	140%

Comments:

When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: _____



Method Summary

CLIENT NAME: DS CONSULTING

AGAT WORK ORDER: 18T308900

PROJECT: 518-20

ATTENTION TO: Shafi Andseta

SAMPLING SITE: Dundas St, Oakville

SAMPLED BY: Simarjeet S

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Barium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Boron	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	EPA SW 846 6010C; MSA, Part 3, Ch.21	ICP/OES
Cadmium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Chromium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Cobalt	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Copper	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Lead	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Molybdenum	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Nickel	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Selenium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Silver	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Thallium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Uranium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Zinc	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Chromium VI	INOR-93-6029	SM 3500 B; MSA Part 3, Ch. 25	SPECTROPHOTOMETER
Cyanide	INOR-93-6052	MOE CN-3015 & E 3009 A; SM 4500 CN	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Electrical Conductivity	INOR-93-6036	McKeague 4.12, SM 2510 B	EC METER
Sodium Adsorption Ratio	INOR-93-6007	McKeague 4.12 & 3.26 & EPA SW-846 6010B	ICP/OES
pH, 2:1 CaCl ₂ Extraction	INOR-93-6031	MSA part 3 & SM 4500-H+ B	PH METER
pH 2:1 Extr.	INOR-93-6031	MSA part 3 & SM 4500-H+ B	N/A

Method Summary

CLIENT NAME: DS CONSULTING
AGAT WORK ORDER: 18T308900
PROJECT: 518-20
ATTENTION TO: Shafi Andseta
SAMPLING SITE: Dundas St, Oakville
SAMPLED BY: Simarjeet S

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Hexachloroethane	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Aldrin	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor Epoxide	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Endosulfan	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Chlordane	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
DDE	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
DDD	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
DDT	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Dieldrin	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Endrin	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Methoxychlor	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobenzene	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobutadiene	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
TCMX	ORG-91-5112	EPA SW-846 3541,3620 & 8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Moisture Content		MOE E3139	BALANCE
Benzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Toluene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Ethylbenzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Xylene Mixture	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
F1 (C6 to C10)	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
F2 (C10 to C16)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
F3 (C16 to C34)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
F4 (C34 to C50)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009		GC/FID
Dichlorodifluoromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromomethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Acetone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Chloroform	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Benzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS

Method Summary

CLIENT NAME: DS CONSULTING
AGAT WORK ORDER: 18T308900
PROJECT: 518-20
ATTENTION TO: Shafi Andseta
SAMPLING SITE: Dundas St, Oakville
SAMPLED BY: Simarjeet S

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,2-Dichloropropane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Toluene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromoform	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Styrene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
o-Xylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Xylene Mixture	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
n-Hexane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Toluene-d8	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Moisture Content	VOL-91-5002	MOE E3139	BALANCE



AGAT Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
web@earthlagatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:
 Company: D.S. Consultants Ltd
 Contact: 6221 Highway 7, Unit 16
Vaughan, ON, L4H 0K8
 Address: 905-764-9353 Fax: 905-764-9353
 Phone: Shafiq-consultants@rogers.com
 Reports to be sent to:
 1. Email: Shafiq-consultants@rogers.com
 2. Email:

Project Information:
 Project: S18-20
 Site Location: Dundas St Oakville
 Sampled By: Simoneet S
 AGAT Quote #:

Invoice Information:
 Company:
 Contact:
 Address:
 Email:
 Bill To Same: Yes No
 PO: PO
 Please note: If quotation number is not provided, client will be billed full price for analysis.

