

Phase Two Environmental Site Assessment

14259 Humber Station Road
Bolton, Ontario

Prepared For:

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DS Project No: 21-386-100

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Executive Summary

DS Consultants Ltd. (DS) was retained by Argo Humber Station Limited (the “Client”) to conduct a Phase Two Environmental Site Assessment (ESA) of the Property located at 14259 Humber Station Road, Bolton, Ontario, herein referred to as the “Phase Two Property” or Site. DS understands that this Phase Two ESA has been requested for due diligence purposes associated with the proposed residential development of the Site, and that this report may be used in the future for Record of Site Condition (RSC) filing 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 objective of this Phase Two ESA is to assess whether contaminants are present, and if present, at what concentration are they present on the Phase Two Property, as related to the Areas of Potential Environmental Concern (APEC) identified in the Phase One ESA.

The Phase Two Property is an irregular shaped parcel of land with an approximate area of 4.01-hectares (9.91 acres), situated within a rural residential neighbourhood in the Town of Bolton, Ontario. The Phase One Property is located approximately 650 meters north of the intersection of King Street and Humber Station Road.

The Phase One ESA completed in September 2022 indicated that the Phase Two Property was first developed for residential/agricultural purposes with a rural agricultural homestead with an orchard at the Site circa 1880. The property was identified to have been used for agricultural and residential purposes since the late 1800s to present. A total of seven (7) Potentially Contaminating Activities (PCAs) were identified in the Phase One ESA, which were considered to be contributing to five (5) APECs on the Phase Two Property. A summary of the APECs, associated PCAs, and contaminants of potential concern (copc) identified is presented in the table below:

Table E-1: Summary of APECs

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	Northwest of the Site	#28: Gasoline and Associated Products Storage in Fixed Tanks	On Site (PCA-2)	PHCs, BTEX	Soil and groundwater
APEC-2	Entire Site	#40: Pesticides (including herbicides, Fungicides and Anti-	On Site (PCA-1)	OCPs, As, Sb, Se, CN-	Soil

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)
		Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications			
APEC-3	Northwest portion of Site	#30: Importation of Fill Material of Unknown Quality	On Site (PCA-5)	PHCs, PAH, VOCs, Metals, As, Sb, Se, B-HWS, CN-, electrical conductivity, Cr (VI), Hg, low or high pH, SAR	Soil
APEC-4	Central portion of Site	#30: Importation of Fill Material of Unknown Quality	On Site (PCA-6)	PHCs, PAH, VOCs, Metals, As, Sb, Se, B-HWS, CN-, electrical conductivity, Cr (VI), Hg, low or high pH, SAR	Soil
APEC-5	East portion of Site	#46: Rail Yards, Tracks and Spurs	Off Site (PCA-3)	PAH, Metals, As, Sb, Se, CN-	Soil and Groundwater

Based on the findings of the Phase One ESA it was concluded that a Phase Two ESA is warranted to assess the soil and groundwater conditions on the Phase Two Property.

The Phase Two ESA was conducted in conjunction with geotechnical and hydrogeological investigation. It involved the advancement of five (5) boreholes and one (1) test pit which were completed in September 2022. The boreholes were advanced to a maximum depth of 10.5 metres below ground surface (mbgs) and a test pit was advanced to depth of 1.4 mbgs under the supervision of DS personnel. Groundwater monitoring wells were installed in three (3) of the boreholes to facilitate the collection of groundwater samples and the assessment of groundwater flow direction. The borehole locations were determined based on the findings of the Phase One ESA and in consideration of geotechnical and hydrogeological requirements. Soil and groundwater samples were collected and submitted for analysis of all PCOCs, including: metals and hydride-forming metals (antimony, arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel,

selenium, silver, thallium, uranium, vanadium and zinc); pH, sodium adsorption ratio (SAR) and electrical conductivity (EC) together referred to as metals and other regulated parameters (ORPs), Petroleum Hydrocarbons (PHCs) in the F1-F4 ranges, Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Volatile Organic Compounds (VOCs), Organochlorine pesticides (OCPs) and Polycyclic Aromatic Hydrocarbons (PAHs).

The soil and groundwater analytical results were compared to the “Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition” provided in the MECP document entitled, “*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*” dated April 15, 2011 (Table 2 Standards) for coarse-textured soils and residential/parkland/institutional property use.

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

- ◆ The surface at the borehole locations is covered with approximately 200 to 250 mm of topsoil. Weathered/disturbed native material consisting of silty sand to clayey silt was encountered below the surface material extending from 0.2 to 0.8 mbgs. Silty clay till was encountered at depths of 0.8 to 10.5 mbgs. Bedrock was not encountered at the maximum drilling depth of 10.5 mbgs.
- ◆ The groundwater levels were found to range between 1.92 to 5.92 mbgs, with corresponding elevation of 258.61 to 263.44 meters above sea level (masl) in the monitoring wells. Based on the groundwater elevations recorded, the groundwater flow direction appears to be northeast towards Humber River. It is possible that the groundwater levels may vary seasonally. The groundwater levels may also be impacted by other factors such as historical infilling activities, subsurface utility trenches, and similar subsurface anomalies. The groundwater flow direction can only be confirmed through long term monitoring.
- ◆ Soil and groundwater samples were collected from the Phase Two Property and submitted for analysis of PAHs, OCPs, PHCs including BTEX, VOCs, metals and ORPs.
- ◆ The results of the chemical analyses conducted on soil and groundwater samples indicate that the applicable Site Condition Standards have been met in the samples analysed.
- ◆ Based on these findings, no further environmental site assessment is recommended at this time. It is the opinion of DS that a Record of Site Condition may be filed for the Phase Two Property based on the findings of this investigation.
- ◆ All monitoring wells should be decommissioned in accordance with O.Reg. 903 when no longer required.

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1.0 Introduction

DS Consultants Ltd. (DS) was retained by Argo Humber Station Limited (the “Client”) to conduct a Phase Two Environmental Site Assessment (ESA) of the Property located at 14259 Humber Station Road, Bolton, Ontario, herein referred to as the “Phase Two Property” or Site. DS understands that this Phase Two ESA has been requested for due diligence purposes associated with the proposed residential development of the Site, and that this report may be used in the future for Record of Site Condition (RSC) filing purposes.

The Phase Two ESA was completed to satisfy the intent of the requirements, methodology and practices for a Phase One ESA as described in Ontario Regulation 153/04 (as amended). The objective of this Phase Two ESA is to assess whether contaminants are present, and if present, at what concentration are they present on the Phase Two Property, as related to the Areas of Potential Environmental Concern (APEC) identified in the Phase One ESA.

1.1 Site Description

The Phase Two Property is an irregular shaped 4.01-hectare (9.91 acres) parcel of land situated within a rural residential neighbourhood in the Town of Bolton, Ontario. The Phase Two Property is located approximately 650 meters north of the intersection of King Street and Humber Station Road. A Site Location Plan depicting the general setting of the Phase Two Property is provided in Figure 1. A Plan of Survey for the Phase One Property dated July 25, 1977, and prepared by Ernest Bison, an Ontario Land Surveyor, has been provided under Appendix A.

For the purposes of this report, King Street is assumed to be aligned in an east-west orientation, and Humber Station Road in a north-south orientation.

Access to the Site is through a paved driveway off Humber Station Road, along the northwest portion of the Site. At the time of this investigation there were no structures at the Phase One Property. The Phase Two Property was previously developed with a single-storey house and a detached barn which had been demolished. A Site Plan depicting the orientation of the former structures is provided in Figure 2. Additional details regarding the Phase Two Property are provided in the table below.

Table 1-1: Phase Two Property Information

Criteria	Information	Source
Legal Description	PT LT 12 CON 5 ALBION PT 1, 43R5176; CALEDON	Land Registry Office
Property Identification Number (PIN)	14329-0054 (LT)	Land Registry Office

Criteria	Information	Source
Current Site Occupants	Vacant with no building structure	Site Reconnaissance
Site Area	4.01 hectares (9.91 acres)	Legal Survey

1.2 Property Ownership

The ownership details for the Phase Two Property are provided in the table below.

Table 1-2: Phase Two Property Ownership

Property Owner	Address	Contact
Argo Humber Station Limited	Argo Development Corporation 4900 Palladium Way, Suite 105 Burlington, Ontario	Email: anil@argoland.com

1.3 Current and Proposed Future Use

The Phase Two Property is considered to be Agricultural Property Use under O.Reg. 153/04 (as amended). The intended future use of the Site will be Residential.

1.4 Applicable Site Condition Standards

The Phase Two Property is an agricultural property located within the Town of Bolton, Ontario, and the proposed future land use is residential.

The applicable Site Condition Standards (SCS) for the Phase Two Property are considered by the Qualified Person (QP) to be the Table 2 SCS: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Residential/Parkland/Institutional Use with medium-fine textured soils as contained in the April 15, 2011 Ontario Ministry of Environment, Conservation and Parks (MECP) document entitled “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act”, herein referred to as the “Table 2 SCS”.

The selection of the Table 2 SCS is considered appropriate based on the following rationale:

- ◆ Permission for the use of non-potable groundwater standards has not been granted by Peel Region;
- ◆ The Site is not considered to be environmentally sensitive, as defined as Under Section 41 of O. Reg 153/04 (as amended);
- ◆ The proposed future use of the Phase Two Property will be residential;
- ◆ Sieve analysis summarized in Section 4.4 indicated that more than 2/3 of the soils at the Site are classified as medium-fine textured.
- ◆ The pH of the soils analyzed during this Phase Two ESA are within the accepted range specified under O.Reg. 153/04 (as amended); and

◆ Bedrock was not encountered within 2 meters of the ground surface.

2.0 Background Information

2.1 Physical Setting

2.1.1 Water Bodies and Areas of Natural Significance

During the site visit, an irrigation pond was observed on the Phase Two Property located on the east corner of Site. The irrigation pond was created for agricultural purposes and is not considered to be a water body as defined under O. Reg 153/04. A man-made pond was observed on the west neighbouring property and is not considered to be a water body as defined under O. Reg 153/04. The nearest body of water to the Phase Two Property is a tributary of the Humber River located approximately 100 m east of the Site.

According to the Ministry of Natural Resources and Forestry online mapping system, a natural heritage system (NHS) is located on the east adjacent property and is associated with the Greenbelt within Peel Region. As well, there is a provincially significant wetland located at the southeast corner of the Site, and a larger provincially significant wetland located approximately 105 m southeast of the Phase Two Property. The NHS is associated with the Humber River and the Peel Region Greenbelt.

2.1.2 Topography and Surface Water Draining Features

The Phase Two Property is generally slopes to the east, with surface elevation varying from 268 meters above sea level (masl) in the western portion to 264 masl in the eastern portion. The topography within the Phase Two Study Area generally slopes to the east to southeast, towards the Humber River, located approximately 670 m northeast of the Phase One Property. The nearest body of water is a tributary of the Humber River, located approximately 100 meter east of the Site. Based on a review of the MECP well records, the depth to groundwater in the vicinity of the Phase One Property is approximately 4 to 7 mbgs. The shallow groundwater flow direction within the Phase One Study Area is inferred to be southeast towards the Humber River.

The Site is situated within a drumlinized till plain physiographic region. The surficial geology in the vicinity of the Site is described as “glaciolacustrine deposits or shale, which may include clay to silt-textured till”. The underlying bedrock within the area generally consists of shale, limestone, dolostone, and siltstone of the Queenston Formation. Based on the Ontario Department of Mines Preliminary Map N. 470 and Bolton Bedrock Topography Map

2276, the bedrock underlying the Phase One Property is anticipated at elevations between 183 to 198 masl. This corresponds to approximately depths of 81 to 90 mbgs.

2.2 Past Investigations

2.2.1 Previous Report Summary

The following Environmental report was available for review:

- ◆ *“Phase One Environmental Site Assessment, 14259 Humber Station, Bolton, Ontario”* prepared for Argo Humber Station Limited, prepared by DS Consultants Ltd., dated September 09, 2023

2022 DS Phase One ESA

- The Site has been used for agricultural purposes since the 1800s.
- A railway line is located immediately east of the Phase One Property.
- Two (2) ASTs were identified in the basement of the residential house. The tanks were observed to be in fair condition, there was no visual or olfactory indicators of leaks in the vicinity of the tanks.
- The house was heated with a fireplace which was in the basement.
- The neighboring properties appear to have been used for mixed agricultural and residential purposes since 1880.
- Based on the age of the site building, which was possibly constructed in the early 1970s, there is a potential for asbestos containing materials, lead pipes/paint and PCB containing equipment within the Site building.
- Four (4) on-Site potentially contaminating activities were identified on Site related to the agricultural land use, the former house and present footprint of the demolished house and barn on the Property.

3.0 Scope of the Investigation

The scope of the Phase Two ESA was designed to investigate the portions of the Site determined in the Phase One ESA to be Areas of Potential Environmental Concern. This Phase Two ESA was conducted in general accordance with O.Reg. 153/04 (as amended). The scope of the investigation including the subsurface investigation, sampling, and laboratory analysis was based on the findings of the Phase One ESA and was limited to the portions of the site which were accessible.

3.1 Overview of Site Investigation

The following tasks were completed as part of the Phase Two ESA:

- ◆ Preparation of a Health and Safety Plan to ensure that all work was executed safely;
- ◆ Clearance of public private underground utility services prior to commencement of subsurface investigative operations;
- ◆ Preparation of a Sampling and Analysis Plan (SAP);
- ◆ Retained a MECP licenced driller to advance a total of five (5) boreholes on the Phase Two Property, to maximum depth of 8.2 mbgs. One test pit was excavated to 1.4 mbgs. Three (3) of the boreholes were instrumented with groundwater monitoring wells upon completion. The soil lithology was logged during drilling, and representative soil samples were collected at regular intervals. The soil samples were screened for organic vapours using (RKI Eagle 2 MultiGas Detector, and examined for visual and olfactory indications of soil impacts;
- ◆ Submitted “worst case” soil samples collected from the boreholes for laboratory analysis of relevant contaminants of potential concern (COPCs) as identified in the Phase One ESA;
- ◆ Conducted groundwater level measurements in the monitoring wells in order to determine the groundwater elevation, and to establish the local groundwater flow direction;
- ◆ Surveyed all monitoring wells to a geodetic benchmark;
- ◆ Developed and purged all monitoring wells prior to sampling. Groundwater samples were collected for all COPCs identified in the Phase One ESA;
- ◆ Compared all soil and groundwater analytical data to the applicable MECP SCS; and
- ◆ Prepared a Phase Two ESA Report in general accordance with O.Reg. 153/04 (as amended).

3.2 Media Investigated

3.2.1 Rationale for Inclusion or Exclusion of Media

Table 3-1: Rationale of Sampling Media

Media	Included or excluded	Rationale
Soil	Included	Soil was identified as a media of potential impact in the Phase One ESA, based on the historical operations conducted on-Site.
Groundwater	Included	Groundwater was identified as a media of potential impact in the Phase One ESA, based on the historical operations conducted on-Site.

Media	Included or excluded	Rationale
Sediment	Excluded	Sediment is not present on the Phase Two Property.
Surface Water	Excluded	Surface water is not present on the Phase Two Property.

3.2.2 Overview of Field Investigation of Media

Table 3-2: Field Investigation of Media

Media	Methodology of Investigation
Soil	A total of five (5) boreholes and one (1) test pit were advanced on the Phase Two Property, to a maximum depth of 8.2 mbgs. Soil samples were collected and submitted for analysis of all relevant COPCs.
Groundwater	A total of three (3) monitoring wells were installed on the Phase Two Property at the time of the investigation. Representative groundwater samples were collected from each monitoring well and submitted for analysis of all relevant COPCs.

3.3 Phase One Conceptual Site Model

All PCAs identified within the Phase One Study Area are presented on Figure 4. The PCAs which are considered to contribute to APECs on, in or under the Phase One Property are summarized in the table below:

Table 3-3: Summary of PCAs Contributing to APECs

PCA Item.	PCA Description (Per. Table 2, Schedule D of O.Reg. 153/04)	Description	Rationale
1	#40: Pesticides (including herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	Inferred large scale application of pesticides on the Phase One Property for a previous orchard at the Phase One Property.	PCA is on-Site
2	#28: Gasoline and associated products storage in fixed tanks	Historically, the former residential dwelling at the Site contained, two (2) ASTs in the basement.	PCA is on-Site
3	#46: Rail Yards, Tracks and Spurs	Railway tracks are adjacent to the east of the Phase One Property.	PCA is adjacent to the Phase One Property.
5	#30: Importation of Fill Material of Unknown Quality	Observed during the site reconnaissance, the Phase One Property residential dwelling had been demolished and the basement backfilled with fill material.	PCA is on-Site
7	#30: Importation of Fill Material of Unknown Quality	Observed during the site reconnaissance, the Phase One Property barn had been demolished and backfilled with fill material.	PCA is on-Site

3.4 Deviations from Sampling and Analysis Plan

The Phase Two ESA was completed in accordance with the sampling and analysis plan (SAP).

3.5 Impediments

DS was granted complete access to the Phase Two Property throughout the course of the investigation. No impediments were encountered.

4.0 Investigation Method

4.1 General

The Phase Two ESA followed the methodology 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) (Analytical Protocol);

The methods used in the Phase Two ESA investigation did not differ from the associated standard operating procedures.

4.2 Drilling and Excavating

A site visit was conducted prior to drilling in order to identify the borehole/test pit locations based on the APECs identified in the Phase One ESA. The selected borehole/test pit locations are presented on Figure 5. The borehole locations were cleared of underground public and private utility services prior to commencement of drilling. A summary of the drilling activities is provided in the table below.

Table 4-1: Summary of Drilling Activities

Parameter	Details
Drilling Contractor	Davis Drilling Ltd.
Drilling Dates	September 7 and 20, 2022
Drilling Equipment Used	Truck-mounted CME 55 (BH22-36 to BH22-40) Hand Auger (TP1)
Measures taken to minimize the potential for cross contamination	◆ Soil sampling was conducted using a 50 mm stainless steel split spoon sampler. The split spoon sampler was brushed clean of soil, washed in municipal water containing phosphate free detergent, rinsed in municipal water, and then rinsed with distilled water for each sampling interval in order to reduce the potential for cross contamination;

Parameter	Details
	◆ Use of dedicated and disposable nitrile gloves for the handling of soil samples. A new set of gloves was used for each sample.
Sample collection frequency	Samples were collected at a frequency of every 0.6 m per 0.8 m from the ground surface to 3.1 mbgs, followed by one sample per 1.5 m to borehole termination depth.

4.3 Soil Sampling

Soil samples were collected using a stainless-steel split spoon sampler. Discrete soil samples were collected from the dedicated samplers by DS personnel using dedicated nitrile gloves.

A portion of each sample was placed in a resealable plastic bag for field screening, and the remaining portion was placed into laboratory supplied glass sampling jars. 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 sample jars were stored in dedicated coolers with ice for storage, pending transport to the analytical laboratory. A formal chain of custody was maintained for all samples submitted to the laboratory.

The subsurface soil conditions were logged by DS personnel at the time of drilling and recorded on field borehole logs. The borehole logs are presented under Appendix C. Additional detail regarding the lithology encountered in the boreholes is presented under Section 5.1 and depicted visually in Figure 5.