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions
AR-1 - SS-2	Jan 30		1	Soil	
AR-2 - SS-3	Jan 30		1		
AR-3 - SS-7	Jan 30		2		
AR-4 - SS-1	Jan 30		1		
AR-5 - SS-2	Jan 31		2		
AR-6 - SS-9	Jan 31		1		
AR-8 - SS-3	Feb 01		1		
AR-9 - SS-2	Jan 31		2		
AR-9 - SS-1	Jan 31		1		
AR-10 - SS-2	Feb 01		2		
AR-11 - SS-7	Feb 01		2		

Samples Retained by (Print Name and Sign): Ray
 Date: Feb 3 2018 Time: 12:30
 Samples Released by (Print Name and Sign): Ray
 Date: 2018/2/6 Time: 8:47
 Samples Received by (Print Name and Sign):
 Date: Time:

Laboratory Use Only
 Work Order #: 18T 308900
 Cooler Quantity: None
 Arrival Temperatures: 4.8 | 4.5 | 4.8
3.4 | 3.8 | 3.4
 Custody Seal Intact: Yes No N/A
 Notes:

Turnaround Time (TAT) Required:
 Regular TAT 5 to 7 Business Days
 Rush TAT (rush surcharges apply)
 3 Business Days 2 Business Days Next Business Day
 OR Date Required (Rush Surcharges May Apply):
 Please provide prior notification for rush TAT
 *TAT is exclusive of weekends and statutory holidays
 For 'Same Day' analysis, please contact your AGAT CPM

Metals and Inorganics	Field Filtered - Metals, Hg, CrVI	Regulation/Custom Metals	Volatiles: VOC BTEX THM	PHCs F1 - F4	ABNs	PAHs	PCBs: Total Aroclors	Organochlorine Pesticides	TCLP: M&I VOCs ABNs B(a)P PCBs	Sewer Use
<input checked="" type="checkbox"/> All Metals 153 Metals (excl. Hydrides)		<input checked="" type="checkbox"/> All Metals 153 Metals (incl. Hydrides)	<input checked="" type="checkbox"/> NO ₂ <input checked="" type="checkbox"/> NO ₃ <input checked="" type="checkbox"/> NH ₃ <input checked="" type="checkbox"/> TN	<input checked="" type="checkbox"/> X	<input checked="" type="checkbox"/> X		<input checked="" type="checkbox"/> X	<input checked="" type="checkbox"/> X		
<input checked="" type="checkbox"/> ORPs: B-HWS Cl CN		<input checked="" type="checkbox"/> Full Metals Scan		<input checked="" type="checkbox"/> X						
<input checked="" type="checkbox"/> Hydride Metals 153 Metals (excl. Hydrides)		<input checked="" type="checkbox"/> B-H SAR								
<input checked="" type="checkbox"/> C ¹⁴ EC POC Hg		<input checked="" type="checkbox"/> B-H EC POC Hg								

Date: 2018/2/6 Time: 8:47
 Page 1 of 2
 No: **T 066638**



AGAT Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.742.5422
web@earth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:
Company: D.S. Consultants Ltd
Contact: _____
Address: 6221 Highway 7, Unit 16
Vaughan ON L4A 0K8
Phone: 905-264-9393 Fax: _____
Reports to be sent to:
1. Email: shafi.ahmed@dsconsultants.ca
2. Email: _____

Project Information:
Project: S18-20
Site Location: Dundas, Oakville
Sampled By: Simejers
AGAT Quote #: _____
PO: _____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:
Company: _____
Contact: _____
Address: _____
Email: _____
Bill To Same: Yes No

Regulatory Requirements: No Regulatory Requirement
(Please check all applicable boxes)
 Regulation 153/04
Table 1, B Regulation 558
 Sewer Use OCME
 Ind/Com Res/Park Prov. Water Quality Objectives (PWQO)
 Res/Park Agriculture Other
Soil Texture (Check One) Region _____
 Coarse Fine MISA
Indicate One

Report Outline on Certificate of Analysis
Is this submission for a Record of Site Condition?
 Yes No

Sample Matrix Legend
B Blota
GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water

Laboratory Use Only
Work Order #: _____
Cooler Quantity: Med
Arrival Temperatures: 4.8 4.5 4.2
Custody Seal Intact: Yes No N/A
Notes: _____

Turnaround Time (TAT) Required:
Regular TAT 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply) 3 Business Days 2 Business Days Next Business Day
OR Date Required (Rush Surcharges May Apply): _____
Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays
For 'Same Day' analysis, please contact your AGAT CPM

Field Filtered - Metals, Hg, Cyl	Y/N	Comments/Special Instructions
Metals and Inorganics	X	
All Metals <input type="checkbox"/> 153 Metals (excl. Hydrides)	X	
Hydride Metals <input type="checkbox"/> 153 Metals (incl. Hydrides)	X	
DRPs <input type="checkbox"/> B-HWS <input type="checkbox"/> C <input type="checkbox"/> CN	X	
C+ EC <input type="checkbox"/> FOC <input type="checkbox"/> HR	X	
pH <input type="checkbox"/> SAR	X	
Full Metals Scan		
Regulation/Custom Metals		
Nutrients: <input type="checkbox"/> TP <input type="checkbox"/> NH ₃ <input type="checkbox"/> TN		
NO ₂ <input type="checkbox"/> NO ₃ <input type="checkbox"/> NO ₂ -NO ₃		
Volatiles: <input type="checkbox"/> VOC <input type="checkbox"/> BTEX <input type="checkbox"/> THM		
PHCs F1 - F4	X	
ABNs		
PAHs		
PBS: <input type="checkbox"/> Total <input type="checkbox"/> Aroclors	X	
Organochlorine Pesticides	X	
TCLP: <input type="checkbox"/> M&I <input type="checkbox"/> VOCs <input type="checkbox"/> ABNs <input type="checkbox"/> BAP <input type="checkbox"/> PCBs		
Sewer Use		

Date	Time	Date	Time	Date	Time
2018/2/16	8:47				
2018/2/16	2:30				
2018/2/16					

Samples Returned by (Print Name and Sign): Ray
Samples Returned by (Print Name and Sign): Ray
Samples Returned by (Print Name and Sign): _____

Page 2 of 2
No. T 066637

CLIENT NAME: DS CONSULTANTS LTD.
6221 HIGHWAY 7 WEST, UNIT #16
VAUGHAN, ON L4H 0K8
905-264-9393

ATTENTION TO: Shafi Andseta

PROJECT: 18-518-20

AGAT WORK ORDER: 18T322612

TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Mar 29, 2018

PAGES (INCLUDING COVER): 13

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

Certificate of Analysis

AGAT WORK ORDER: 18T322612

PROJECT: 18-518-20

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: DS CONSULTANTS LTD.

ATTENTION TO: Shafi Andseta

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - OC Pesticides (Water)

DATE RECEIVED: 2018-03-22

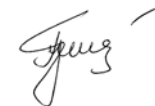
DATE REPORTED: 2018-03-29

Parameter	Unit	SAMPLE DESCRIPTION:		AR-MW10	AR-MW11	AR-MW12
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2018-03-21	2018-03-21	2018-03-21
		G / S	RDL	9144188	9144192	9144198
Gamma-Hexachlorocyclohexane	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Heptachlor	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Aldrin	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Heptachlor Epoxide	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Endosulfan	µg/L	0.05	0.05	<0.05	<0.05	<0.05
Chlordane	µg/L	0.06	0.04	<0.04	<0.04	<0.04
DDE	µg/L	10	0.01	<0.01	<0.01	<0.01
DDD	µg/L	1.8	0.05	<0.05	<0.05	<0.05
DDT	µg/L	0.05	0.04	<0.04	<0.04	<0.04
Dieldrin	µg/L	0.05	0.02	<0.02	<0.02	<0.02
Endrin	µg/L	0.05	0.05	<0.05	<0.05	<0.05
Methoxychlor	µg/L	0.05	0.04	<0.04	<0.04	<0.04
Hexachlorobenzene	ug/L	0.01	0.01	<0.01	<0.01	<0.01
Hexachlorobutadiene	ug/L	0.01	0.01	<0.01	<0.01	<0.01
Hexachloroethane	ug/L	0.01	0.01	<0.01	<0.01	<0.01
Surrogate	Unit	Acceptable Limits				
TCMX	%	50-140		95	66	72
Decachlorobiphenyl	%	60-140		78	95	67