4.4 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 were 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 organic 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 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. A summary of the equipment used for field screening is provided below:

Table 4-2: Field Screening Equipment

Parameter	Details
Make and Model of Field Screening Instrument	RKI Eagle 2, Model 5101-P2
Chemicals the equipment can detect and associated detection limits	VOCs with dynamic range of 0 parts per million (ppm) to 2,000 ppm PHCs with range of 0 to 50,000 ppm
Precision of the measurements	3 significant figures
Accuracy of the measurements	VOCs: $\pm 10\%$ display reading + one digit Hydrocarbons: $\pm 5\%$ display reading + one digit
Calibration reference standards	PID: Isobutylene CGD: Hexane
Procedures for checking calibration of equipment	In-field re-calibration of the CGI was conducted (using the gas standard in accordance with the operator's manual instructions) if the calibration check indicated that the calibration had drifted by more than $\pm 10\%$.

4.5 Groundwater Monitoring Well Installation

Monitoring wells were installed upon completion of three (3) boreholes advanced on the Phase Two Property. The monitoring wells were constructed of 51-millimetre (2-inch) inner diameter (ID) flush-threaded schedule 40 polyvinyl chloride (PVC) risers, equipped with a 3.1 m length of No. 10 slot PVC screen. The well screens were sealed at the bottom using a threaded cap and at the top with a lockable J-plug.

Silica sand was placed around and up to 0.6 m above the well screen to act as a filter pack. Bentonite was placed from the ground surface to the top of the sand pack. The wells were completed with protective aboveground monument casings.

Details regarding the monitoring well construction can be found on the borehole log provided in Appendix C, and in table 1 and 3 of Appendix D.

Disposable nitrile gloves were used to minimize the potential for cross-contamination during well installation. Dedicated equipment was used for well development and sampling for further minimize the risk of cross contamination.

The monitoring wells were developed on September 19, 2022. In accordance with DS SOPs for monitoring well development, the wells were developed by removing a minimum of three standing water column volumes using dedicated inertial pumps comprised of Waterra polyethylene tubing and dedicated foot valves.

4.6 Groundwater Field Measurement of Water Quality Parameters

Field measurements of water quality parameters including temperature, specific conductivity, pH, turbidity, dissolved oxygen, oxidation-reduction potential and turbidity were collected using a flow-through cell and a YSI Water Quality Meter (YSI-556™). The YSI Water Quality Meter was calibrated by the supplier Maxim in accordance with the manufacturer's specifications.

The measurements were conducted at regular intervals in order to determine whether stabilized geochemical conditions had been established in the monitoring well, indicating representative groundwater conditions.

The field measurements have been archived and can be provided upon request.

4.7 Groundwater Sampling

Groundwater samples were collected a minimum of 24 hours after the development of the monitoring wells. The monitoring wells could not be sampled using low flow methodology due to the low yield and recovery of the monitoring wells. The monitoring wells were purged to dryness at the lower possible pumping rate. The monitoring wells were allowed to recover prior to sampling. Groundwater samples to be submitted for analysis of volatile parameters (PHC F1, and VOCs) were collected using a dedicated inertial pump. The remaining samples were collected using a peristaltic pump with dedicated 6.4 mm ID polyethylene tubing.

Groundwater samples for metals analysis were field filtered using dedicated 0.45 micro in-line filters. The groundwater was transferred directly into laboratory supplied containers and preserved as appropriate using the containers supplied by the analytical laboratory. The samples were placed in coolers upon completion of sampling and stored on ice for storage, pending transport to the analytical laboratory. A formal chain of custody was maintained for all samples submitted to the laboratory.

4.8 Sediment Sampling

Sediment was not identified as a media of concern, as such sediment sampling was not required.

4.9 Analytical Testing

The soil and groundwater samples collected were submitted to Bureau Veritas Laboratory (BV) under chain of custody protocols. Bureau Veritas (BV) is an independent laboratory accredited by the Canadian Association for Laboratory Accreditation. BV conducted the

analyses in accordance with the MECP document “Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act” dated March 9, 2004 (revised on July 1, 2011).

4.10 Residue Management Procedures

4.10.1 Soil Cuttings From Drilling and Excavations

The soil cuttings generated by the borehole drilling program were stored in 205 L drums and left on-site for disposal by a MECP approved waste-hauler for disposal at a MECP-approved waste management facility.

4.10.2 Water from Well Development and Purging

Excess water derived from well purging activities was stored in 20-L sealed plastic pails, and temporarily stored on site. Upon receipt of the analytical results, it was determined that the purged groundwater meets the applicable Table 2 SCS. Based on this the purged groundwater was allowed to re-infiltrate adjacent to the monitoring wells.

4.10.3 Fluids from Equipment Cleaning

Excess equipment cleaning fluids were stored in 20-L sealed plastic pails and temporarily stored on site for disposal by a MECP approved waste-hauler for disposal at a MECP-approved waste management facility.

4.11 Elevation Surveying

The surface elevations at the borehole locations were surveyed by DS using a global navigation satellite system (GNSS) equipment (Sokkia GCX-2 GNSS RTK receiver) to determine the position and surface elevation of each borehole/monitoring well location.

The ground surface elevations can be found on the borehole logs presented in Appendix C.

4.12 Quality Assurance and Quality Control Measures

4.12.1 Sample containers, preservation, labelling, handling and custody for samples submitted for laboratory analysis, including any deviations from the SAP

All soil and groundwater samples were stored in laboratory-supplied sample containers in accordance with the MECP Analytical Protocol. A summary of the preservatives supplied by the laboratory is provided in the table below.

Table 4-3: Summary of Sample Bottle Preservatives

Media	Parameter	Sample Container
Soil	PHCs F1 VOCs	40 mL methanol preserved glass vial with septum lid.
	PHCs F2-F4 metals and ORPs PAHs	120 mL or 250 mL unpreserved glass jar with Teflon™-lined lid.
Groundwater	PHCs F1 VOCs	40 mL glass vial with septum lid, containing sodium bisulphate preservative.
	PHCs F2-F4	250 mL amber glass bottle with sodium bisulphate preservative
	PAHs	250 mL amber glass bottle (unpreserved)
	Inorganics	500 mL high density polyethylene bottle (unpreserved)
Groundwater	Metals	125 mL high density polyethylene bottle containing nitric acid preservative
	Hexavalent Chromium	125 mL high density polyethylene bottle containing ammonium sulphate/ammonium hydroxide preservative
	Mercury	125 mL glass bottle containing hydrochloric acid preservative
	Cyanide	125 mL high density polyethylene bottle containing sodium hydroxide preservative

Groundwater samples were collected using dedicated equipment for each well. Groundwater samples collected for analysis of dissolved metals, mercury and hexavalent chromium were filtered in the field using a dedicated 0.45-micron in-line filter. Each sample container was labelled with a unique sample identification, the project number, and the sampling date. All samples were placed in an ice-filled cooler upon completion of sampling and kept under refrigerated conditions until the time of delivery to the analytical laboratory. A formal chain of custody was maintained for all samples submitted to the laboratory.

4.12.2 Description of equipment cleaning procedures followed during all sampling

Dedicated, disposable nitrile gloves were used for each sampling event to reduce the potential for cross-contamination.

The split spoon sampler was brushed clean of soil, washed in municipal water containing phosphate free detergent, rinsed in municipal water, and then rinsed with distilled water for each sampling interval to reduce the potential for cross contamination.

Dedicated equipment was used for well development and sampling for further minimize the risk of cross contamination. Non-dedicated equipment (i.e., interface probe) was cleaned before initial use and between all measurement points with a solution of Alconox™ and distilled water. The Alconox™ solution was rinsed off using distilled water.

4.12.3 Description of how the field quality control measures referred to in subsection 3 (3) were carried out

Field duplicate samples were collected at the time of sampling. In accordance with O.Reg. 153/04, one duplicate sample was analyzed per ten samples submitted for analysis. A laboratory prepared trip blank accompanied the groundwater samples during each sampling event and was submitted for laboratory analysis of VOCs.

All field screening devices (i.e., PID, CGD, YSI Water Quality Meter) were calibrated prior to use by the supplier. Calibration checks were completed, and re-calibrations were conducted as required.

4.12.4 Description of, and rational for, any deviations from the procedures set out in the quality assurance and quality control program set out in the SAP

There were no deviations from the QA/QC program described in the SAP.

5.0 Review and Evaluation

5.1 Geology

A summary of the subsurface conditions is presented below. Additional details may be found in the borehole logs appended in Appendix C and Appendix D. The boundaries of soil indicated on the borehole logs and described below are intended to reflect transition zones for the purpose of environmental assessment and should not be interpreted as exact planes of geological change.

The surface at the borehole locations is covered with approximately 200 to 250 mm in topsoil thickness in all of the borehole advanced. Weathered/disturbed native material consisting of silty sand to clayey silt was encountered below the surface material extending from 0.2 to 0.8 mbgs. The silty clay till was encountered at depths of 0.8 to 8.2 mbgs. Bedrock was not encountered at the maximum drilling depth of 8.2 mbgs.

Table 5-1: Summary of Geologic Units Investigated

Geologic Unit	Inferred Thickness (m)	Top Elevation (masl)	Bottom Elevation (masl)	Properties
Topsoil	0.2-0.25	261.7	264.0	Moist Topsoil
Weathered/Disturbed native Silty Sand	0.2-0.8	261.7	265.7	Wet to moist
Sandy Silt	0.8-1.5	260.9	260.2	Wet to moist
Weathered/Disturbed native Clayey Silt to Silty Clay	0.2-0.8	265.7	261.9	Moist to firm

Weathered/Disturbed native Clayey Silt to Silty Clay	0.2-0.8	265.7	261.9	Moist to firm
Silty Clay Till	0.8-8.2	264.3	258.3	Stiff to very hard
Weathered Shale	Not determined	Not determined	Not determined	Not determined
Shale Bedrock	Not determined	Not determined	Not determined	Not determined

5.2 Ground Water Elevations and Flow Direction

5.2.1 Rationale for Monitoring Well Location and Well Screen Intervals

The monitoring wells were screened to intersect the first water bearing formation encountered, in order to allow for the assessment of LNAPL, and to provide information regarding the quality of the groundwater at the water table. The monitoring wells were screened within the silty clay till unit encountered at an approximate depth of 5.00 to 8.58 mbgs. This unit is inferred to be an semi-confined aquifer.

5.2.2 Results of Interface Probe Measurements

A summary of the groundwater level measurements is provided in Table 1. The groundwater level measurements were collected using a Solinst interface probe. The depth to groundwater was found to range between 1.92 to 5.92 mbgs on September 8 and 19, 2022. There was no indication of DNAPL or LNAPL in the monitoring wells at this time.

5.2.3 Product Thickness and Free Flowing Product

No evidence of product was observed in the monitoring wells at the time of the investigation.

5.2.4 Groundwater Elevation

The groundwater elevation was calculated by subtracting the depth to groundwater from the surface elevation determined by the surface elevation survey conducted as part of this investigation. A summary of the groundwater elevations calculated is presented in Table 1 (enclosed). Generally, the groundwater elevation was found to range from 258.97 to 264.62 masl in the upper aquifer investigated on September 08 and 19, 2022.

5.2.5 Groundwater Flow Direction

The groundwater flow direction was interpreted using the groundwater elevations data obtain at the Phase Two Property on September 19, 2022. Based on the groundwater elevations calculated, the groundwater flow direction is interpreted to be southeast towards

the Humber River. The groundwater elevation contours, and flow direction are presented on Figure 4.

5.2.6 Assessment of Potential for Temporal Variability in Groundwater Flow Direction

The shallow aquifer investigated is inferred to be an unconfined aquifer, based on the soil stratigraphy observed in the boreholes advanced on the Phase Two Property. It is possible that temporal variations in groundwater elevations may occur on the Phase Two Property in response to seasonal weather patterns.

Temporal variability in groundwater level has the ability to influence the groundwater flow direction. The degree of variation in groundwater levels on the Phase Two Property can only be confirmed with long-term monitoring.

5.2.7 Evaluation of Potential Interaction Between Buried Utilities and the Water Table

The Phase Two Property is currently agricultural land with no building structures; therefore, no buried utility services are anticipated to be present at the Site.

5.3 Ground Water Hydraulic Gradients

5.3.1 Horizontal Hydraulic Gradient

The horizontal hydraulic gradient was calculated based on the groundwater levels recorded on September 19, 2022

Table 5-2: Summary of Horizontal Hydraulic Gradient Calculations

Hydrogeological Unit	Calculated Horizontal Hydraulic Gradient
BH22-39 to BH22-40	0.044
BH22-36 to BH22-40	No significant elevation difference
BH22-39 to BH22-36	0.014

The average horizontal hydraulic gradient for the Phase One Property is 0.029.

5.3.2 Vertical Hydraulic Gradient

The vertical hydraulic gradient was not calculated, as no groundwater impacts were identified on the Phase Two Property.

5.4 Fine-Medium Soil Texture

5.4.1 Rational for use of Fine-Medium Soil Texture Category

A total of two (2) grain size analyses were conducted as part of this investigation. The results of the grain size analyses indicate that the soils encountered contained over 50% by mass of particles that passed through 75 micrometres mean diameter sieve and are considered to be medium to fine textured soil.

5.4.2 Results of Grain Size Analysis

A summary of the soil samples analyzed, and the corresponding grain size results is presented in the table below:

Table 5-3: Summary of Grain Size Analyses

Sample	%Passing 75 micrometre sieve	Classification
BH22-36 SS3	71	Medium-fine textured
BH22-36 SS8	75	Medium-fine textured

5.4.3 Rational for the Number of Samples Collected and Analyzed

The grain size analyses were conducted for the purposes of this Phase Two ESA, in addition to a geotechnical investigation which was conducted concurrently. The samples were selected to be representative of the native material encountered at the Phase Two Property.

5.5 Soil Field Screening

The soil vapour headspace readings were collected using a calibrated RKI Eagle 2 operated in methane elimination mode. The PID and CGD measurements were all non-detectable (0 ppm).

The soil samples were also screened for visual and olfactory indicators of impacts (e.g., staining, odours). No observation of staining, odours were identified in the soil samples.

5.6 Soil Quality

The results of the chemical analyses conducted are presented in Tables 5 through 9 of Appendix D. A visual summary of the location of the sample locations is provided in Figures 7A through 7E. The laboratory certificates of analysis have been provided under Appendix E.

5.6.1 Metals and ORPs

A total of eight (8) samples, including one (1) field duplicates for QA/QC purposes were submitted for analysis of metals and ORPs. The results of the analyses are tabulated in Table 5 and presented on Figure 7A. The results of the analyses indicated no exceedances of the Table 2 SCS.

5.6.2 Petroleum Hydrocarbons

A total of four (4) samples, including one (1) field duplicates for QA/QC purposes were submitted for analysis of PHCs (incl. BTEX). The results of the analyses are tabulated in Table 6 and presented on Figure 7B. The results of the analyses indicated no exceedances of the Table 2 SCS.

5.6.3 Volatile Organic Compounds

A total of four (4) samples, including one (1) field duplicates for QA/QC purposes were submitted for analysis of VOCs. The results of the analyses are tabulated in Table 7 and presented on Figure 7C. The results of the analyses indicated no exceedances of the Table 2 SCS.

5.6.4 Polycyclic Aromatic Hydrocarbons

A total of five (5) samples, including one (1) field duplicates for QA/QC purposes were submitted for analysis of PAHs. The results of the analyses are tabulated in Table 8 and presented on Figure 7D. The results of the analyses indicated no exceedances of the Table 2 SCS.

5.6.5 Organochloride Pesticides

A total of eight (8) samples, including one (1) field duplicate for QA/QC purposes were submitted for analysis of OC Pesticides. The results of the analyses are tabulated in Table 9 and presented on Figure 7E. The results of the analyses indicated no exceedance of Table 2 SCS.

5.6.6 Commentary on Soil Quality

The analytical results of the soil samples indicate that all the tested parameters met the MECP Table 2 SCS.

5.7 Ground Water Quality

The results of the chemical analyses conducted are presented in Tables 10 through 12 of Appendix D. A visual summary of the location of the sample locations is provided in Figures 8A through 8C. The laboratory certificates of analysis have been provided under Appendix E.

5.7.1 Metals and ORPs

A total of four (4) samples, including one (1) field duplicates for QA/QC purposes were submitted for analysis of metals and ORPs. The results of the analyses are tabulated in Table 10 and presented on Figure 8A. The groundwater samples transferred into the metals, mercury, and hexavalent chromium bottles were field filtered using a 0.45-micron in-line filter. The results of the analyses indicated no exceedances of the Table 2 SCS.

5.7.2 Petroleum Hydrocarbons

A total of four (4) samples, including one (1) field duplicates for QA/QC purposes were submitted for analysis of PHCs (incl. BTEX). The results of the analyses are tabulated in Table 11 and presented on Figure 8B. The results of the analyses indicated no exceedances of the Table 2 SCS.

5.7.3 Volatile Organic Compounds

A total of five (5) samples, including one (1) field duplicates and one (1) trip blank sample for QA/QC purposes were submitted for analysis of VOCs. The results of the analyses are tabulated in Table 12 and presented on Figure 8C. No VOC parameter was detected in the trip blank sample. The results of the analyses indicated no exceedances of the Table 2 SCS.

5.7.4 Polycyclic Aromatic Hydrocarbons

A total of four (4) samples, including one (1) field duplicates for QA/QC purposes were submitted for analysis of VOCs. The results of the analyses are tabulated in Table 13 and presented on Figure 8D. The results of the analyses indicated no exceedances of the Table 2 SCS.

5.7.5 Commentary on Groundwater Quality

The analytical results of the groundwater samples indicate that all the tested parameters met the MECP Table 2 SCS.

5.8 Sediment Quality

No sediment was present on the Phase Two Property at the time of the investigation.

5.9 Quality Assurance and Quality Control Results

Collection of soil and groundwater samples was conducted in general accordance with the MECP *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*. As described in Section 5.12, dedicated equipment was used where possible, and all non-dedicated equipment was decontaminated before and between sampling events. All soil and groundwater samples were transferred directly into laboratory-supplied containers. The laboratory containers were prepared by the laboratory with suitable preservative, as required. All samples were stored and transported under refrigerated conditions. Chain of custody protocols were maintained from the time of sampling to delivery to the analytical laboratory.

The field QA/QC program involved the collection of field duplicate soil and groundwater samples, and the use of a trip blank for each groundwater sampling event (when suitable). In addition to the controls listed above, the analytical laboratory employed method blanks, internal laboratory duplicates, surrogate spike samples, matrix spike samples, and standard reference materials.

A summary of the field duplicate samples analyzed and an interpretation of the efficacy of the QA/QC program are included in Appendix D and provided in the table below.

Table 5-4: Summary of QA/QC Results

Sample ID	QA/QC duplicate	Medium	Parameter Analyzed	QA/QC Result
BH22-38 SS1	DUP-1	Soil	M&I	All results were within the analytical protocol criteria for RPD, except for HWS-Boron, Cobalt, Copper, Molybdenum, Nickel, Thallium, Conductivity, Sodium Adsorption Ratio
BH22-40 SS3	DUP-2	Soil	PAHs	All results were within the analytical protocol criteria for RPD.
BH22-39 SS6	DUP-3	Soil	PHC/BTEX	All results were within the analytical protocol criteria for RPD.
BH22-39 SS1	DUP-4	Soil	OCPs	All results were within the analytical protocol criteria for RPD.
MW22-39	DUP-1	Groundwater	Metals and ORPs, PAHs, PHC/BTEX	All results were within the analytical protocol criteria for RPD except for Copper and Selenium.