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

9144188-9144198 Note: DDT applies to the total of op'DDT and pp'DDT, DDD applies to the total of op'DDD and pp'DDD and DDE applies to the total of op'DDE and pp'DDE. Endosulfan applies to the total of Endosulfan I and Endosulfan II.
Chlordane applies to the total of Alpha-Chlordane and Gamma-Chlordane.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18T322612

PROJECT: 18-518-20

5835 COOPERS AVENUE
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<http://www.agatlabs.com>

CLIENT NAME: DS CONSULTANTS LTD.

ATTENTION TO: Shafi Andseta

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)

DATE RECEIVED: 2018-03-22

DATE REPORTED: 2018-03-29

Parameter	Unit	SAMPLE DESCRIPTION:		AR-MW2	AR-MW6	AR-MW9	QA/QC1
		G / S	RDL	9144184	9144186	9144187	9144201
F1 (C6 to C10)	µg/L	420	25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	NA	NA	NA
Surrogate	Unit	Acceptable Limits					
Terphenyl	%	60-140		82	74	80	81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

9144184-9144201 The C6-C10 fraction is calculated using Toluene response factor.
 The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
 Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
 The chromatogram has returned to baseline by the retention time of nC50.
 Total C6-C50 results are corrected for BTEX contributions.
 This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
 nC6 and nC10 response factors are within 30% of Toluene response factor.
 nC10, nC16 and nC34 response factors are within 10% of their average.
 C50 response factor is within 70% of nC10 + nC16 nC34 average.
 Linearity is within 15%.
 Extraction and holding times were met for this sample.
 Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Certified By:



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AGAT WORK ORDER: 18T322612

PROJECT: 18-518-20

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CLIENT NAME: DS CONSULTANTS LTD.

ATTENTION TO: Shafi Andseta

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2018-03-22

DATE REPORTED: 2018-03-29

Parameter	Unit	SAMPLE DESCRIPTION:		AR-MW2	AR-MW6	AR-MW9	QA/QC1	Trip Blank	Field Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-03-21	2018-03-21	2018-03-21	2018-03-21	2018-03-21	2018-03-21
		G / S	RDL	9144184	9144186	9144187	9144201	9144204	9144207
Dichlorodifluoromethane	µg/L	590	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 18T322612

PROJECT: 18-518-20

5835 COOPERS AVENUE
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<http://www.agatlabs.com>

CLIENT NAME: DS CONSULTANTS LTD.

ATTENTION TO: Shafi Andseta

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2018-03-22

DATE REPORTED: 2018-03-29

Parameter	Unit	SAMPLE DESCRIPTION:		AR-MW2	AR-MW6	AR-MW9	QA/QC1	Trip Blank	Field Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-03-21	2018-03-21	2018-03-21	2018-03-21	2018-03-21	2018-03-21
		G / S	RDL	9144184	9144186	9144187	9144201	9144204	9144207
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylene Mixture	µg/L	72	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits							
Toluene-d8	% Recovery	50-140		95	98	95	94	93	93
4-Bromofluorobenzene	% Recovery	50-140		93	95	91	91	81	83

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard; Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 18T322612

PROJECT: 18-518-20

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CLIENT NAME: DS CONSULTANTS LTD.

ATTENTION TO: Shafi Andseta

SAMPLING SITE:

SAMPLED BY:

Total PCBs (water)

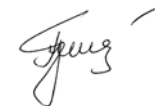
DATE RECEIVED: 2018-03-22

DATE REPORTED: 2018-03-29

		SAMPLE DESCRIPTION:		AR-MW10	
		SAMPLE TYPE:		Water	
		DATE SAMPLED:		2018-03-21	
Parameter	Unit	G / S	RDL	9144188	
PCBs	µg/L	0.2	0.1	<0.1	
Surrogate	Unit	Acceptable Limits			
Decachlorobiphenyl	%	60-130	70		

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By:



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AGAT WORK ORDER: 18T322612

PROJECT: 18-518-20

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CLIENT NAME: DS CONSULTANTS LTD.