The following exceptions in the RPD protocols were identified:

- ◆ The RPD value for BH22-38 SS1(QAQC Soil DUP-1) of 255% exceeded the recommended 30% RPD limit for Boron (Hot Water Soluble);
- ◆ The RPD value for BH22-38 SS1 (QAQC Soil DUP-1) of 48 % exceeded the recommended 30% RPD limit for Cobalt and Copper;
- ◆ The RPD value for BH22-38 SS1(QAQC Soil DUP-1) of 38% exceeded the recommended RPD value of 30% Nickel;
- ◆ The RPD value for BH22-38 SS1(QAQC Soil DUP-1) of 31% exceeded the recommended RPD value of 30% Thallium;
- ◆ The RPD value for BH22-38 SS1(QAQC Soil DUP-1) of 36% exceeded the recommended RPD value of 30% Conductivity;
- ◆ The RPD value for BH22-38 SS1(QAQC Soil DUP-1) of 21% exceeded the recommended RPD value of 30% Sodium Adsorption Ratio;
- ◆ The RPD value for BH22-38 SS1(QAQC GW DUP-1) of 89% exceeded the recommended RPD value of 30% Copper;
- ◆ The RPD value for BH22-38 SS1(QAQC GW DUP-1) of 33% exceeded the recommended RPD value of 30% Nickel;

The variance in the analytical results between the parent and duplicate sample are attributed to the heterogeneity of the surface sample. The concentration of B-HWS, Cobalt, Copper, Molybdenum, Nickel, Thallium, Conductivity, and Sodium Adsorption Ratio in soil sample BH22-38 SS1 and DUP-1 met the Table 2 SCS. Hence, the overall conclusion of this investigation is not influenced by the RPD discrepancies.

Based on the interpretation of the laboratory results and the QA/QC program, it is the opinion of the QP that the laboratory analytical data can be relied upon.

All samples were handled in accordance with the MECP Analytical Protocol regarding sample holding time, preservation methods, storage requirements, and type of container.

Bureau Veritas routinely conducts internal QA/QC analyses in order to satisfy regulatory QA/QC requirements. The results of the Bureau Veritas QA/QC analyses for the submitted soil samples are summarized in the laboratory Certificates of Analyses provided in Appendix E.

With respect to subsection 47(3) of O. Reg 153/04 (as amended), all certificates of analysis or analytical reports pursuant to clause 47(2) (b) of the regulation comply with subsection 47(3). A certificate of analysis has been received for each sample submitted for analysis and have been provided (in full) in Appendix E.

A review of the QA/QC sample results indicated that no issues were identified with respect to both the field collection methodology and the laboratory reporting. It is the opinion of the QP that the analytical data obtained are representative of the soil and groundwater conditions at the Phase Two Property for the purpose of assessing whether the soil and groundwater at the Phase Property meets the applicable MECP SCS.

5.10 Phase Two Conceptual Site Model

The Phase Two Conceptual Site Model is presented under Appendix F.

6.0 Conclusions

This Phase Two ESA involved that advancement of five (5) boreholes, one (1) test pit, the installation of three (3) monitoring wells on the Phase Two Property, and the collection of soil and groundwater samples for analysis of the potential contaminants of concern, including: PAHs, OCPs, PHCs including BTEX, VOCs and metals and ORPs.

Based on the results of the information gathered through the course of the investigation, DS presents the following conclusions:

- ◆ The surface at the borehole locations is covered with approximately 200 to 250 mm of topsoil. Weathered/disturbed native material consisting of silty sand to clayey silt was encountered below the surface material extending from 0.2 to 0.8 mbgs. Silty clay till was encountered at depths of 0.8 to 10.5 mbgs. Bedrock was not encountered at the maximum drilling depth of 10.5 mbgs.
- ◆ The groundwater levels were found to range between 1.92 to 5.92 mbgs, with corresponding elevation of 261.70 to 266.55 meters above sea level (masl) in the monitoring wells. Based on the groundwater elevations recorded, the groundwater flow direction appears to be northeast towards Humber River. It is possible that the groundwater levels may vary seasonally. The groundwater levels may also be impacted by other factors such as historical infilling activities, subsurface utility trenches, and similar subsurface anomalies. The groundwater flow direction can only be confirmed through long term monitoring.
- ◆ The results of the chemical analyses conducted on soil and groundwater samples indicate that the applicable Site Condition Standards have been met in the samples analysed.
- ◆ Based on the findings, no further environmental site assessment is recommended at this time. It is in the opinion of DS that a Record of Site Condition may be filed for the Phase Two Property based on the findings of this investigation.

- ◆ All monitoring wells should be decommissioned in accordance with O.Reg. 903 when no longer required.

It is the opinion of the QP_{ESA} that the applicable SCS for the soil and groundwater at the Phase Two Property have been met as of the Certification Date of September 20, 2022. No further sub-surface investigation is required regarding the environmental quality of the soil and groundwater at the Phase Two Property at this time.

6.1 Qualifications of the Assessors

Norina Paolucci, BES., EPt

Ms. Norina Paolucci is an environmental technician with DS Consultants Ltd. Norina holds a bachelor's degree in Environmental Resources from Trent University. Norina is a current member of Eco Canada, Environmental Person in Training (EPt). Norina has successfully completed a Phase One and Phase Two Environmental Site Assessments course with Associated Environmental Site Assessor of Canada INC (ASEAC) and has experience in conducting Phase One and Two Environmental Site Assessments, soil, and groundwater sampling.

Efuange Khumbah, M.Sc., P.Eng.

Efuange is a Senior Project Manager, providing environmental services at DS Consultants Ltd. He is a registered professional engineer, in the provinces of Ontario. With over 13 years working for the public and private sectors, Efuange has experience serving clients in constructional, financial institutions, insurance companies, legal firms, manufacturing industries, oil/gas/petrochemical as well as municipal, provincial and federal agencies. In Canada he has managed projects in British Columbia, Alberta, Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland. His area of expertise includes, environmental site assessment, soil and groundwater remediation, litigation support, excess soil management, senior review of environmental reports, and air quality monitoring. Reports prepared by Efuange have been published by the Town of Newmarket, City of Mississauga, and the Ontario Ministry of Environment Conservation and Parks. Efuange hold a M.Sc. degree in Environmental Science and Resource management.

Mr. Patrick (Rick) Fioravanti, B.Sc., P.Geo., QP_{ESA}

Mr. Fioravanti is the Manager of Environmental Services with DS Consultants Limited. Patrick holds an Honours Bachelor of Science with distinction in Toxicology from the University of Guelph and is a practicing member of the Association of Professional

Geoscientists of Ontario (APGO). Patrick has over ten years of environmental consulting experience and has conducted and/or managed hundreds of projects in his professional experience. Patrick has extensive experience conducting Phase One and Phase Two Environmental Site Assessments in support of brownfields redevelopment in urban settings, and been involved in numerous remediation projects, supported many risk assessments, and successfully filed Records of Site Condition with the Ministry of Environment, Conservation and Parks. He has conducted work across southern and eastern Ontario, and Quebec in his professional experience. Patrick is considered a Qualified Person to conduct Environmental Site Assessments as defined by Ontario Regulation 153/04 (as amended).

6.2 Signatures

This Phase Two ESA was conducted under the supervision of Patrick Fioravanti, B.Sc., P.Geo., QP_{ESA} in accordance with the requirements of O.Reg. 153/04 (as amended). The findings and conclusions presented have been determined based on the information obtained at the time of the investigation, and on an assessment of the conditions of the Site at this time.

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.

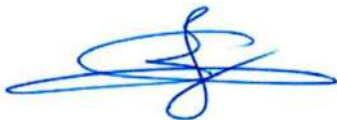
Yours truly,

DS Consultants Ltd



Norina Paolucci, BES, EPT

Environmental Specialist



Efuange Khumbah, M. Sc., P.Eng.
Senior Environmental Project Manager



Rick Fioravanti, B.Sc., P.Geo., QP_{ESA}
Manager – Environmental Services

6.3 Limitations

This report was prepared for the sole use of Argo Humber Station Limited and is intended to provide an assessment of the environmental condition on the property located at 14259 Humber Station Road, Bolton, Ontario. The information presented in this report is based on information collected during the completion of the Phase Two Environmental Site Assessment by DS Consultants Ltd. The material in this report reflects DS' judgment in light of the information available at the time of report preparation. This report 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.

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.

7.0 References

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- ◆ The Ontario Geological Survey. 2003. *Surficial Geology of Southern Ontario*.
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Figures



Legend

 Property Boundary



DS CONSULTANTS LTD.

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

Client:

ARGO HUMBER STATION LIMITED

Project:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
14259 Humber Station Road, Bolton, ON

Title:

SITE LOCATION PLAN



Size:
8.5 x 11

Rev:
0

Approved By:

E.K.

Drawn By:

S.Y / P.P.

Date:

October 2022

Scale:

As Shown

Project No.:

21-386-100

Figure No.:

1

Image/Map Source: Google Street Map



Legend

 Property Boundary



DS CONSULTANTS LTD.

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Client:

ARGO HUMBER STATION LIMITED

Project:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
14259 Humber Station Road, Bolton, ON

Title:

PHASE ONE PROPERTY SITE PLAN



Size:
8.5 x 11

Rev:
0

Approved By:

E.K.

Drawn By:

P.P/S.Y

Date:

January 2023

Scale:

As Shown

Project No.:

21-386-100

Figure No.:

2

Image/Map Source: Google Satellite Image



Legend

- Property Boundary
- Phase One Study Area
- Agricultural
- Residential



DS CONSULTANTS LTD.

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Client:

ARGO HUMBER STATION LIMITED

Project:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
14259 Humber Station Road, Bolton, ON

Title:

PHASE ONE STUDY AREA

Size:
8.5 x 11

Rev:
0

Approved By:

E.K.

Scale:

As Shown

Drawn By:

P.P/S.Y

Project No.:

21-386-100

Date:

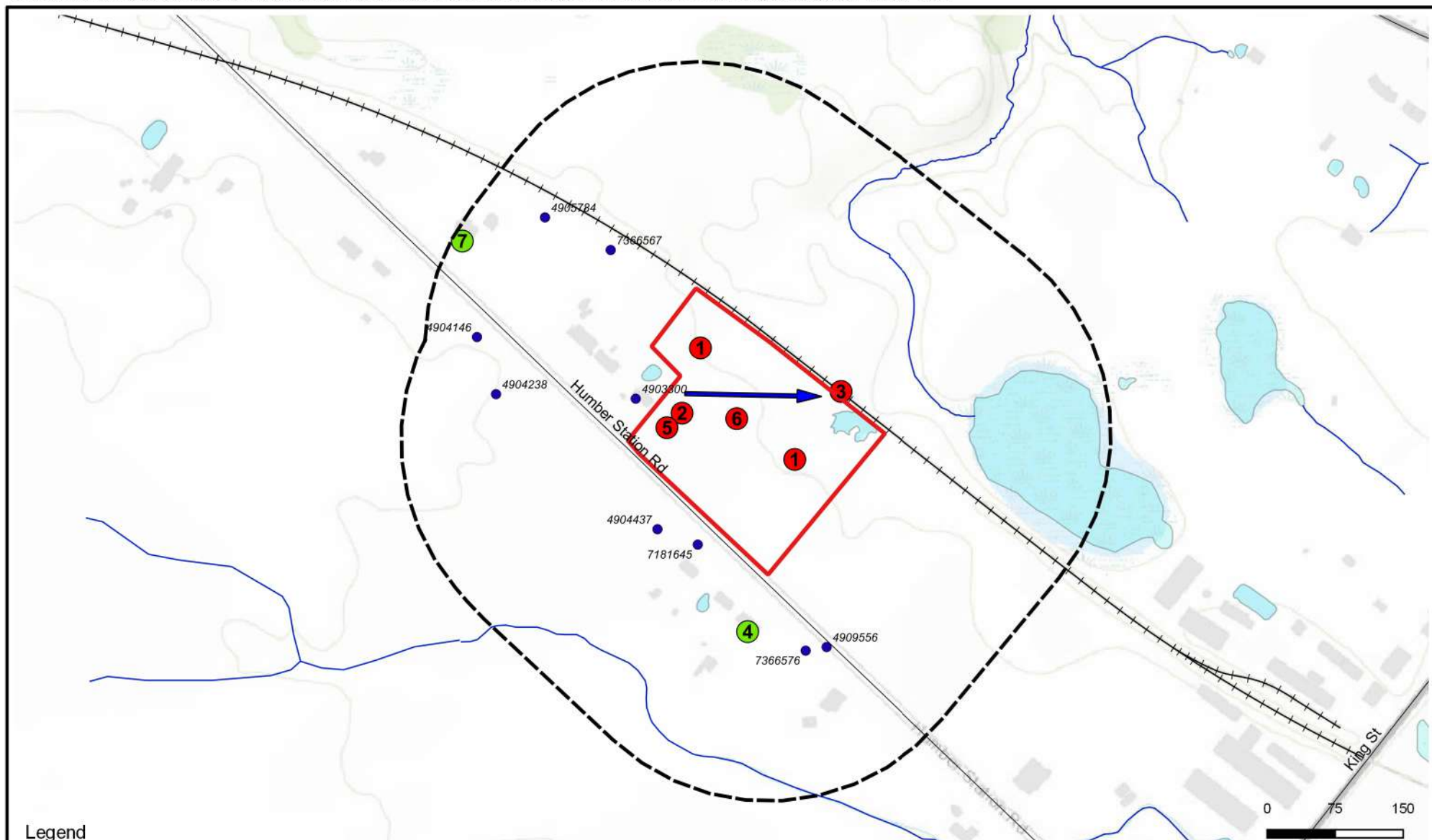
October 2022

Figure No.:

3



Image/Map Source: Google Satellite Image





Legend



- Property Boundary
- Phase One Study Area
- PCA not contributing to APEC
- PCA contributing to APEC
- ➔ Groundwater Flow Direction
- Registered Water Well (MECP WWR)

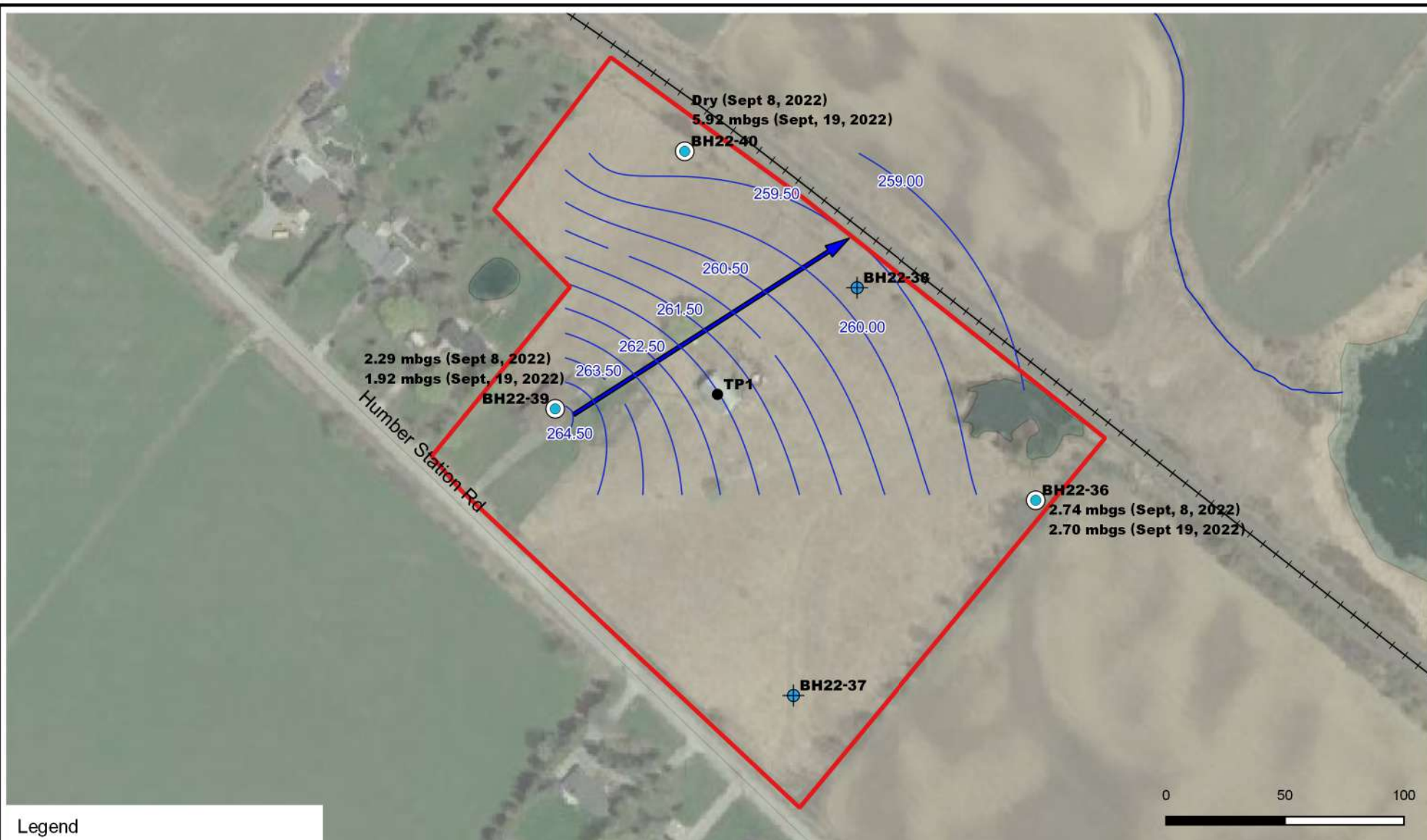
<div></div> <div>DS CONSULTANTS LTD. 6221 Highway 7, UNIT 16 Vaughan, Ontario L4H 0K8 Telephone: (905) 264-9393 www.dsconsultants.ca</div>		<div>Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT 14259 Humber Station Road, Bolton, ON</div>				<div></div>	
		<div>Title: PCAs WITHIN PHASE ONE STUDY AREA</div>					
<div>Client: ARGO HUMBER STATION LIMITED</div>		<div>Size: 8.5 x 11</div>	<div>Approved By: E.K.</div>	<div>Drawn By: P.P/S.Y</div>	<div>Date: October 2022</div>		
		<div>Rev: 0</div>	<div>Scale: As Shown</div>	<div>Project No.: 21-386-100</div>	<div>Figure No.: 4</div>		
<div>Image/Map Source: Esri Topo Image</div>							



Legend

- Approx Property Boundary
- + Borehole Location
- Monitoring Well Location
- Test Pit Location
- APEC-1 & APEC-3
- APEC-2
- APEC-4
- APEC 5

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	Title: BOREHOLE LOCATION PLAN WITH APECs			
Client: ARGO HUMBER STATION LIMITED	Size: 8.5 x 11	Approved By: E.K.	Drawn By: P.P/S.Y	Date: January 2023
	Rev: 0	Scale: As Shown	Project No.: 21-386-100	Figure No.: 5
		Image/Map Source: Google Satellite Image		



Legend

- Property Boundary
- + Borehole Location
- Monitoring Well Location
- Test Pit Location
- Groundwater Elevation Contours
- ➔ Inferred Groundwater Flow Direction



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 www.dsconsultants.ca

Client:
ARGO HUMBER STATION LIMITED

Project: **PHASE TWO ENVIRONMENTAL SITE ASSESSMENT**
 14259 Humber Station Road, Bolton, ON

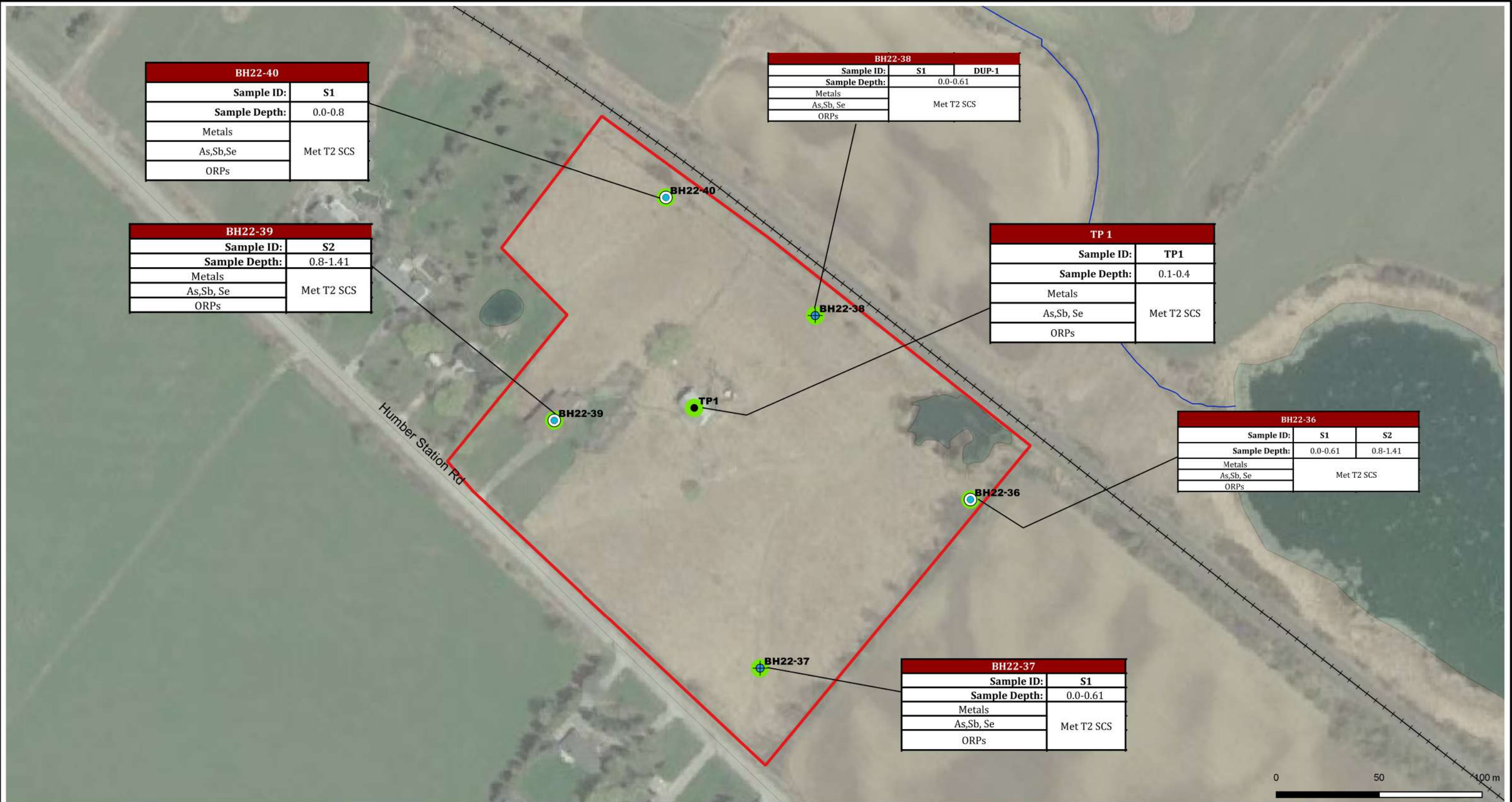
Title: **GROUNDWATER ELEVATION CONTOURS AND FLOW DIRECTION**



Size: 8.5 x 11	Approved By: E.K.	Drawn By: P.P/S.Y	Date: January 2023
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Rev: 0	Scale: As Shown	Project No.: 21-386-100	Figure No.: 6
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Image/Map Source: Google Satellite Image



Legend

- Property Boundary
- Borehole Location
- Monitoring Well Location
- Test Pit Location
- Sample Met Applicable Standards

Legend	
ORPs	EC, SAR, Hg, Cr(VI), CN-, B-HWS, low pH, high pH



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Telephone: (905) 264-9393
www.dsconsultants.ca

Client:
ARGO HUMBER STATION LIMITED

Project:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
14259 Humber Station Road, Bolton, Ontario

Title:
SOIL CHARACTERIZATION - METALS AND INORGANICS

Size: 11x17	Approved By: E.K.	Drawn By: P.P	Date: January 2023
	Scale: As Shown	Project No.: 21-386-100	Figure No.: 7A
Rev: 0	Image/Map Source: Google Satellite Image		

J:\-GIS\2021 PROJECTS\21-386-100 14259 Humber Station Road\1-QGIS\Phase Two\Figure 7B - Soil Characterization - PHCs & BTEX.qgs Feb-02 09:00



Legend

- Property Boundary
- + Borehole Location
- + Monitoring Well Location
- Test Pit Location
- + Sample Met Applicable Standards



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

Client:
ARGO HUMBER STATION LIMITED

Project:
**PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
14259 Humber Station Road, Bolton, Ontario**

Title:
SOIL CHARACTERIZATION - PHCs & BTEX

Size: 11x17
Approved By: E.K.
Drawn By: P.P.
Date: February 2023

Rev. 0
Scale: As Shown
Project No.: 21-386-100
Figure No.: **7B**

Image/Map Source: Google Satellite Image





J:\-GIS\2021 PROJECTS\21-386-100 14259 Humber Station Road\1-QGIS\Phase Two\Figure 7C - Soil Characterization - VOCs.qgs Jan-31 10:33



Legend



- Property Boundary
- Borehole Location
- Monitoring Well Location
- Test Pit Location
- Sample Met Applicable Standards

 <div>DS CONSULTANTS LTD. 6221 Highway 7, UNIT 16 Vaughan, Ontario L4H 0K8 Telephone: (905) 264-9393 www.dsconsultants.ca</div>	Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT 14259 Humber Station Road, Bolton, Ontario				
	Title: SOIL CHARACTERIZATION - VOCs				
Client: ARGO HUMBER STATION LIMITED	Size: 11x17	Approved By: E.K.	Drawn By: P.P	Date: January 2023	
	Rev. 0	Scale: As Shown	Project No.: 21-386-100	Figure No.: 7C	
	Image/Map Source: Google Satellite Image				

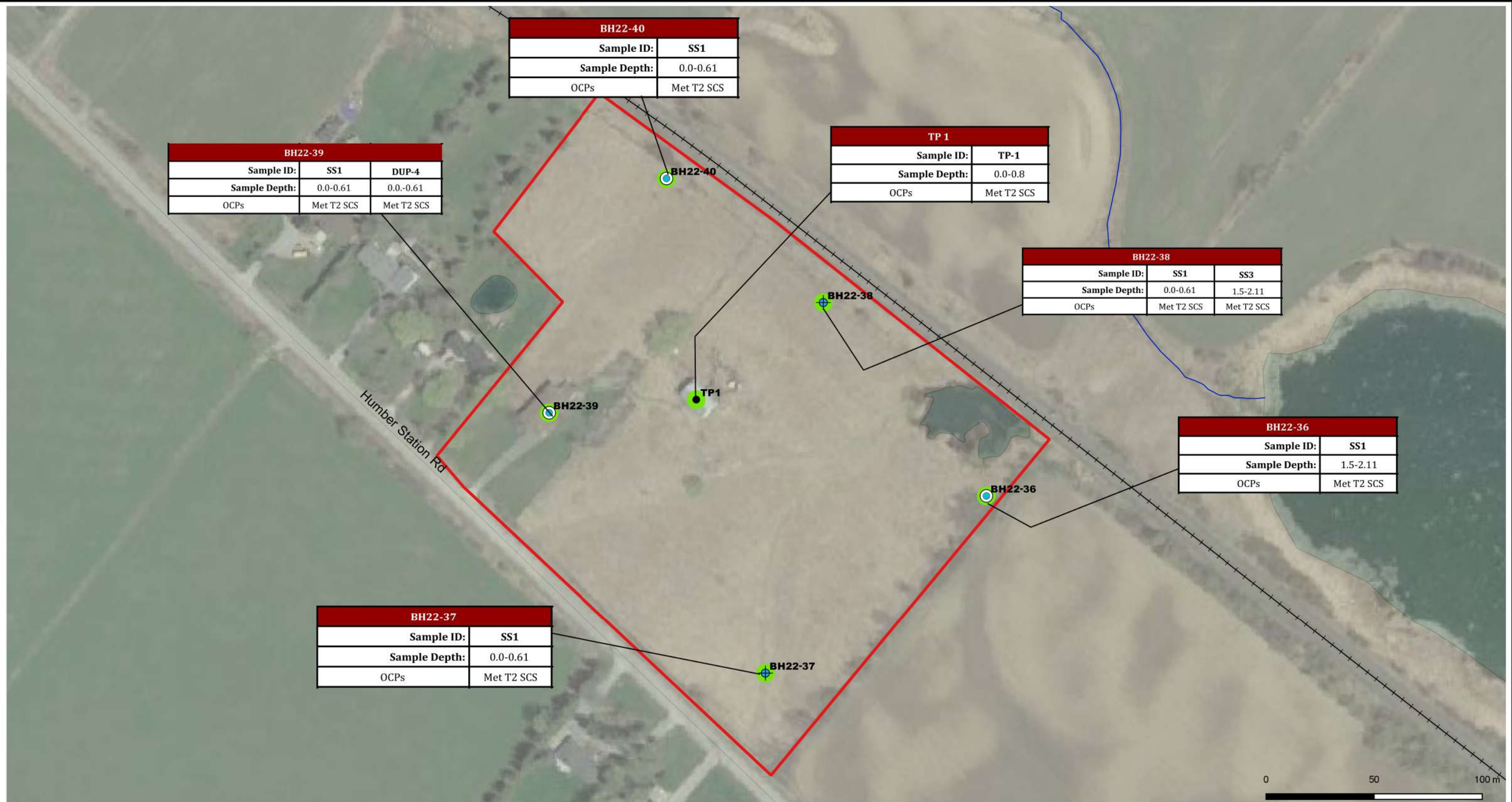
J:\GIS\2021 PROJECTS\21-386-100 14259 Humber Station Road\1-QGIS\Phase Two\Figure 7D - Soil Characterization - PAHs.qgs Jan-31 10:43



- Legend
- Property Boundary
 - Borehole Location
 - Monitoring Well Location
 - Test Pit Location
 - Sample Met Applicable Standards

 DS CONSULTANTS LTD. 6221 Highway 7, UNIT 16 Vaughan, Ontario L4H 0K8 Telephone: (905) 264-9393 www.dsconsultants.ca	Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT 14259 Humber Station Road, Bolton, Ontario			
	Title: SOIL CHARACTERIZATION - PAHs			
Client: ARGO HUMBER STATION LIMITED	Size: 11x17	Approved By: E.K.	Drawn By: P.P	Date: January 2023
	Rev. 0	Scale: As Shown	Project No.: 21-386-100	Figure No.: 7D
Image/Map Source: Google Satellite Image				

J:\GIS\2021 PROJECTS\21-386-100 14259 Humber Station Road\1-QGIS\Phase Two\Figure 7E - Soil Characterization - OCPs.qgs Jan-31 10:35



Legend

- Property Boundary
- Borehole Location
- Monitoring Well Location
- Test Pit Location
- Sample Met Applicable Standards



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Telephone: (905) 264-9393
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Client:
ARGO HUMBER STATION LIMITED

Project:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
14259 Humber Station Road, Bolton, Ontario

Title:
SOIL CHARACTERIZATION - OCPs

Size: 11x17
Approved By: E.K.
Drawn By: P.P.
Date: January 2023

Rev: 0
Scale: As Shown
Project No.: 21-386-100
Figure No.: **7E**

Image/Map Source: Google Satellite Image

J:\GIS\2021 PROJECTS\21-386-100 14259 Humber Station Road\1-QGIS\Phase Two\Figure 8A - Groundwater Characterization - Metals and Inorganics.qgs Jan-31 10:38



- Legend
- Property Boundary
 - Borehole Location
 - Monitoring Well Location
 - Test Pit Location
 - Sample Met Applicable Standards



DS CONSULTANTS LTD.
6221 Highway 7, UNIT 16
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Telephone: (905) 264-9393
www.dsconsultants.ca

Client:
ARGO HUMBER STATION LIMITED

Project:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
14259 Humber Station Road, Bolton, Ontario

Title:
GROUNDWATER CHARACTERIZATION - METALS & INORGANICS

Size: 11x17
Approved By: E.K.
Drawn By: P.P.
Date: January 2023

Rev: 0
Scale: As Shown
Project No.: 21-386-100
Figure No.: **8A**

Image/Map Source: Google Satellite Image





J:\GIS\2021 PROJECTS\21-386-100 14259 Humber Station Road\1-QGIS\Phase Two\Figure 8B - Groundwater Characterization - PHCs & BTEX.ags Jan-31 10:39



Legend

- Property Boundary
- Borehole Location
- Monitoring Well Location
- Test Pit Location
- Sample Met Applicable Standards

 DS CONSULTANTS LTD. 6221 Highway 7, UNIT 16 Vaughan, Ontario L4H 0K8 Telephone: (905) 264-9393 www.dsconsultants.ca	Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT 14259 Humber Station Road, Bolton, Ontario			
	Title: GROUNDWATER CHARACTERIZATION - PHCs & BTEX			
Client: ARGO HUMBER STATION LIMITED	Size: 11x17	Approved By: E.K.	Drawn By: P.P	Date: January 2023
	Rev. 0	Scale: As Shown	Project No.: 21-386-100	Figure No.: 8B
Image/Map Source: Google Satellite Image				

J:\GIS\2021 PROJECTS\21-386-100 14259 Humber Station Road\1-QGIS\Phase Two\Figure 8C - Groundwater Characterization - VOCs.qgs Jan-31 10:40



Legend

- Property Boundary
- Borehole Location
- Monitoring Well Location
- Test Pit Location
- Sample Met Applicable Standards



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

Client:
ARGO HUMBER STATION LIMITED

Project:
**PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
14259 Humber Station Road, Bolton, Ontario**

Title:
GROUNDWATER CHARACTERIZATION - VOCs




Size: 11x17	Approved By:	E.K.	Drawn By:	P.P	Date:	January 2023
	Rev.	0	Scale:	As Shown	Project No.:	21-386-100
Image/Map Source:				Google Satellite Image		

Figure No.: **8C**

J:\GIS\2021 PROJECTS\21-386-100 14259 Humber Station Road\1-QGIS\Phase Two\Figure 8D - Groundwater Characterization - PAHs.qgs Jan-31 10:41



- Legend
- Property Boundary
 - Borehole Location
 - Monitoring Well Location
 - Test Pit Location
 - Sample Met Applicable Standards



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

Client:

ARGO HUMBER STATION LIMITED

Project:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
14259 Humber Station Road, Bolton, Ontario

Title:

GROUNDWATER CHARACTERIZATION - PAHs

Size:

11x17

Approved By:

E.K.

Drawn By:

P.P

Date:

January 2023

Rev.

0

Scale:

As Shown

Project No.:

21-386-100

Figure No.:

8D

Image/Map Source: Google Satellite Image



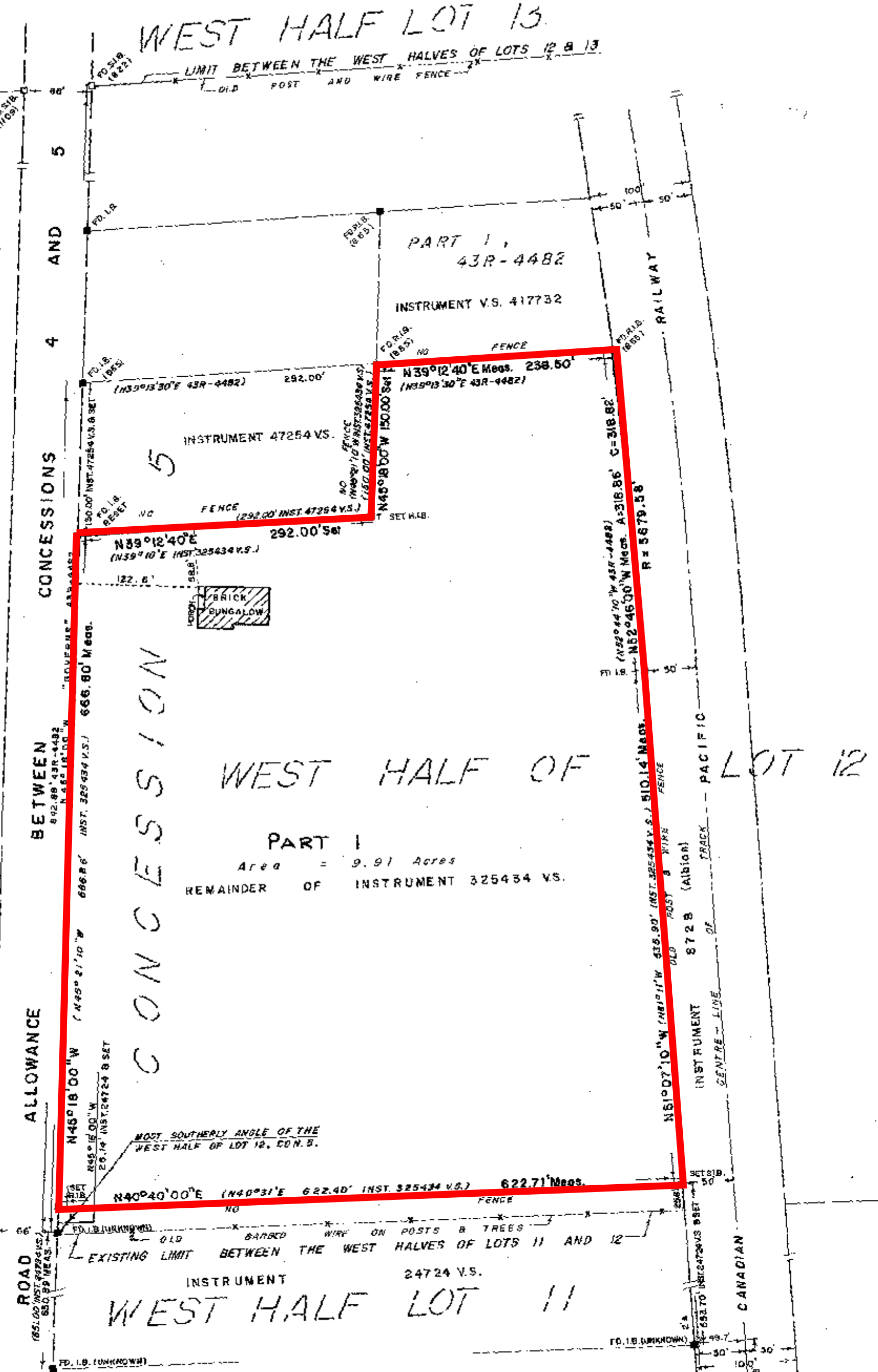


Appendix A

PLAN OF SURVEY SHOWING PART OF
 THE WEST HALF OF LOT 12,
 CONCESSION 5,
 FORMERLY IN THE TOWNSHIP OF ALBION,
 COUNTY OF PEEL, NOW IN THE
 TOWN OF CALEDON,
 REGIONAL MUNICIPALITY OF PEEL.
 SCALE : 1" = 100'
 1977

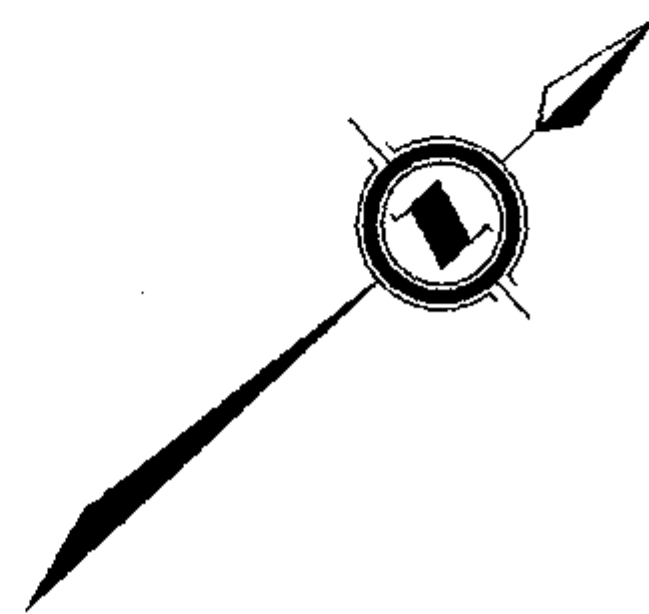
SCHEDULE 'B'

EAST HALF LOT 12
 CONCESSION 4



DEPOSITED UNDER PART II OF THE REGISTRY ACT	PLAN 43-R-5176
DATE JULY 26, 1977	DATE 26 July 1977
<i>Ernest Biason</i> ERNEST BIASON ONTARIO LAND SURVEYOR	<i>Vera Porter</i> LAND REGISTRAR FOR THE REGISTRY DIVISION OF PEEL (Nº 43) 2-37 on

"CAUTION"
 THIS PLAN IS NOT A PLAN OF SUBDIVISION
 WITHIN THE MEANING OF SECTION 29,32
 OR 33 OF THE PLANNING ACT"



DS
 DS
 DS
 MK

BEARING NOTE
 BEARINGS SHOWN HEREON ARE ASSUMED ASTRONOMIC AND ARE
 REFERRED TO THE N45°18'00"W OF THE NORTHEASTERLY
 LIMIT OF THE ROAD ALLOWANCE BETWEEN CONCESSIONS 4 AND
 5, FRONTING ON THE WEST HALF OF LOT 12, CONCESSION 5, AS
 SHOWN ON 43R-4482.