ATTENTION TO: Shafi Andseta

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals & Inorganics (Water)

DATE RECEIVED: 2018-03-22

DATE REPORTED: 2018-03-29

Parameter	Unit	SAMPLE DESCRIPTION:		AR-MW2	AR-MW6	AR-MW9	AR-MW11	AR-MW12	QA/QC1
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-03-21	2018-03-21	2018-03-21	2018-03-21	2018-03-21	2018-03-21
		G / S	RDL	9144184	9144186	9144187	9144192	9144198	9144201
Antimony	µg/L	1.5	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	µg/L	13	1.0	<1.0	4.9	4.7	3.1	4.5	3.4
Barium	µg/L	610	2.0	260	30.6	31.4	34.1	30.1	33.1
Beryllium	µg/L	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	µg/L	1700	10.0	99.2	1290	1260	1300	1290	1290
Cadmium	µg/L	0.5	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	11	2.0	2.8	2.3	<2.0	<2.0	<2.0	<2.0
Cobalt	µg/L	3.8	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Copper	µg/L	5	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lead	µg/L	1.9	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Molybdenum	µg/L	23	0.5	1.7	8.2	8.8	8.4	8.1	8.1
Nickel	µg/L	14	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Selenium	µg/L	5	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	µg/L	0.3	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	µg/L	0.5	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Uranium	µg/L	8.9	0.5	5.5	0.7	0.7	0.8	0.7	0.7
Vanadium	µg/L	3.9	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Zinc	µg/L	160	5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	µg/L	0.1	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	25	5	<5	<5	<5	<5	<5	<5
Cyanide	µg/L	5	2	<2	<2	<2	<2	<2	<2
Sodium	µg/L	490000	1000	51600	100000	102000	100000	100000	101000
Chloride	µg/L	790000	500	184000	22900	22900	23500	23400	23500
Electrical Conductivity	uS/cm		2	1170	1070	1070	1080	1080	1080
pH	pH Units		NA	7.93	8.15	8.10	8.04	8.01	8.09

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
 9144184-9144201 Elevated RDLs indicate the degree of sample dilutions prior to analyses to keep analytes within the calibration range, reduce matrix interference and to avoid contaminating the instrument.

Certified By:



Quality Assurance

CLIENT NAME: DS CONSULTANTS LTD.
 PROJECT: 18-518-20
 SAMPLING SITE:

AGAT WORK ORDER: 18T322612
 ATTENTION TO: Shafi Andseta
 SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Mar 29, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,2-Dichlorobenzene	9144623		< 0.10	< 0.10	NA	< 0.10	105%	50%	140%	86%	60%	130%	87%	50%	140%
1,3-Dichloropropene	9144623		< 0.30	< 0.30	NA	< 0.30	74%	50%	140%	84%	60%	130%	91%	50%	140%
n-Hexane	9144623		< 0.20	< 0.20	NA	< 0.20	117%	50%	140%	86%	60%	130%	85%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)															
F1 (C6 to C10)	9141609		< 25	< 25	NA	< 25	108%	60%	140%	108%	60%	140%	110%	60%	140%
F2 (C10 to C16)		TW	< 100	< 100	NA	< 100	101%	60%	140%	63%	60%	140%	65%	60%	140%
F3 (C16 to C34)		TW	< 100	< 100	NA	< 100	107%	60%	140%	75%	60%	140%	78%	60%	140%
F4 (C34 to C50)		TW	< 100	< 100	NA	< 100	98%	60%	140%	81%	60%	140%	96%	60%	140%
O. Reg. 153(511) - OC Pesticides (Water)															
Gamma-Hexachlorocyclohexane		TW	< 0.01	< 0.01	NA	< 0.01	60%	50%	140%	55%	50%	140%	94%	50%	140%
Heptachlor		TW	< 0.01	< 0.01	NA	< 0.01	93%	50%	140%	114%	50%	140%	87%	50%	140%
Aldrin		TW	< 0.01	< 0.01	NA	< 0.01	87%	50%	140%	92%	50%	140%	88%	50%	140%
Heptachlor Epoxide		TW	< 0.01	< 0.01	NA	< 0.01	90%	50%	140%	103%	50%	140%	89%	50%	140%
Endosulfan		TW	< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	91%	50%	140%	78%	50%	140%
Chlordane		TW	< 0.04	< 0.04	NA	< 0.04	86%	50%	140%	100%	50%	140%	86%	50%	140%
DDE		TW	< 0.01	< 0.01	NA	< 0.01	95%	50%	140%	117%	50%	140%	90%	50%	140%
DDD		TW	< 0.05	< 0.05	NA	< 0.05	97%	50%	140%	110%	50%	140%	86%	50%	140%
DDT		TW	< 0.04	< 0.04	NA	< 0.04	97%	50%	140%	103%	50%	140%	99%	50%	140%
Dieldrin		TW	< 0.02	< 0.02	NA	< 0.02	89%	50%	140%	107%	50%	140%	92%	50%	140%
Endrin		TW	< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	113%	50%	140%	108%	50%	140%
Methoxychlor		TW	< 0.04	< 0.04	NA	< 0.04	110%	50%	140%	110%	50%	140%	112%	50%	140%
Hexachlorobenzene		TW	< 0.01	< 0.01	NA	< 0.01	89%	50%	140%	95%	50%	140%	82%	50%	140%
Hexachlorobutadiene		TW	< 0.01	< 0.01	NA	< 0.01	90%	50%	140%	95%	50%	140%	80%	50%	140%
Hexachloroethane		TW	< 0.01	< 0.01	NA	< 0.01	81%	50%	140%	90%	50%	140%	70%	50%	140%

Comments: Tap water analysis has been performed as QC sample testing for duplicate and matrix spike due to insufficient sample volume.
 When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: _____



Quality Assurance


CLIENT NAME: DS CONSULTANTS LTD.
 PROJECT: 18-518-20
 SAMPLING SITE:

AGAT WORK ORDER: 18T322612
 ATTENTION TO: Shafi Andseta
 SAMPLED BY:

Water Analysis															
RPT Date: Mar 29, 2018			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Water)															
Antimony	9144184	9144184	<1.0	<1.0	NA	< 1.0	105%	70%	130%	105%	80%	120%	109%	70%	130%
Arsenic	9144184	9144184	<1.0	<1.0	NA	< 1.0	107%	70%	130%	97%	80%	120%	99%	70%	130%
Barium	9144184	9144184	260	280	7.4%	< 2.0	105%	70%	130%	95%	80%	120%	96%	70%	130%
Beryllium	9144184	9144184	<0.5	<0.5	NA	< 0.5	108%	70%	130%	105%	80%	120%	103%	70%	130%
Boron	9144184	9144184	99.2	111	11.2%	< 10.0	104%	70%	130%	99%	80%	120%	92%	70%	130%
Cadmium	9144184	9144184	<0.2	<0.2	NA	< 0.2	105%	70%	130%	97%	80%	120%	105%	70%	130%
Chromium	9144184	9144184	2.8	3.7	NA	< 2.0	102%	70%	130%	95%	80%	120%	94%	70%	130%
Cobalt	9144184	9144184	<0.5	<0.5	NA	< 0.5	103%	70%	130%	96%	80%	120%	93%	70%	130%
Copper	9144184	9144184	<1.0	<1.0	NA	< 1.0	107%	70%	130%	99%	80%	120%	92%	70%	130%
Lead	9144184	9144184	<0.5	<0.5	NA	< 0.5	106%	70%	130%	96%	80%	120%	96%	70%	130%
Molybdenum	9144184	9144184	1.7	1.9	NA	< 0.5	108%	70%	130%	92%	80%	120%	102%	70%	130%
Nickel	9144184	9144184	<1.0	<1.0	NA	< 1.0	102%	70%	130%	93%	80%	120%	90%	70%	130%
Selenium	9144184	9144184	<1.0	<1.0	NA	< 1.0	108%	70%	130%	94%	80%	120%	100%	70%	130%
Silver	9144184	9144184	<0.2	<0.2	NA	< 0.2	105%	70%	130%	102%	80%	120%	106%	70%	130%
Thallium	9144184	9144184	<0.3	<0.3	NA	< 0.3	107%	70%	130%	97%	80%	120%	97%	70%	130%
Uranium	9144184	9144184	5.5	5.9	7.0%	< 0.5	105%	70%	130%	95%	80%	120%	96%	70%	130%
Vanadium	9144184	9144184	<0.4	<0.4	NA	< 0.4	100%	70%	130%	93%	80%	120%	94%	70%	130%
Zinc	9144184	9144184	<5.0	<5.0	NA	< 5.0	105%	70%	130%	97%	80%	120%	92%	70%	130%
Mercury	9144184	9144184	<0.02	<0.02	NA	< 0.02	103%	70%	130%	103%	80%	120%	95%	70%	130%
Chromium VI	9144184	9144184	<5	<5	NA	< 5	101%	70%	130%	102%	80%	120%	100%	70%	130%
Cyanide	9140929		<2	<2	NA	< 2	100%	70%	130%	101%	80%	120%	102%	70%	130%
Sodium	9146949		704	715	NA	< 500	98%	70%	130%	99%	80%	120%	103%	70%	130%
Chloride	9135780		48	49	NA	< 100	92%	70%	130%	109%	70%	130%	106%	70%	130%
Electrical Conductivity	9143868		3880	3900	0.5%	< 2	99%	90%	110%	NA			NA		
pH	9143868		7.70	7.60	1.3%	NA	100%	90%	110%	NA			NA		