McLEAN, McMURCHY & BIASON
 ONTARIO LAND SURVEYORS
 P.O. BOX 310
 BRAMPTON, ONTARIO.
 PHONE 451-0460.
 AND
 12 KING STREET WEST, P.O. BOX 67,
 BOLTON, ONTARIO
 PHONE 857-0541

- NOTES
- 1) — S.I.B. DENOTES STANDARD IRON BARS (1" Sq x 4' Long)
 - 2) — S.I.B. DENOTES 5/8" SQUARE IRON BARS
 - 3) — R.I.B. DENOTES 3/4" DIAMETER ROUND IRON BARS.
 - 4) F.D. DENOTES FOUND.
 - 5) ALL HANGING LINES SHOWN ON THIS PLAN HAVE BEEN VERIFIED.

MADE FOR
 ALOI BROS. LIMITED,
 842 WILSON AVENUE,
 GOWNSVIEW, ONTARIO.
 ATTN: MR. MARIO PREZ

SURVEYOR'S CERTIFICATE
 I HEREBY CERTIFY THAT
 1) THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE
 WITH THE SURVEYS ACT AND THE REGISTRY ACT AND THE
 REGULATIONS MADE THEREUNDER.
 2) THE SURVEY WAS COMPLETED ON THE 24th DAY OF JUNE,
 1977.
 BOLTON, ONTARIO.
 JUNE 28, 1977.
Ernest Biason
 ERNEST BIASON
 ONTARIO LAND SURVEYOR

PROJECT Nº
 77-7



Appendix B



P22-08-008

September 19, 2022

**Argo Humber Station Limited
4900 Palladium Way, Suite 105
Burlington, Ontario
L7M 0W7
via email: anil@agroland.com**

Attention: Anil Datt

**Re: Sampling and Analysis Plan – Phase Two Environmental Site Assessment
14259 Humber Station Road**

1. Introduction

DS Consultants Limited (DS) is pleased to present the Sampling and Analysis Plan (SAP) for the proposed Phase Two Environmental Site Assessment of 14259 Humber Station Road, (the Site). The purpose of the proposed Phase Two ESA program is to assess the current subsurface environmental conditions in support of the proposed redevelopment of the Site.

The Phase Two ESA will involve intrusive investigation in the areas determined in the Site visit to be Areas of Potential Environmental Concern (APECs), and will be completed in general accordance with O.Reg 153/04. Based on the findings of the field and laboratory analyses, a Phase Two ESA report will be prepared.

2. Background

Based on the Phase One Environmental Site Assessment completed by DS in August, 2022, it is DS's understanding that the Site is a 4.01 (9.91 acres) parcel of land which is currently used for mixed residential and commercial purposes. The first developed use of the Site is interpreted to be Agricultural and residential based on the findings of the Phase One ESA. A total of seven (7) potentially contaminating activities were identified on the Phase One Property Study Area which are considered to be contributing to Areas of Potential Environmental Concern (APECs) on the Phase Two Property. A summary of the APECs identified, the potential contaminants of concern, and the media potentially impacted is presented in Table 1 below:

**Table 1: Areas of Potential Environmental Concern**

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	Northwest of the Site	#28: Gasoline and Associated Products Storage in Fixed Tanks	On Site (PCA-2)	PHCs, BTEX	Soil and groundwater
APEC-2	Entire Site	#40: Pesticides (including herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	On Site (PCA-1)	OCPs, As, Sb, Se, CN-	Soil
APEC-3	Northwest portion of Site	#30: Importation of Fill Material of Unknown Quality	On Site (PCA-5)	PHCs, PAH, VOCs, Metals, As, Sb, Se, B-HWS, CN-, electrical conductivity, Cr (VI), Hg, low or high pH, SAR	Soil
APEC-4	Central portion of Site	#30: Importation of Fill Material of Unknown Quality	On Site (PCA-6)	PHCs, PAH, VOCs, Metals, As, Sb, Se, B-HWS, CN-, electrical conductivity, Cr (VI), Hg, low or high pH, SAR	Soil
APEC-5	East portion of Site	#46: Rail Yards, Tracks and Spurs	Off Site (PCA-3)	PAH, Metals, As, Sb, Se, CN-	Soil and Groundwater

Notes:

1. N/S - not specified in Table 2, Schedule D, of O.Reg. 153/04
2. PHC (F1-F4) = Petroleum Hydrocarbons in the F1-F4 fraction ranges
3. VOCs = Volatile Organic Compounds
4. PAHs = Polycyclic Aromatic Hydrocarbons
5. PCBs = Polychlorinated Biphenyls



3. Site Investigation Program

The proposed field investigation will involve the advancement of boreholes, the installation of monitoring wells, and periodic monitoring of the installed wells. A total of five (5) borehole locations have been identified. Details regarding the proposed boreholes/monitoring wells are provided in the following table:

Table 3-1: Summary of Proposed Investigation Program

ID	Proposed Depth	Well Installation (Y/N)	Well Install Depth(mbtoc)	Purpose
BH22-36	10.5	Y	5.12	Assess soil and water quality in APEC 2 and 5
BH22-37	8.2	N	-	Assess soil quality at APEC2
BH22-38	8.2	N	-	Assess soil and water quality in APEC 2 and 5
BH22-39	8.2	Y	5.0	Assess soil and water quality at APECs 1, 2 and 3
BH22-40	8.2	Y	8.58	Assess soil and water quality at APECs 2 and 5
TP1	0.4	N	-	Assess soil quality at APEC4

Prior to mobilizing a drilling rig, we will lay out the proposed borehole and clear the buried utilities and services by using Ontario One Call System in addition to private utility locates.

The borings will be advanced to the indicated depths using a combination of a track mounted continuous flight auger machine and portable drilling equipment. Samples will be retrieved by means of a 50 mm O.D. split-spoon barrel sampler at 0.61 metre intervals in the upper 3 metres and at 1.5 metres intervals below this level. The monitoring wells will be constructed using 50 mm I.D. PVC pipe, equipped with 3.1 m slotted screens and finished at the ground surface with flush mount well casings. A geodetic benchmark will be used to establish the elevation of each borehole. Drilling and sampling will conform to standard practice.

The Phase Two ESA involves the following principal tasks:

- Retain the services of public and private utility locaters to identify the locations of buried and overhead utility services prior to any excavation or demolition activities;
 - Certain underground utilities (such as those constructed or encased in plastic, fibreglass, clay, concrete pipe, untraceable cast iron, steel, and/or repaired services) cannot be traced by standard locating practices. DS will review all available Site Plans and/or “As Built” figures in an attempt to identify the



locations of potential untraceable services. DS will not be held responsible for any damages to utility services that are not on the figures provided or cannot be located by standard utility locating practices;

- Advancement of boreholes as specified in Table 3-1. The proposed boreholes will be used to facilitate the collection of representative soil and groundwater samples, and to provide information regarding the Site-specific geological and hydrogeological conditions;
- All soil samples recovered during the proposed drilling activities will be field screened for visual and olfactory evidence of deleterious impacts and for the presence of petroleum hydrocarbon (PHC) and volatile organic compound (VOC) derived vapours using either a combustible gas detector (CGD) calibrated to hexane, or a photo-ionization detector (PID) calibrated to isobutylene or equivalent;
- Measure the depth to groundwater levels in the monitoring wells installed, and monitor the wells for the presence/absence of non-aqueous phase liquid using an interface probe;
- Survey each of the monitoring wells to a geodetic datum;
- Develop and purge all of the monitoring wells installed;
- Submit soil samples from the newly advanced boreholes as follows:

Table 3-2: Summary of proposed soil chemical analyses

Borehole ID	Sample No	Sample Depth (mbgs)	Lab Analysis	Purpose
MW22-36	SS1	0.0-0.61	M&I, OCP	Assess soil conditions APEC 2, 5
	SS2	0.8-1.4	M&I, PAH	Assess soil conditions APEC 2, 5
	SS7	6.1-6.71	PHC VOC	Assess soil conditions APEC 5
BH22-37	SS1	0.0-0.61	M&I, OCP	Assess soil conditions APEC 2
BH22-38	SS1	0.0-0.61	M&I, OCP	Assess soil conditions APEC 2, 5
	SS3	1.5-2.11	OCP	Assess soil conditions APEC 2, 5
MW22-39	SS1	0.0-0.61	OCP	Assess soil quality at APEC 1, 2, 3
	SS2	0.8-1.4	M&I, PAH	Assess soil quality at APEC 1, 2, 3
	SS6	4.6-5.2	PHC VOC	Assess soil quality at APEC 1, 2, 3
MW22-40	SS1	0.0-0.61	M&I, OCP	Assess soil conditions APEC 2, 5
	SS3	1.5-2.11	PAH	Assess soil conditions APEC 2, 5
TP1	TP1	0.0-0.8	M&I, PHC, VOCs, PAH, OCP	Assess soil conditions APEC-4
BH22-38	DUP 1	0.0-0.61	M&I,	QA/QC
MW22-40	DUP 2	1.5-2.11	PAHs	QA/QC
MW22-39	DUP 3	4.6-5.2	PHCs, VOCs	QA/QC
MW22-39	DUP 4	0.0-0.61	OCP	QA/QC

- Submit groundwater samples from the monitoring wells as follows:

**Table 3-3: Summary of proposed groundwater analyses**

Well ID	Well Depth	Lab Analysis	Purpose
MW22-36	3.9 mbgs	M&I, PHCs, VOCs, PAHs	Assess water conditions APEC 2, 5
MW22-39	4.3 mbgs	M&I, PHCs, VOCs, PAHs	Assess water quality at APEC 1, 2, 3
MW22-40	8.2 mbgs	M&I, PHCs, VOCs, PAHs	Assess water conditions APEC 2, 5
WDUP (MW22-39)	4.3 mbgs	M&I, PHCs, VOCs, PAHs	Quality Assurance Purposes
Trip Blank	N/A	VOC	Quality Assurance Purposes

A summary of the proposed soil and groundwater analytical program is presented in the following table:

Table 3-4: Summary of Soil and Groundwater Analytical Program

Soil	Groundwater
<ul style="list-style-type: none">• 7 Samples for analysis of metals and inorganics• 4 Samples for analysis of PHCs• 3 Samples for analysis of VOCs• 4 Samples for analysis of PAHs• 7 Samples for analysis of OCPs	<ul style="list-style-type: none">• 3 Samples for analysis of metals and inorganics• 3 Samples for analysis of PHCs• 3 Samples for analysis of VOCs• 3 Samples for analysis of PAHs• 1 VOC Trip Blank

- A Quality Assurance and Quality Control (QAQC) program will be implemented, involving the collection and analysis of duplicate soil and groundwater samples and trip blanks at the frequency specified under O.Reg. 153/04 (as amended);
- A Phase Two ESA Report will be prepared upon receipt of all analytical results and groundwater monitoring data. The Phase Two ESA Report will be completed in general accordance with O.Reg. 153/04 (as amended).

It should be noted that drilling activities may result in some disturbance to the ground surface at the site. Precautions will be taken by the drilling contractor to minimize any damage. The Client will be notified should there be cause to extend the borehole termination depth based on field observations. It is assumed that the site can be accessed at our convenience, during regular business hours. Prior notice will be sent to the client and site representative

It is noted that if the Phase Two ESA reveals parameter concentrations greater than the applicable standards set out in *Ontario Regulation 153/04*, then additional work (i.e., supplemental delineation, additional drilling, sampling, analysis, and/or site remediation activities) will be deemed necessary



prior to RSC filing, should an RSC be required. The costs for any additional work, if necessary, are beyond the current scope of work.

The SAP was created based on the request to complete a Phase Two ESA in support of the proposed redevelopment of the Site. The SAP was compiled to collect data to provide information on soil and/or groundwater quality in each APEC.

Additional delineation may be required following the implementation of this SAP to meet the requirements of O.Reg. 153/04 which requires delineation of all areas where concentrations are above the applicable SCS such as in the following conditions:

- Unexpected contamination not previously discovered, or not related to identified APECs, is discovered which will require further delineation to identify source(s); and
- If the sampling results indicate that the soil and/or groundwater impacts are deeper than initially expected.

4. Closure

We trust that this Sampling and Analysis Plan meets the objectives of the Client. If further assistance is required on this matter please do not hesitate to contact the undersigned.

Yours Very Truly,

DS Consultants Ltd.

Efuange Khumbah, M. Sc., P.Eng. QP_{ESA}
Senior Environmental Project Manager



Appendix C



Table 1: Summary of Monitoring Well Installation and Groundwater Data

Well ID			BH22-36	BH22-39	BH22-40
Installed By:			DS	DS	DS
Installation Date:			07-Sep-22	07-Sep-22	07-Sep-22
Well Status:			Active	Active	Active
EastUTM17			598455.2	598262.19	598283.023
NorthUTM17			4858561	4858595.5	4858704.224
Inner Diameter	(mm)	50	50	50	
Surface Elevation	(masl)	261.71	266.54	265.06	
Bottom of Concrete Seal/Top of Bentonite Seal	mbgs	0.30	0.30	0.30	
	masl	261.41	266.24	264.76	
Bottom of Bentonite Seal/Top of Sand Pack	mbgs	2.50	2.50	2.50	
	masl	259.21	264.04	262.56	
Top of Well Screen	mbgs	3.10	3.10	3.10	
	masl	258.61	263.44	261.96	
Well Screen Length	m	3.00	3.00	3.00	
Bottom of Well Screen	mbgs	6.10	6.10	6.10	
	masl	255.61	260.44	258.96	
GW Monitoring					
08-Sep-22	Depth to GW	mbgs	2.74	2.29	Dry
	GW Elevation	masl	258.97	264.25	not measured
19-Sep-22	Depth to GW	mbgs	2.70	1.92	5.92
	GW Elevation	masl	259.01	264.62	259.14

For Table Notes see **Notes for Soil and Groundwater Summary Tables**, included at the end of this Section.



Table 2: Summary of Soil Samples Submitted for Chemical Analysis

Borehole ID	Sample No.	Sample Depth (mbgs)	Soil Description	Parameter Analyzed	APEC Investigated
BH22-36	SS1	0.0-0.61	Clayey Silt	M&I, OCPs	APEC 2 & 5
	SS2	0.8-1.41	Sandy Silt	M&I, PAHs	
	SS7	6.1-6.71	Silty Clay Till	PHC,VOCs	
BH22-37	SS1	0.0-0.61	Silty Clay	M&I,OCPs	APEC 2
BH22-38	SS1	0.0-0.61	Silty Clay	M&I,OCPs	APEC 2&5
	SS3	1.5-2.11	Silty Clay	OCPs	
BH22-39	SS1	0.0-0.61	Silty Clay	OCPs	APEC 1,2&3
	SS2	0.8-1.41	Silty Clay	M&I,PAHs	
	SS6	4.6-5.2	Silty Clay Till	PHC,VOCs	
BH22-40	SS1	0.0-0.61	Silty Clay	M&I, OCPs	APEC 2&5
	SS3	1.5-2.11	Silty Clay Till	PAHs	
TP1	TP 1	0.0-0.8	Silty Clay	M&I,PHC,VOCs, PAHs, OCPs	APEC 4

For Table Notes see **Notes for Soil and Groundwater Summary Tables**, included at the end of this Section.



Table 3: Summary of Groundwater Samples Submitted for Chemical Analysis

Well ID	Well Screen Interval (masl)		Sample Date	Parameter Analyzed	APEC Investigated
BH22-36	258.61	- 255.61	21-Sep-22	Metals and ORPs,PHCs, VOCs, PAHs	APEC 2 & 5
BH22-39	263.44	- 260.44	21-Sep-22	Metals and ORPs,PHCs, VOCs, PAHs	APEC 1,2,3
BH22-40	261.96	- 258.96	22-Sep-22	Metals and ORPs,PHCs, VOCs, PAHs	APEC 2 & 5

For Table Notes see **Notes for Soil and Groundwater Summary Tables**, included at the end of this Section.



Table 4: Summary of APECs Investigated

APEC	Description	PCOCs	Media	Boreholes Within APEC	Samples Analysed	Parameter Analyzed
APEC-1	Former gasoline tank was situated in the basement.	PHCs,BTEX	Soil	BH22-39	SS1	OCPs
					SS2	M&I, PAH
					SS7	PHC,VOCs
					DUP 1	PHC,VOCs
			Groundwater	BH22-39	DUP-1	M&I,PHCs, VOCs, PAHs
APEC-2	The property has always been used as agricultural	OCPs,Pb, As, Sb,Se,CN-	Soil	BH22-36	SS1	M&I, OCPs
					SS2	M&I, PAHs
					SS6	PHCs, VOCs
				BH22-37	SS1	M&I,OCP
				BH22-38	SS1	M&I,OCPs
					SS3	OCPs
				BH22-40	SS1	M&I,OCP
					SS3	PAHs
			Groundwater	BH22-36	BH22-36	Metals and ORPs, PHCs, VOCs, PAHs, OCPs
				BH22-39	BH22-39	
				BH22-40	BH22-40	
				DUP-1	DUP-1	
APEC-3	The former residential building has been demolished and replaced with agricultural crops.	PHCs,PAH,VOCs, Metals, As,Sb,Se,B-, HWS,CN-,electrical conductivity, Cr(VI),Hg, low or high pH, SAR	Soil	BH22-39	SS1	OCPs
					SS2	M&I,PAHs
					SS7	PHC/VOCs
			Groundwater	BH22-39	BH22-39	Metals and ORPs, PHCs, VOCs, PAHs, OCPs
APEC-4	The importation of fill material may have occurred in the vicinity of the former barn, due to the area currently farmland.	PHC,PAH, VOCs, Metals, As,Sb,Se, B-, HWS,CN-, electrical conductivity, Cr (VI), Hg, low or high pH,SAR	Soil	BH22-43	TP 1	M&I,PHC, VOCs, PAHs, OCPs
APEC-5	Rail Yard Tracks are situated on the east portion of the site.	PAH, Metals, As, Sb,Se,CN-	Soil	BH22-40	SS1	Metals and ORPs,OCPs
					SS3	PAHs
			Groundwater	BH22-40	DUP-2	M&I,PHC,VOCs,PAHs

For Table Notes see **Notes for Soil and Groundwater Summary Tables**, included at the end of this Section



Table 5: Summary of Metals and ORPs in Soil

Parameter	MECP Table 2 SCS	TP 1	BH22-36 SS1	BH22-36 SS2	BH22-37 SS1	BH22-38 SS1	DUP -1 (BH22-38 SS1)	BH22-39 SS2	BH22-40 SS1	DUP-2 (BH22-40 SS3)
Date of Collection		07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22
Date Reported		20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22
Sampling Depth (mbgs)		0.0-0.8	0.0-0.61	0.8-1.41	0.0-0.61	0.0-0.61	0.0-0.61	0.8-1.41	0.0-0.61	1.5-2.11
Analytical Report Reference No.		TRH315-C2P9440	TRH317-C2P8440	TRH318-C2P8440	TRH316-C2P8440	TRH325-C2P8440	TRH327-C2P8440	TRH323-C2P8440	TRH320-C2P8440	TRH328-C2P8440
Antimony	7.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-
Arsenic	18	4.5	1.6	2	2.6	2.7	3.6	3.3	3.3	-
Barium	390	120	26	39	61	81	81	90	80	-
Beryllium	4	0.92	0.26	0.32	0.62	0.67	0.64	0.72	0.75	-
Boron (Hot Water Soluble)	1.5	0.42	0.16	0.058	0.46	0.39	0.11	0.1	0.13	-
Cadmium	1.2	0.13	<0.10	<0.10	0.13	0.16	<0.10	0.11	<0.10	-
Chromium	160	30	13	12	19	20	21	24	23	-
Chromium VI	8	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	-
Cobalt	22	12	4.2	5.9	8	6.3	12	10	10	-
Copper	140	29	8.5	12	15	12	23	22	24	-
Lead	120	13	5.2	5.1	11	9.4	9.6	9.9	10	-
Mercury	0.27	0.054	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
Molybdenum	6.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Nickel	100	30	8.6	12	16	15	24	23	24	-
Selenium	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Silver	20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-
Thallium	1	0.18	0.065	0.069	0.11	0.11	0.16	0.16	0.17	-
Vanadium	86	39	27	19	29	30	29	32	31	-
Zinc	340	73	21	25	48	41	51	55	53	-
pH (pH Units)	NV	7.34	7.14	7.79	7.66	7.32	7.75	7.6	7.49	7.82
Conductivity (ms/cm)	0.7	0.31	0.12	0.17	0.24	0.19	0.14	0.2	0.15	-
Sodium Adsorption Ratio	5	0.35	0.37	0.4	0.45	0.23	0.29	0.44	0.25	-
Cyanide, Free	0.051	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
Boron (Total)	120	7.4	<5.0	<5.0	<5.0	<5.0	8.6	7.4	7.6	-
Uranium	23	0.57	0.46	0.38	0.6	0.68	0.57	0.6	0.5	-

For Table Notes see **Notes for Soil and Groundwater Summary Tables**, included at the end of this Section



Table 6: Summary of PHCs in Soil

Parameter	MECP Table 2 SCS	TP 1	BH22-36 SS7	BH22-39 SS6	DUP -3 (BH22-39 SS6)
Date of Collection		07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22
Date Reported		20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22
Sampling Depth (mbgs)		0.0-0.8	6.1-6.71	4.6-5.2	4.6-5.2
Analytical Report Reference No.		TRH315-C2P8440	TRH319-C2P8440	TRH324-C2P8440	TRH329-C2P8440
Benzene	0.24	<0.0060	<0.0060	<0.0060	<0.0060
Ethylbenzene	0.28	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	2.1	<0.020	<0.020	<0.020	<0.020
Xylenes (Total)	25	<0.020	<0.020	<0.020	<0.020
F1 (C6-C10) -BTEX	30	<10	<10	<10	<10
F2 (C10-C16)	150	<10	<10	12	<10
F3 (C16-C34)	400	<50	<50	64	<50
F4 (C34-C50)	2800	<50	<50	<50	<50

For Table Notes see **Notes for Soil and Groundwater Summary Tables**, included at the end of this Section.

Table 7: Summary of VOCs in Soil

Parameter	MECP Table 2 SCS	TP 1	BH22-36 SS7	BH22-39 SS6	DUP-3 (BH22-39 SS6)
Date of Collection		07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22
Date Reported		20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22
Sampling Depth (mbgs)		0.0-0.8	6.1-6.71	4.6-5.2	4.6-5.2
Analytical Report Reference No.		TRH315-C2P8440	TRH319-C2P8440	TRH324-C2P8440	TRH329-C2P8440
Acetone	0.5	<0.49	<0.49	<0.49	<0.49
Benzene	0.02	<0.0060	<0.0060	<0.0060	<0.0060
Bromodichloromethane	0.05	<0.040	<0.040	<0.040	<0.040
Bromoform	0.05	<0.040	<0.040	<0.040	<0.040
Bromomethane	0.05	<0.040	<0.040	<0.040	<0.040
Carbon Tetrachloride	0.05	<0.040	<0.040	<0.040	<0.040
Chlorobenzene	0.05	<0.040	<0.040	<0.040	<0.040
Chloroform	0.05	<0.040	<0.040	<0.040	<0.040
Dibromochloromethane	0.05	<0.040	<0.040	<0.040	<0.040
1,2-Dichlorobenzene	0.05	<0.040	<0.040	<0.040	<0.040
1,3-Dichlorobenzene	0.05	<0.040	<0.040	<0.040	<0.040
1,4-Dichlorobenzene	0.05	<0.040	<0.040	<0.040	<0.040
1,1-Dichloroethane	0.05	<0.040	<0.040	<0.040	<0.040
1,2-Dichloroethane	0.05	<0.049	<0.049	<0.049	<0.049
1,1-Dichloroethylene	0.05	<0.040	<0.040	<0.040	<0.040
Cis-1,2-Dichloroethylene	0.05	<0.040	<0.040	<0.040	<0.040
Trans-1,2-Dichloroethylene	0.05	<0.040	<0.040	<0.040	<0.040
1,2-Dichloropropane	0.05	<0.040	<0.040	<0.040	<0.040
Cis-1,3-Dichloropropylene	NV	<0.030	<0.030	<0.030	<0.030
Trans-1,3-Dichloropropylene	NV	<0.040	<0.040	<0.040	<0.040
Ethylbenzene	0.05	<0.010	<0.010	<0.010	<0.010
Ethylene Dibromide	0.05	<0.040	<0.040	<0.040	<0.040
Methyl Ethyl Ketone	0.5	<0.40	<0.40	<0.40	<0.40
Methylene Chloride	0.05	<0.049	<0.049	<0.049	<0.049
Methyl Isobutyl Ketone	0.5	<0.40	<0.40	<0.40	<0.40
Methyl-t-Butyl Ether	0.05	<0.040	<0.040	<0.040	<0.040
Styrene	0.05	<0.040	<0.040	<0.040	<0.040
1,1,1,2-Tetrachloroethane	0.05	<0.040	<0.040	<0.040	<0.040
1,1,2,2-Tetrachloroethane	0.05	<0.040	<0.040	<0.040	<0.040
Toluene	0.2	<0.020	<0.020	<0.020	<0.020
Tetrachloroethylene	0.05	<0.040	<0.040	<0.040	<0.040
1,1,1-Trichloroethane	0.05	<0.040	<0.040	<0.040	<0.040
1,1,2-Trichloroethane	0.05	<0.040	<0.040	<0.040	<0.040
Trichloroethylene	0.05	0.022	0.021	0.046	0.043
Vinyl Chloride	0.02	<0.019	<0.019	<0.019	<0.019
m-Xylene & p-Xylene	NV	<0.020	<0.020	<0.020	<0.020
o-Xylene	NV	<0.020	<0.020	<0.020	<0.020
Total Xylenes	0.05	<0.020	<0.020	<0.020	<0.020
Dichlorodifluoromethane	0.05	<0.040	<0.040	<0.040	<0.040
Hexane(n)	0.05	<0.040	<0.040	<0.040	<0.040
Trichlorofluoromethane	0.05	<0.040	<0.040	<0.040	<0.040
1,3-Dichloropropene (cis + trans)	0.05	<0.050	<0.050	<0.050	<0.050



Table 8: Summary of PAHs in Soil

Parameter	MECP Table 2 SCS	TP 1	BH22-36 SS2	BH22-39 SS2	BH22-40 SS3	DUP-2 (BH22-40 SS3)
Date of Collection		07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22
Date Reported		20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22
Sampling Depth (mbgs)		0.0-0.8	0.8-1.41	0.8-1.41	1.5-2.11	1.5-2.11
Analytical Report Reference No.		TRH315-C2P9440	TRH318-C2P8440	TRH323-C2P8440	TRH321-C2P8440	TRH328-C2P8440
Methylnaphthalene, 2-(1-)	0.99	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071
Acenaphthene	7.9	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	0.15	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	0.67	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(a)anthracene	0.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(a)pyrene	0.3	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b/j)fluoranthene	0.78	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(ghi)perylene	6.6	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(k)fluoranthene	0.78	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chrysene	7	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dibenzo(a,h)anthracene	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	0.69	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluorene	62	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Indeno(1,2,3-cd)pyrene	0.38	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Naphthalene	0.6	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Phenanthrene	6.2	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Pyrene	78	0.005	<0.0050	<0.0050	<0.0050	<0.0050

For Table Notes see **Notes for Soil and Groundwater Summary Tables**, included at the end of this Section.



Table 9: Summary of OCPs in Soil

Parameter	MECP Table 2 SCS	TP 1	BH22-36 SS1	BH22-37 SS1	BH22-38 SS1	BH22-38 SS3	BH22-39 SS1	DUP-4 (BH22-39 SS1)	BH22-40 SS1
Date of Collection		07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22	07-Sep-22
Date Reported		20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22
Screen Interval (mbgs)		0.0-0.8	0.0-0.61	0.0-0.61	0.0-0.61	1.5-2.11	0.0-0.61	0.0-0.61	0.0-0.61
Analytical Report Reference No.		TRH315- C2P8440	TRH320-C2P8440	TRH316-C2P440	TRH326- C2P8440	TRH330-C2P8440	TRH325-C2P8440	TRH330-C2P8440	TRH322-C2P8440
Aldrin	0.05	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Chlordane	0.05	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
DDD	3.3	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
DDE	0.26	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
DDT	1.4	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dieldrin	0.05	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endosulfan	0.04	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Endrin	0.04	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor	0.15	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Heptachlor Epoxide	0.05	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobenzene	0.52	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachlorobutadiene	0.012	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Hexachloroethane	0.089	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Methoxychlor	0.13	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

For Table Notes see **Notes for Soil and Groundwater Summary Tables**, included at the end of this Section.



Table 10: Summary of Metals and ORPs in Groundwater

Parameter	MECP Table 2 SCS	BH22-36	BH22-39	DUP-1 (BH22-39)	BH22-40
Date of Collection		20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22
Date Reported		29-Sep-22	29-Sep-22	29-Sep-22	29-Sep-22
Screen Interval (masl)		258.61-255.61	263.44-260.44	263.44-260.44	261.96-258.96
Analytical Report Reference No.		TUD396-C2R1694	TUD394-C2R1694	TUD398-C2R1694	TUD395- C2R1694
Antimony	6	<0.50	<0.50	<0.50	0.74
Arsenic	25	<1.0	5.2	4.9	<1.0
Barium	1000	120	130	130	98
Beryllium	4	<0.40	<0.40	<0.40	<0.40
Boron (total)	5000	35	56	59	110
Cadmium	2.7	<0.090	<0.090	<0.090	<0.090
Chromium Total	25	<5.0	<5.0	<5.0	<5.0
Cobalt	3.8	<0.50	1.7	1.8	<0.50
Copper	87	<0.90	1.4	13	1.4
Lead	10	<0.50	<0.50	<0.50	<0.50
Molybdenum	70	3.4	4.1	4	7.2
Nickel	100	<1.0	3.3	4.9	<1.0
Selenium	10	<2.0	<2.0	<2.0	<2.0
Silver	1.5	<0.090	<0.090	<0.090	<0.090
Sodium	490000	53000	59000	59000	45000
Thallium	2	<0.050	<0.050	<0.050	<0.050
Uranium	20	3.1	2.4	2.4	3.3
Vanadium	6.2	1.2	1.2	1.4	1.4
Zinc	1100	<5.0	<5.0	7.9	<5.0

For Table Notes see **Notes for Soil and Groundwater Summary Tables**, included at the end of this Section



Table 11: Summary of PHCs in Groundwater

Parameter	MECP Table 2 SCS	BH22-36	BH22-39	DUP-1 (BH22-39)	BH22-40
Date of Collection		20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22
Date Reported		29-Sep-22	29-Sep-22	29-Sep-22	29-Sep-22
Screen Interval (mbgs)		258.61-255.61	263.44-260.44	263.44-260.44	261.96-258.96
Analytical Report Reference No.		TUD396-C2R1694	TUD394-C2R1694	TUD398-C2R1694	TUD395- C2R1694
Benzene	5	<0.17	<0.17	<0.17	<0.17
Ethylbenzene	2.4	<0.20	<0.20	<0.20	<0.20
Toluene	24	<0.20	<0.20	<0.20	<0.20
Xylenes (Total)	300	<0.20	<0.20	<0.20	<0.20
F1 (C6 to C10) minus BTEX	750	<25	<25	<25	<25
F2 (C10 to C16)	150	<100	<100	<100	<100
F3 (C16 to C34)	500	<200	<200	<200	<200
F4 (C34 to C50)	500	<200	<200	<200	<200

For Table Notes see **Notes for Soil and Groundwater Summary Tables**, included at the end of this Section.



Table 12: Summary of VOCs in Groundwater

Parameter	MECP Table 2 SCS	BH22-36	BH22-39	DUP-1 (BH22-39)	BH22-40	Trip Blank
Date of Collection		20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22
Date Reported		29-Sep-22	29-Sep-22	29-Sep-22	29-Sep-22	29-Sep-22
Screen Interval (mbgs)		258.61-255.61	263.44-260.44	263.44-260.44	261.96-258.96	-
Analytical Report Reference No.		TUD396-C2R1694	TUD394-C2R1694	TUD398-C2R1694	TUD395-C2R1694	TUD397-C2R1694
Acetone	2700	<10	<10	<10	<10	<10
Bromomethane	0.89	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride	0.79	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	30	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	2.4	<0.20	<0.20	<0.20	<0.20	<0.20
Dichlorobenzene, 1,2-	3	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,3-	59	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,4-	1	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	25	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethane, 1,1-	5	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethane, 1,2-	1.6	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,1-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, 1,2-cis-	1.6	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,2-trans-	1.6	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloropropane, 1,2-	5	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylene dibromide	0.2	<0.20	<0.20	<0.20	<0.20	<0.20
Hexane (n)	51	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Ethyl Ketone	1800	<10	<10	<10	<10	<10
Methyl Isobutyl Ketone	640	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl tert-Butyl Ether (MTBE)	15	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	50	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	5.4	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,1,2-	1.1	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	1	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	200	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,2-	4.7	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	150	<0.50	<0.50	<0.50	<0.50	<0.50
Vinyl Chloride	0.5	<0.20	<0.20	<0.20	<0.20	<0.20

For Table Notes see **Notes for Soil and Groundwater Summary Tables**, included at the end of this Section.



Table 13: Summary of PAHs in Groundwater

Parameter		BH22-36	BH22-39	DUP-1 (BH22-39)	BH22-40
Date of Collection	MECP Table 2 SCS	20-Sep-22	20-Sep-22	20-Sep-22	20-Sep-22
Date Reported		29-Sep-22	29-Sep-22	29-Sep-22	29-Sep-22
Screen Interval (mbgs)		258.61-255.61	263.44-260.44	263.44-260.44	261.96-258.96
Analytical Report Reference No.		TUD396-C2R1694	TUD394-C2R1694	TUD398-C2R1694	TUD395-C2R1694
Methylnaphthalene, 2-(1-)	3.2	<0.071	<0.071	<0.071	<0.071
Acenaphthene	4.1	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	1	<0.050	<0.050	<0.050	<0.050
Anthracene	2.4	<0.050	<0.050	<0.050	<0.050
Benzo(a)anthracene	1	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	0.01	<0.0090	<0.0090	<0.0090	<0.0090
Benzo(b/j)fluoranthene	0.1	<0.050	<0.050	<0.050	<0.050
Benzo(ghi)perylene	0.2	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	0.1	<0.050	<0.050	<0.050	<0.050
Chrysene	0.1	<0.050	<0.050	<0.050	<0.050
Dibenzo(a,h)anthracene	0.2	<0.050	<0.050	<0.050	<0.050
Fluoranthene	0.41	<0.050	<0.050	<0.050	<0.050
Fluorene	120	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	0.2	<0.050	<0.050	<0.050	<0.050
Naphthalene	11	<0.050	<0.050	<0.050	<0.050
Phenanthrene	1	<0.030	<0.030	<0.030	<0.030
Pyrene	4.1	<0.050	<0.050	<0.050	<0.050

For Table Notes see **Notes for Soil and Groundwater Summary Tables**, included at the end of this Section.