Comments: NA signifies Not Applicable.

Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.


 Certified By: _____

Method Summary

CLIENT NAME: DS CONSULTANTS LTD.

AGAT WORK ORDER: 18T322612

PROJECT: 18-518-20

ATTENTION TO: Shafi Andseta

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Gamma-Hexachlorocyclohexane	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Heptachlor	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Aldrin	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Heptachlor Epoxide	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Endosulfan	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Chlordane	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
DDE	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
DDD	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
DDT	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Dieldrin	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Endrin	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Methoxychlor	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Hexachlorobenzene	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Hexachlorobutadiene	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Hexachloroethane	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
TCMX	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Decachlorobiphenyl	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
F1 (C6 to C10)	VOL-91-5010	MOE PHC E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	MOE PHC E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	MOE PHC E3421	GC / FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC E3421	GC / FID
F4 (C34 to C50)	VOL-91-5010	MOE PHC E3421	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	MOE PHC E3421	BALANCE
Terphenyl	VOL-91-5010		GC/FID
Dichlorodifluoromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Bromomethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Acetone	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Chloroform	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Benzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Toluene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS

Method Summary

CLIENT NAME: DS CONSULTANTS LTD.

AGAT WORK ORDER: 18T322612

PROJECT: 18-518-20

ATTENTION TO: Shafi Andseta

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Tetrachloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Bromoform	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Styrene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
o-Xylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Xylene Mixture	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
n-Hexane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Toluene-d8	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
PCBs	ORG-91-5112	EPA SW-846 3510 & 8082	GC/ECD
Decachlorobiphenyl	ORG-91-5112	EPA SW-846 3510 & 8082	GC/ECD
Water Analysis			
Antimony	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Barium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Boron	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Cadmium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Chromium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Cobalt	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Copper	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Lead	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Molybdenum	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Nickel	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Selenium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Silver	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Thallium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Uranium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Zinc	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Mercury	MET-93-6100	EPA SW-846 7470 & 245.1	CVAAS
Chromium VI	INOR-93-6034	SM 3500-Cr B	SPECTROPHOTOMETER
Cyanide	INOR-93-6052	MOE METHOD CN- 3015 & SM 4500 CN- I	TECHNICON AUTO ANALYZER
Sodium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Chloride	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
pH	INOR-93-6000	SM 4500-H+ B	PC TITRATE