Table 14: Summary of Maximum Concentrations in Soil

	Parameter	Standard	Maximum Concentration	Location
Metals and ORPs	Antimony	7.5	<0.20	All Samples
	Arsenic	18	4.5	TP 1
	Barium	390	120	TP 1
	Beryllium	4	0.92	TP 1
	Boron (Hot Water Soluble)	1.5	0.46	BH22-37 SS1
	Cadmium	1.2	0.16	BH22-38 SS1
	Chromium	160	30	TP 1
	Chromium VI	8	<0.18	All Samples
	Cobalt	22	12	TP 1
	Copper	140	29	TP 1
	Lead	120	13	TP 1
	Mercury	0.27	0.054	TP 1
	Molybdenum	6.9	<0.50	All Samples
	Nickel	100	30	TP 1
	Selenium	2.4	<0.50	All Samples
	Silver	20	<0.20	All Samples
	Thallium	1	0.18	TP 1
	Vanadium	86	39	TP 1
	Zinc	340	73	TP 1
	pH (pH Units)	NV	7.82	DUP-2 (BH22-40 SS3)
PHCs	Conductivity (ms/cm)	0.7	0.31	TP 1
	Sodium Adsorption Ratio	5	0.45	BH22-37 SS1
	Cyanide, Free	0.051	<0.01	All Samples
	Uranium	23	0.68	BH22-38 SS1
	Benzene	0.24	<0.0060	All Samples
	Ethylbenzene	0.28	<0.0010	All Samples
	Toluene	2.1	<0.020	All Samples
	Xylenes (Total)	25	<0.020	All Samples
	F1 (C6-C10) -BTX	30	<10	All Samples
	F2 (C10-C16)	150	12	BH22-39 SS6
	F3 (C16-C34)	400	64	BH22-39 SS6
	F4 (C34-C50)	2800	<50	All Samples



Table 14: Summary of Maximum Concentrations in Soil

	Parameter	Standard	Maximum Concentration	Location
VOCs	Acetone	0.5	<0.040	All Samples
	Benzene	0.02	<0.040	All Samples
	Bromodichloromethane	0.05	<0.040	All Samples
	Bromoform	0.05	<0.040	All Samples
	Bromomethane	0.05	<0.040	All Samples
	Carbon Tetrachloride	0.05	<0.040	All Samples
	Chlorobenzene	0.05	<0.049	All Samples
	Chloroform	0.05	<0.040	All Samples
	Dibromochloromethane	0.05	<0.040	All Samples
	1,2-Dichlorobenzene	0.05	<0.040	All Samples
	1,3-Dichlorobenzene	0.05	<0.040	All Samples
	1,4-Dichlorobenzene	0.05	<0.030	All Samples
	1,1-Dichloroethane	0.05	<0.040	All Samples
	1,2-Dichloroethane	0.05	<0.010	All Samples
	1,1-Dichloroethylene	0.05	<0.040	All Samples
	Cis-1,2-Dichloroethylene	0.05	<0.40	All Samples
	Trans-1,2-Dichloroethylene	0.05	<0.049	All Samples
	1,2-Dichloropropane	0.05	<0.40	All Samples
	Cis-1,3-Dichloropropylene	NV	<0.040	All Samples
	Trans-1,3-Dichloropropylene	NV	<0.040	All Samples
	Ethylbenzene	0.05	<0.040	All Samples
	Ethylene Dibromide	0.05	<0.040	All Samples
	Methyl Ethyl Ketone	0.5	<0.020	All Samples
	Methylene Chloride	0.05	<0.040	All Samples
	Methyl Isobutyl Ketone	0.5	<0.040	All Samples
	Methyl-t-Butyl Ether	0.05	<0.040	All Samples
	Styrene	0.05	0.022	All Samples
	1,1,1,2-Tetrachloroethane	0.05	<0.019	All Samples
	1,1,2,2-Tetrachloroethane	0.05	<0.020	All Samples
	Toluene	0.2	<0.020	All Samples
	Tetrachloroethylene	0.05	<0.020	All Samples
	1,1,1-Trichloroethane	0.05	<0.040	All Samples
	1,1,2-Trichloroethane	0.05	<0.040	All Samples
	Trichloroethylene	0.05	<0.040	All Samples
	Vinyl Chloride	0.02	<0.050	All Samples
	m-Xylene & p-Xylene	NV	<0.020	All Samples
	o-Xylene	NV	<0.020	All Samples
	Total Xylenes	0.05	<0.040	All Samples
	Dichlorodifluoromethane	0.05	<0.040	All Samples
	Hexane(n)	0.05	<0.040	All Samples
	Trichlorofluoromethane	0.05	<0.050	All Samples
	1,3-Dichloropropene (cis + trans)	0.05	<0.050	All Samples



Table 14: Summary of Maximum Concentrations in Soil

	Parameter	Standard	Maximum Concentration	Location
PAHs	Methylnaphthalene, 2-(1-)	0.99	<0.0071	All Samples
	Acenaphthene	7.9	<0.0050	All Samples
	Acenaphthylene	0.15	<0.0050	All Samples
	Anthracene	0.67	<0.0050	All Samples
	Benzo(a)anthracene	0.5	<0.0050	All Samples
	Benzo(a)pyrene	0.3	<0.0050	All Samples
	Benzo(b/j)fluoranthene	0.78	<0.0050	All Samples
	Benzo(ghi)perylene	6.6	<0.0050	All Samples
	Benzo(k)fluoranthene	0.78	<0.0050	All Samples
	Chrysene	7	<0.0050	All Samples
	Dibenzo(a,h)anthracene	0.1	<0.0050	All Samples
	Fluoranthene	0.69	<0.0050	All Samples
	Fluorene	62	<0.0050	All Samples
	Indeno(1,2,3-cd)pyrene	0.38	<0.0050	All Samples
	Naphthalene	0.6	0.005	TP 1
	Phenanthrene	6.2	0.005	TP 1
	Pyrene	78	0.005	TP 1
OCPs	Aldrin	0.05	<0.0020	All Samples
	Chlordane	0.05	<0.0020	All Samples
	DDD	3.3	<0.0020	All Samples
	DDE	0.26	<0.0020	All Samples
	DDT	1.4	<0.0020	All Samples
	Dieldrin	0.05	<0.0020	All Samples
	Endosulfan	0.04	<0.0020	All Samples
	Endrin	0.04	<0.0020	All Samples
	Heptachlor	0.15	<0.0020	All Samples
	Heptachlor Epoxide	0.05	<0.0020	All Samples
	Hexachlorobenzene	0.52	<0.0020	All Samples
	Hexachlorobutadiene	0.012	<0.0020	All Samples
	Hexachloroethane	0.089	<0.0020	All Samples
	Methoxychlor	0.13	<0.0050	All Samples



Table 15: Summary of Maximum Concentrations in Groundwater

	Parameter	Standard	Maximum Concentration	Location
Metals and ORPs	Antimony	6	0.74	BH22-40
	Arsenic	25	5.2	BH22-39
	Barium	1000	130	BH22-39
	Beryllium	4	<0.40	All Samples
	Boron (total)	5000	110	BH22-40
	Cadmium	2.7	<0.090	All Samples
	Chromium Total	25	<5.0	All Samples
	Cobalt	3.8	1.8	DUP-1 (BH22-39)
	Copper	87	13	DUP-1 (BH22-39)
	Lead	10	<0.50	All Samples
	Molybdenum	70	7.2	BH22-40
	Nickel	100	4.9	DUP-1 (BH22-39)
	Selenium	10	<2.0	All Samples
	Silver	1.5	<0.090	All Samples
	Sodium	490000	59000	BH22-39
	Thallium	2	<0.050	All Samples
	Uranium	20	3.3	BH22-40
	Vanadium	6.2	1.4	DUP-1 (BH22-39)
	Zinc	1100	7.9	DUP-1 (BH22-39)
PHCs	Benzene	5	<0.17	All Samples
	Ethylbenzene	2.4	<0.20	All Samples
	Toluene	24	<0.20	All Samples
	Xylenes (Total)	300	<0.20	All Samples
	F1 (C6 to C10) minus BTEX	750	<25	All Samples
	F2 (C10 to C16)	150	<100	All Samples
	F3 (C16 to C34)	500	<200	All Samples
	F4 (C34 to C50)	500	<200	All Samples



Table 15: Summary of Maximum Concentrations in Groundwater

	Parameter	Standard	Maximum Concentration	Location
VOCs	Acetone	2700	<10	All Samples
	Bromomethane	0.89	<0.50	All Samples
	Carbon Tetrachloride	0.79	<0.20	All Samples
	Chlorobenzene	30	<0.20	All Samples
	Chloroform	2.4	<0.20	All Samples
	Dichlorobenzene, 1,2-	3	<0.50	All Samples
	Dichlorobenzene, 1,3-	59	<0.50	All Samples
	Dichlorobenzene, 1,4-	1	<0.50	All Samples
	Dichlorodifluoromethane	25	<1.0	All Samples
	Dichloroethane, 1,1-	5	<0.20	All Samples
	Dichloroethane, 1,2-	1.6	<0.50	All Samples
	Dichloroethylene, 1,1-	1.6	<0.20	All Samples
	Dichloroethylene, 1,2-cis-	1.6	<0.50	All Samples
	Dichloroethylene, 1,2-trans-	1.6	<0.50	All Samples
	Dichloropropane, 1,2-	5	<0.20	All Samples
	Ethylene dibromide	0.2	<0.20	All Samples
	Hexane (n)	51	<1.0	All Samples
	Methyl Ethyl Ketone	1800	<10	All Samples
	Methyl Isobutyl Ketone	640	<5.0	All Samples
	Methyl tert-Butyl Ether (MTBE)	15	<0.50	All Samples
	Methylene Chloride	50	<2.0	All Samples
	Styrene	5.4	<0.50	All Samples
	Tetrachloroethane, 1,1,1,2-	1.1	<0.50	All Samples
	Tetrachloroethane, 1,1,2,2-	1	<0.50	All Samples
	Tetrachloroethylene	1.6	<0.20	All Samples
	Trichloroethane, 1,1,1-	200	<0.20	All Samples
	Trichloroethane, 1,1,2-	4.7	<0.50	All Samples
	Trichloroethylene	1.6	<0.20	All Samples
	Trichlorofluoromethane	150	<0.50	All Samples
	Vinyl Chloride	0.5	<0.20	All Samples

For Table Notes see **Notes for Soil and Groundwater Summary Tables**, included at the end of this Section



Notes for Soil and Groundwater Summary Tables

	For soil and groundwater analytical results, concentration exceeds the applicable Standards.
	For soil and groundwater analytical results, laboratory detection limits exceed the applicable Standards.
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
masl	Meters above sea level
MECP Table 2 SCS	Table 2 SCS: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Residential/Parkland/ Institutional Use with medium-fine textured soils of the "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", published by the MECP on April 15, 2011.
mbgs	Meters below ground surface
NM	Not Monitored
NA	Not Available
OCPs	Organochlorine Pesticides
PAH	Polycyclic Aromatic Hydrocarbon
PHC	Petroleum Hydrocarbon
Units	Units for all soil analyses are in µg/g (ppm) unless otherwise indicated
Units	Units for all groundwater analyses are in µg/L (ppb) unless otherwise indicated



Appendix E



Your Project #: 21-386-100
Site Location: 14259 HUMBER STATION RD, BOLTON
Your C.O.C. #: n/a

Attention: Efuange Khumbah

DS Consultants Limited
6221 Highway 7, Unit 16
Vaughan, ON
CANADA L4H 0K8

Report Date: 2022/11/04
Report #: R7372976
Version: 5 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C2P8440

Received: 2022/09/08, 15:42

Sample Matrix: Soil
Samples Received: 16

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	5	N/A	2022/09/15	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	8	2022/09/13	2022/09/14	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	4	N/A	2022/09/13		EPA 8260C m
Free (WAD) Cyanide	5	2022/09/12	2022/09/13	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	3	2022/09/14	2022/09/14	CAM SOP-00457	OMOE E3015 m
Conductivity	8	2022/09/14	2022/09/14	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	5	2022/09/13	2022/09/13	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1)	3	2022/09/14	2022/09/14	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydrocarbons F2-F4 in Soil (2)	3	2022/09/13	2022/09/13	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	1	2022/09/29	2022/09/30	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	8	2022/09/13	2022/09/13	CAM SOP-00447	EPA 6020B m
Moisture	6	N/A	2022/09/10	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	9	N/A	2022/09/12	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	1	N/A	2022/09/13	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (3)	5	2022/09/13	2022/09/14	CAM SOP-00307	SW846 8081, 8082
OC Pesticides (Selected) & PCB (3)	3	2022/09/15	2022/09/16	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	7	N/A	2022/09/12	CAM SOP-00307	EPA 8081/8082 m
OC Pesticides Summed Parameters	1	N/A	2022/09/14	CAM SOP-00307	EPA 8081/8082 m
PAH Compounds in Soil by GC/MS (SIM)	5	2022/09/13	2022/09/14	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	1	2022/11/04	2022/11/04	CAM SOP-00413	EPA 9045 D m
pH CaCl2 EXTRACT	8	2022/09/13	2022/09/13	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	8	N/A	2022/09/15	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs	4	N/A	2022/09/12	CAM SOP-00230	EPA 8260C m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement



Your Project #: 21-386-100
Site Location: 14259 HUMBER STATION RD, BOLTON
Your C.O.C. #: n/a

Attention: Efuange Khumbah

DS Consultants Limited
6221 Highway 7, Unit 16
Vaughan, ON
CANADA L4H 0K8

Report Date: 2022/11/04
Report #: R7372976
Version: 5 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C2P8440

Received: 2022/09/08, 15:42

Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

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Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Soils are reported on a dry weight basis unless otherwise specified.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

(3) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Ashton Gibson, Project Manager
Email: Ashton.Gibson@bureauveritas.com
Phone# (905)817-5765

=====

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O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID			TRH315	TRH316	TRH317			TRH317		
Sampling Date			2022/09/07	2022/09/07	2022/09/07			2022/09/07		
COC Number			n/a	n/a	n/a			n/a		
	UNITS	Criteria	TP1	BH22-37 SS1	BH22-36 SS1	RDL	QC Batch	BH22-36 SS1 Lab-Dup	RDL	QC Batch

Calculated Parameters										
Sodium Adsorption Ratio	N/A	5.0	0.35	0.45	0.37		8215077			
Inorganics										
Conductivity	mS/cm	0.7	0.31	0.24	0.12	0.002	8223190			
Available (CaCl ₂) pH	pH	-	7.34	7.66	7.14		8221170			
WAD Cyanide (Free)	ug/g	0.051	<0.01	<0.01	<0.01	0.01	8219558			
Chromium (VI)	ug/g	8	<0.18	<0.18	<0.18	0.18	8220566			
Metals										
Hot Water Ext. Boron (B)	ug/g	1.5	0.42	0.46	0.16	0.050	8220638	0.16	0.050	8220638
Acid Extractable Antimony (Sb)	ug/g	7.5	<0.20	<0.20	<0.20	0.20	8220978			
Acid Extractable Arsenic (As)	ug/g	18	4.5	2.6	1.6	1.0	8220978			
Acid Extractable Barium (Ba)	ug/g	390	120	61	26	0.50	8220978			
Acid Extractable Beryllium (Be)	ug/g	4	0.92	0.62	0.26	0.20	8220978			
Acid Extractable Boron (B)	ug/g	120	7.4	<5.0	<5.0	5.0	8220978			
Acid Extractable Cadmium (Cd)	ug/g	1.2	0.13	0.13	<0.10	0.10	8220978			
Acid Extractable Chromium (Cr)	ug/g	160	30	19	13	1.0	8220978			
Acid Extractable Cobalt (Co)	ug/g	22	12	8.0	4.2	0.10	8220978			
Acid Extractable Copper (Cu)	ug/g	140	29	15	8.5	0.50	8220978			
Acid Extractable Lead (Pb)	ug/g	120	13	11	5.2	1.0	8220978			
Acid Extractable Molybdenum (Mo)	ug/g	6.9	<0.50	<0.50	<0.50	0.50	8220978			
Acid Extractable Nickel (Ni)	ug/g	100	30	16	8.6	0.50	8220978			
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	<0.50	<0.50	0.50	8220978			
Acid Extractable Silver (Ag)	ug/g	20	<0.20	<0.20	<0.20	0.20	8220978			
Acid Extractable Thallium (Tl)	ug/g	1	0.18	0.11	0.065	0.050	8220978			
Acid Extractable Uranium (U)	ug/g	23	0.57	0.60	0.46	0.050	8220978			
Acid Extractable Vanadium (V)	ug/g	86	39	29	27	5.0	8220978			
Acid Extractable Zinc (Zn)	ug/g	340	73	48	21	5.0	8220978			

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition

Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil



BUREAU
VERITAS

Bureau Veritas Job #: C2P8440

Report Date: 2022/11/04

DS Consultants Limited

Client Project #: 21-386-100

Site Location: 14259 HUMBER STATION RD, BOLTON

Sampler Initials: NP

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID			TRH315	TRH316	TRH317			TRH317		
Sampling Date			2022/09/07	2022/09/07	2022/09/07			2022/09/07		
COC Number			n/a	n/a	n/a			n/a		
	UNITS	Criteria	TP1	BH22-37 SS1	BH22-36 SS1	RDL	QC Batch	BH22-36 SS1 Lab-Dup	RDL	QC Batch
Acid Extractable Mercury (Hg)	ug/g	0.27	0.054	<0.050	<0.050	0.050	8220978			
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										
Lab-Dup = Laboratory Initiated Duplicate										
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)										
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition										
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil										



Bureau Veritas Job #: C2P8440
Report Date: 2022/11/04

DS Consultants Limited
Client Project #: 21-386-100
Site Location: 14259 HUMBER STATION RD, BOLTON
Sampler Initials: NP

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID			TRH318			TRH318			TRH320		
Sampling Date			2022/09/07			2022/09/07			2022/09/07		
COC Number			n/a			n/a			n/a		
	UNITS	Criteria	BH22-36 SS2	RDL	QC Batch	BH22-36 SS2 Lab-Dup	RDL	QC Batch	BH22-40 SS1	RDL	QC Batch

Calculated Parameters											
Sodium Adsorption Ratio	N/A	5.0	0.40		8215077				0.25 (1)		8215077
Inorganics											
Conductivity	mS/cm	0.7	0.17	0.002	8223190	0.17	0.002	8223190	0.15	0.002	8223190
Available (CaCl ₂) pH	pH	-	7.79		8221136				7.49		8221170
WAD Cyanide (Free)	ug/g	0.051	<0.01	0.01	8223208				<0.01	0.01	8219558
Chromium (VI)	ug/g	8	<0.18	0.18	8223180				<0.18	0.18	8220566
Metals											
Hot Water Ext. Boron (B)	ug/g	1.5	0.058	0.050	8220638				0.13	0.050	8220638
Acid Extractable Antimony (Sb)	ug/g	7.5	<0.20	0.20	8220978				<0.20	0.20	8220978
Acid Extractable Arsenic (As)	ug/g	18	2.0	1.0	8220978				3.3	1.0	8220978
Acid Extractable Barium (Ba)	ug/g	390	39	0.50	8220978				80	0.50	8220978
Acid Extractable Beryllium (Be)	ug/g	4	0.32	0.20	8220978				0.75	0.20	8220978
Acid Extractable Boron (B)	ug/g	120	<5.0	5.0	8220978				7.6	5.0	8220978
Acid Extractable Cadmium (Cd)	ug/g	1.2	<0.10	0.10	8220978				<0.10	0.10	8220978
Acid Extractable Chromium (Cr)	ug/g	160	12	1.0	8220978				23	1.0	8220978
Acid Extractable Cobalt (Co)	ug/g	22	5.9	0.10	8220978				10	0.10	8220978
Acid Extractable Copper (Cu)	ug/g	140	12	0.50	8220978				24	0.50	8220978
Acid Extractable Lead (Pb)	ug/g	120	5.1	1.0	8220978				10	1.0	8220978
Acid Extractable Molybdenum (Mo)	ug/g	6.9	<0.50	0.50	8220978				<0.50	0.50	8220978
Acid Extractable Nickel (Ni)	ug/g	100	12	0.50	8220978				24	0.50	8220978
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	0.50	8220978				<0.50	0.50	8220978
Acid Extractable Silver (Ag)	ug/g	20	<0.20	0.20	8220978				<0.20	0.20	8220978
Acid Extractable Thallium (Tl)	ug/g	1	0.069	0.050	8220978				0.17	0.050	8220978
Acid Extractable Uranium (U)	ug/g	23	0.38	0.050	8220978				0.50	0.050	8220978

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels
RDL = Reportable Detection Limit	
QC Batch = Quality Control Batch	
Lab-Dup = Laboratory Initiated Duplicate	
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)	
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition	
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil	
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.	