AGAT Laboratories

1 large blank

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Laboratory Use Only

Work Order #: 18T322612

Cooler Quantity: _____
Arrival Temperatures: 1.57 2 1.6

Custody Seal Intact: Yes No N/A
Notes: on ice

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water intended for human consumption)

Report Information:

Company: DS Consultants Ltd.
Contact: Shafi Andreta
Address: 6221 Highway 7, Unit 16
Phone: 905-264-9393 Fax: _____
Reports to be sent to:
1. Email: Shafi.Andreta@dsconsultants.ca
2. Email: Sean.Ellison@dsconsultants.ca

Regulatory Requirements:

No Regulatory Requirement
(Please check all applicable boxes)
 Regulation 153/04 Sewer Use Regulation 558
Table 2 Sanitary CCME
 Ind/Com Storm Prov. Water Quality Objectives (PWQO)
 Res/Park Agriculture Other
Soil Texture (Check One) Region _____
 Coarse Fine Indicate One

Is this submission for a Record of Site Condition?

Yes No

Report Guideline on Certificate of Analysis

Yes No

Turnaround Time (TAT) Required:

Regular TAT 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

3 Business Days 2 Business Days Next Business Day

OR Date Required (Rush Surcharges May Apply): _____

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

Project Information:

Project: 18-518-20
Site Location: Hutton
Sampled By: Sean Ellison
AGAT Quote #: _____ PO: _____

Please note: if quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes No

Company: _____
Contact: _____
Address: _____
Email: _____

Sample Matrix Legend

B Biota
GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water

Field Filtered - Metals, Hg, CrVI

O. Reg 153

Metals and Inorganics	Field Filtered - Metals, Hg, CrVI	Y	N
<input type="checkbox"/> All Metals <input type="checkbox"/> 153 Metals (excl. Hydrides)			
<input type="checkbox"/> Hydride Metals			
ORPs: <input type="checkbox"/> B-HWS <input type="checkbox"/> Cl <input type="checkbox"/> CN			
<input type="checkbox"/> Cr ⁶⁺ <input type="checkbox"/> EC <input type="checkbox"/> FOC <input type="checkbox"/> Hg			
<input type="checkbox"/> pH <input type="checkbox"/> SAR			
Full Metals Scan			
Regulation/Custom Metals			
Nutrients: <input type="checkbox"/> TP <input type="checkbox"/> NH ₃ <input type="checkbox"/> TKN			
<input type="checkbox"/> NO ₃ <input type="checkbox"/> NO ₂ <input type="checkbox"/> NO ₃ +NO ₂			
Volatiles: <input type="checkbox"/> VOC <input type="checkbox"/> BTEX <input type="checkbox"/> THM			
COMET Fractions 1 to 4			
ABNS			
PAHs			
PCBs: <input checked="" type="checkbox"/> Total <input type="checkbox"/> Aroclors			
Organochlorine Pesticides			
TCLP: <input type="checkbox"/> M&I <input type="checkbox"/> VOCs <input type="checkbox"/> ABNS <input type="checkbox"/> B(a)P <input type="checkbox"/> PCBs			
Sewer Use			
VOCs			
PHAs			
OCs			
PCPs			
OCs			

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions
AR-MW2	Mar. 21	10:30	9	GW	
AR-MW6		11:45	9		
AR-MW9		12:50	9		
AR-MW10		13:30	2		
AR-MW11		14:30	6		
AR-MW12		15:40	6		
QA/QC 1		14:55	9		
Trip Blank			3		
Field Blank			3		

Samples Relinquished By (Print Name and Sign): <u>Sean Ellison</u>	Date: <u>Mar. 22</u>	Time: <u>10:00AM</u>	Samples Received By (Print Name and Sign): <u>Procelia Patel</u>	Date: <u>22/3/18</u>	Time: <u>9:55</u>
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____

Page 1 of 1
No: **T 068012**