BUREAU
VERITAS

Bureau Veritas Job #: C2P8440

Report Date: 2022/11/04

DS Consultants Limited

Client Project #: 21-386-100

Site Location: 14259 HUMBER STATION RD, BOLTON

Sampler Initials: NP

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID			TRH318			TRH318			TRH320		
Sampling Date			2022/09/07			2022/09/07			2022/09/07		
COC Number			n/a			n/a			n/a		
	UNITS	Criteria	BH22-36 SS2	RDL	QC Batch	BH22-36 SS2 Lab-Dup	RDL	QC Batch	BH22-40 SS1	RDL	QC Batch
Acid Extractable Vanadium (V)	ug/g	86	19	5.0	8220978				31	5.0	8220978
Acid Extractable Zinc (Zn)	ug/g	340	25	5.0	8220978				53	5.0	8220978
Acid Extractable Mercury (Hg)	ug/g	0.27	<0.050	0.050	8220978				<0.050	0.050	8220978

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate Criteria: Ontario Reg. 153/04 (Amended April 15, 2011) Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil	



O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID			TRH323	TRH325			TRH327		
Sampling Date			2022/09/07	2022/09/07			2022/09/07		
COC Number			n/a	n/a			n/a		
	UNITS	Criteria	BH22-39 SS2	BH22-38 SS1	RDL	QC Batch	DUP-1	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	5.0	0.44	0.23 (1)		8215077	0.29 (1)		8215077
Inorganics									
Conductivity	mS/cm	0.7	0.20	0.19	0.002	8223190	0.14	0.002	8223190
Moisture	%	-					15	1.0	8218709
Available (CaCl2) pH	pH	-	7.60	7.32		8221136	7.75		8221170
WAD Cyanide (Free)	ug/g	0.051	<0.01	<0.01	0.01	8223208	<0.01	0.01	8219558
Chromium (VI)	ug/g	8	<0.18	<0.18	0.18	8223180	<0.18	0.18	8220566
Metals									
Hot Water Ext. Boron (B)	ug/g	1.5	0.10	0.39	0.050	8220638	0.11	0.050	8220638
Acid Extractable Antimony (Sb)	ug/g	7.5	<0.20	<0.20	0.20	8220978	<0.20	0.20	8220978
Acid Extractable Arsenic (As)	ug/g	18	3.3	2.7	1.0	8220978	3.6	1.0	8220978
Acid Extractable Barium (Ba)	ug/g	390	90	81	0.50	8220978	81	0.50	8220978
Acid Extractable Beryllium (Be)	ug/g	4	0.72	0.67	0.20	8220978	0.64	0.20	8220978
Acid Extractable Boron (B)	ug/g	120	7.4	<5.0	5.0	8220978	8.6	5.0	8220978
Acid Extractable Cadmium (Cd)	ug/g	1.2	0.11	0.16	0.10	8220978	<0.10	0.10	8220978
Acid Extractable Chromium (Cr)	ug/g	160	24	20	1.0	8220978	21	1.0	8220978
Acid Extractable Cobalt (Co)	ug/g	22	10	6.3	0.10	8220978	12	0.10	8220978
Acid Extractable Copper (Cu)	ug/g	140	22	12	0.50	8220978	23	0.50	8220978
Acid Extractable Lead (Pb)	ug/g	120	9.9	9.4	1.0	8220978	9.6	1.0	8220978
Acid Extractable Molybdenum (Mo)	ug/g	6.9	<0.50	<0.50	0.50	8220978	<0.50	0.50	8220978
Acid Extractable Nickel (Ni)	ug/g	100	23	15	0.50	8220978	24	0.50	8220978
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	<0.50	0.50	8220978	<0.50	0.50	8220978
Acid Extractable Silver (Ag)	ug/g	20	<0.20	<0.20	0.20	8220978	<0.20	0.20	8220978
Acid Extractable Thallium (Tl)	ug/g	1	0.16	0.11	0.050	8220978	0.16	0.050	8220978
Acid Extractable Uranium (U)	ug/g	23	0.60	0.68	0.050	8220978	0.57	0.050	8220978
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)									
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition									
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil									
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.									



O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID			TRH323	TRH325			TRH327		
Sampling Date			2022/09/07	2022/09/07			2022/09/07		
COC Number			n/a	n/a			n/a		
	UNITS	Criteria	BH22-39 SS2	BH22-38 SS1	RDL	QC Batch	DUP-1	RDL	QC Batch
Acid Extractable Vanadium (V)	ug/g	86	32	30	5.0	8220978	29	5.0	8220978
Acid Extractable Zinc (Zn)	ug/g	340	55	41	5.0	8220978	51	5.0	8220978
Acid Extractable Mercury (Hg)	ug/g	0.27	<0.050	<0.050	0.050	8220978	<0.050	0.050	8220978
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)									
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition									
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil									

Bureau Veritas ID			TRH327		
Sampling Date			2022/09/07		
COC Number			n/a		
	UNITS	Criteria	DUP-1 Lab-Dup	RDL	QC Batch
Inorganics					
WAD Cyanide (Free)	ug/g	0.051	<0.01	0.01	8219558
Chromium (VI)	ug/g	8	<0.18	0.18	8220566
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Lab-Dup = Laboratory Initiated Duplicate					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					



Bureau Veritas Job #: C2P8440
Report Date: 2022/11/04

DS Consultants Limited
Client Project #: 21-386-100
Site Location: 14259 HUMBER STATION RD, BOLTON
Sampler Initials: NP

O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID			TRH315			TRH316	TRH317	TRH320		
Sampling Date			2022/09/07			2022/09/07	2022/09/07	2022/09/07		
COC Number			n/a			n/a	n/a	n/a		
	UNITS	Criteria	TP1	RDL	QC Batch	BH22-37 SS1	BH22-36 SS1	BH22-40 SS1	RDL	QC Batch
Inorganics										
Moisture	%	-				13	12	16	1.0	8217606
Calculated Parameters										
Chlordane (Total)	ug/g	0.05	<0.0020	0.0020	8215766	<0.0020	<0.0020	<0.0020	0.0020	8215766
o,p-DDD + p,p-DDD	ug/g	3.3	<0.0020	0.0020	8215766	<0.0020	<0.0020	<0.0020	0.0020	8215766
o,p-DDE + p,p-DDE	ug/g	0.26	<0.0020	0.0020	8215766	<0.0020	<0.0020	<0.0020	0.0020	8215766
o,p-DDT + p,p-DDT	ug/g	1.4	<0.0020	0.0020	8215766	<0.0020	<0.0020	<0.0020	0.0020	8215766
Total Endosulfan	ug/g	0.05	<0.0020	0.0020	8215766	<0.0020	<0.0020	<0.0020	0.0020	8215766
Total PCB	ug/g	0.35	<0.015	0.015	8215766	<0.015	<0.015	<0.015	0.015	8215766
Pesticides & Herbicides										
Aldrin	ug/g	0.05	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
a-Chlordane	ug/g	0.05	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
g-Chlordane	ug/g	0.05	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
o,p-DDD	ug/g	3.3	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
p,p-DDD	ug/g	3.3	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
o,p-DDE	ug/g	0.26	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
p,p-DDE	ug/g	0.26	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
o,p-DDT	ug/g	1.4	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
p,p-DDT	ug/g	1.4	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
Dieldrin	ug/g	0.05	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
Lindane	ug/g	0.056	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
Endosulfan I (alpha)	ug/g	0.04	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
Endosulfan II (beta)	ug/g	0.04	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
Endrin	ug/g	0.04	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
Heptachlor	ug/g	0.15	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
Heptachlor epoxide	ug/g	0.05	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
Hexachlorobenzene	ug/g	0.52	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
Hexachlorobutadiene	ug/g	0.012	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
Hexachloroethane	ug/g	0.089	<0.0020	0.0020	8222176	<0.0020	<0.0020	<0.0020	0.0020	8222176
Methoxychlor	ug/g	0.13	<0.0050	0.0050	8222176	<0.0050	<0.0050	<0.0050	0.0050	8222176
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)										
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition										
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil										



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VERITAS

Bureau Veritas Job #: C2P8440

Report Date: 2022/11/04

DS Consultants Limited

Client Project #: 21-386-100

Site Location: 14259 HUMBER STATION RD, BOLTON

Sampler Initials: NP

O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID			TRH315			TRH316	TRH317	TRH320		
Sampling Date			2022/09/07			2022/09/07	2022/09/07	2022/09/07		
COC Number			n/a			n/a	n/a	n/a		
	UNITS	Criteria	TP1	RDL	QC Batch	BH22-37 SS1	BH22-36 SS1	BH22-40 SS1	RDL	QC Batch
Aroclor 1242	ug/g	-	<0.015	0.015	8222176	<0.015	<0.015	<0.015	0.015	8222176
Aroclor 1248	ug/g	-	<0.015	0.015	8222176	<0.015	<0.015	<0.015	0.015	8222176
Aroclor 1254	ug/g	-	<0.015	0.015	8222176	<0.015	<0.015	<0.015	0.015	8222176
Aroclor 1260	ug/g	-	<0.015	0.015	8222176	<0.015	<0.015	<0.015	0.015	8222176
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	-	86		8222176	72	78	87		8222176
Decachlorobiphenyl	%	-	101		8222176	96	96	86		8222176
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)										
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition										
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil										



O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID			TRH322		TRH325		TRH326		
Sampling Date			2022/09/07		2022/09/07		2022/09/07		
COC Number			n/a		n/a		n/a		
	UNITS	Criteria	BH22-39 SS1	QC Batch	BH22-38 SS1	QC Batch	BH22-38 SS3	RDL	QC Batch
Inorganics									
Moisture	%	-	16	8217606	15	8217816	14	1.0	8217606
Calculated Parameters									
Chlordane (Total)	ug/g	0.05	<0.0020	8215766	<0.0020	8215766	<0.0020	0.0020	8215766
o,p-DDD + p,p-DDD	ug/g	3.3	<0.0020	8215766	<0.0020	8215766	<0.0020	0.0020	8215766
o,p-DDE + p,p-DDE	ug/g	0.26	<0.0020	8215766	<0.0020	8215766	<0.0020	0.0020	8215766
o,p-DDT + p,p-DDT	ug/g	1.4	<0.0020	8215766	<0.0020	8215766	<0.0020	0.0020	8215766
Total Endosulfan	ug/g	0.05	<0.0020	8215766	<0.0020	8215766	<0.0020	0.0020	8215766
Total PCB	ug/g	0.35	<0.015	8215766	<0.015	8215766	<0.015	0.015	8215766
Pesticides & Herbicides									
Aldrin	ug/g	0.05	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
a-Chlordane	ug/g	0.05	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
g-Chlordane	ug/g	0.05	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
o,p-DDD	ug/g	3.3	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
p,p-DDD	ug/g	3.3	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
o,p-DDE	ug/g	0.26	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
p,p-DDE	ug/g	0.26	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
o,p-DDT	ug/g	1.4	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
p,p-DDT	ug/g	1.4	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
Dieldrin	ug/g	0.05	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
Lindane	ug/g	0.056	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
Endosulfan I (alpha)	ug/g	0.04	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
Endosulfan II (beta)	ug/g	0.04	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
Endrin	ug/g	0.04	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
Heptachlor	ug/g	0.15	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
Heptachlor epoxide	ug/g	0.05	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
Hexachlorobenzene	ug/g	0.52	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
Hexachlorobutadiene	ug/g	0.012	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
Hexachloroethane	ug/g	0.089	<0.0020	8227164	<0.0020	8222176	<0.0020	0.0020	8227164
Methoxychlor	ug/g	0.13	<0.0050	8227164	<0.0050	8222176	<0.0050	0.0050	8227164
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)									
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition									
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil									



O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID			TRH322		TRH325		TRH326		
Sampling Date			2022/09/07		2022/09/07		2022/09/07		
COC Number			n/a		n/a		n/a		
	UNITS	Criteria	BH22-39 SS1	QC Batch	BH22-38 SS1	QC Batch	BH22-38 SS3	RDL	QC Batch
Aroclor 1242	ug/g	-	<0.015	8227164	<0.015	8222176	<0.015	0.015	8227164
Aroclor 1248	ug/g	-	<0.015	8227164	<0.015	8222176	<0.015	0.015	8227164
Aroclor 1254	ug/g	-	<0.015	8227164	<0.015	8222176	<0.015	0.015	8227164
Aroclor 1260	ug/g	-	<0.015	8227164	<0.015	8222176	<0.015	0.015	8227164
Surrogate Recovery (%)									
2,4,5,6-Tetrachloro-m-xylene	%	-	80	8227164	86	8222176	82		8227164
Decachlorobiphenyl	%	-	100	8227164	78	8222176	107		8227164
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)									
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition									
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil									



O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID			TRH330		
Sampling Date			2022/09/07		
COC Number			n/a		
	UNITS	Criteria	DUP-4	RDL	QC Batch
Inorganics					
Moisture	%	-	15	1.0	8222894
Calculated Parameters					
Chlordane (Total)	ug/g	0.05	<0.0020	0.0020	8215766
o,p-DDD + p,p-DDD	ug/g	3.3	<0.0020	0.0020	8215766
o,p-DDE + p,p-DDE	ug/g	0.26	<0.0020	0.0020	8215766
o,p-DDT + p,p-DDT	ug/g	1.4	<0.0020	0.0020	8215766
Total Endosulfan	ug/g	0.05	<0.0020	0.0020	8215766
Total PCB	ug/g	0.35	<0.015	0.015	8215766
Pesticides & Herbicides					
Aldrin	ug/g	0.05	<0.0020	0.0020	8227164
a-Chlordane	ug/g	0.05	<0.0020	0.0020	8227164
g-Chlordane	ug/g	0.05	<0.0020	0.0020	8227164
o,p-DDD	ug/g	3.3	<0.0020	0.0020	8227164
p,p-DDD	ug/g	3.3	<0.0020	0.0020	8227164
o,p-DDE	ug/g	0.26	<0.0020	0.0020	8227164
p,p-DDE	ug/g	0.26	<0.0020	0.0020	8227164
o,p-DDT	ug/g	1.4	<0.0020	0.0020	8227164
p,p-DDT	ug/g	1.4	<0.0020	0.0020	8227164
Dieldrin	ug/g	0.05	<0.0020	0.0020	8227164
Lindane	ug/g	0.056	<0.0020	0.0020	8227164
Endosulfan I (alpha)	ug/g	0.04	<0.0020	0.0020	8227164
Endosulfan II (beta)	ug/g	0.04	<0.0020	0.0020	8227164
Endrin	ug/g	0.04	<0.0020	0.0020	8227164
Heptachlor	ug/g	0.15	<0.0020	0.0020	8227164
Heptachlor epoxide	ug/g	0.05	<0.0020	0.0020	8227164
Hexachlorobenzene	ug/g	0.52	<0.0020	0.0020	8227164
Hexachlorobutadiene	ug/g	0.012	<0.0020	0.0020	8227164
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					



BUREAU
VERITAS

Bureau Veritas Job #: C2P8440

Report Date: 2022/11/04

DS Consultants Limited

Client Project #: 21-386-100

Site Location: 14259 HUMBER STATION RD, BOLTON

Sampler Initials: NP

O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID			TRH330		
Sampling Date			2022/09/07		
COC Number			n/a		
	UNITS	Criteria	DUP-4	RDL	QC Batch
Hexachloroethane	ug/g	0.089	<0.0020	0.0020	8227164
Methoxychlor	ug/g	0.13	<0.0050	0.0050	8227164
Aroclor 1242	ug/g	-	<0.015	0.015	8227164
Aroclor 1248	ug/g	-	<0.015	0.015	8227164
Aroclor 1254	ug/g	-	<0.015	0.015	8227164
Aroclor 1260	ug/g	-	<0.015	0.015	8227164
Surrogate Recovery (%)					
2,4,5,6-Tetrachloro-m-xylene	%	-	81		8227164
Decachlorobiphenyl	%	-	105		8227164
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					



O.REG 153 PAHS (SOIL)

Bureau Veritas ID			TRH315			TRH318	TRH321		
Sampling Date			2022/09/07			2022/09/07	2022/09/07		
COC Number			n/a			n/a	n/a		
	UNITS	Criteria	TP1	RDL	QC Batch	BH22-36 SS2	BH22-40 SS3	RDL	QC Batch
Inorganics									
Moisture	%	-				14	11	1.0	8217816
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	-	<0.0071	0.0071	8215081	<0.0071	<0.0071	0.0071	8215081
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	7.9	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Acenaphthylene	ug/g	0.15	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Anthracene	ug/g	0.67	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Benzo(a)anthracene	ug/g	0.5	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Benzo(a)pyrene	ug/g	0.3	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Benzo(b/j)fluoranthene	ug/g	0.78	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Benzo(g,h,i)perylene	ug/g	6.6	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Chrysene	ug/g	7	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Fluoranthene	ug/g	0.69	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Fluorene	ug/g	62	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Indeno(1,2,3-cd)pyrene	ug/g	0.38	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
1-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
2-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Naphthalene	ug/g	0.6	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Phenanthrene	ug/g	6.2	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Pyrene	ug/g	78	<0.0050	0.0050	8220546	<0.0050	<0.0050	0.0050	8220546
Surrogate Recovery (%)									
D10-Anthracene	%	-	98		8220546	105	105		8220546
D14-Terphenyl (FS)	%	-	90		8220546	100	101		8220546
D8-Acenaphthylene	%	-	83		8220546	87	91		8220546
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)									
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition									
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil									



O.REG 153 PAHS (SOIL)

Bureau Veritas ID			TRH321			TRH323		TRH328		
Sampling Date			2022/09/07			2022/09/07		2022/09/07		
COC Number			n/a			n/a		n/a		
	UNITS	Criteria	BH22-40 SS3 Lab-Dup	RDL	QC Batch	BH22-39 SS2	QC Batch	DUP-2	RDL	QC Batch
Inorganics										
Moisture	%	-				17	8217606	12	1.0	8217816
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	-				<0.0071	8215081	<0.0071	0.0071	8215081
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	7.9	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Acenaphthylene	ug/g	0.15	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Anthracene	ug/g	0.67	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Benzo(a)anthracene	ug/g	0.5	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Benzo(a)pyrene	ug/g	0.3	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Benzo(b/j)fluoranthene	ug/g	0.78	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Benzo(g,h,i)perylene	ug/g	6.6	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Chrysene	ug/g	7	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Fluoranthene	ug/g	0.69	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Fluorene	ug/g	62	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Indeno(1,2,3-cd)pyrene	ug/g	0.38	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
1-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
2-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Naphthalene	ug/g	0.6	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Phenanthrene	ug/g	6.2	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Pyrene	ug/g	78	<0.0050	0.0050	8220546	<0.0050	8220546	<0.0050	0.0050	8220546
Surrogate Recovery (%)										
D10-Anthracene	%	-	102		8220546	101	8220546	103		8220546
D14-Terphenyl (FS)	%	-	101		8220546	101	8220546	99		8220546
D8-Acenaphthylene	%	-	90		8220546	88	8220546	90		8220546
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										
Lab-Dup = Laboratory Initiated Duplicate										
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)										
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition										
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil										



Bureau Veritas Job #: C2P8440
Report Date: 2022/11/04

DS Consultants Limited
Client Project #: 21-386-100
Site Location: 14259 HUMBER STATION RD, BOLTON
Sampler Initials: NP

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID			TRH315			TRH315		
Sampling Date			2022/09/07			2022/09/07		
COC Number			n/a			n/a		
	UNITS	Criteria	TP1	RDL	QC Batch	TP1 Lab-Dup	RDL	QC Batch
Inorganics								
Moisture	%	-	14	1.0	8217816			
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	0.05	<0.050	0.050	8215347			
Volatile Organics								
Acetone (2-Propanone)	ug/g	16	<0.49	0.49	8218324	<0.49	0.49	8218324
Benzene	ug/g	0.21	<0.0060	0.0060	8218324	<0.0060	0.0060	8218324
Bromodichloromethane	ug/g	1.5	<0.040	0.040	8218324	<0.040	0.040	8218324
Bromoform	ug/g	0.27	<0.040	0.040	8218324	<0.040	0.040	8218324
Bromomethane	ug/g	0.05	<0.040	0.040	8218324	<0.040	0.040	8218324
Carbon Tetrachloride	ug/g	0.05	<0.040	0.040	8218324	<0.040	0.040	8218324
Chlorobenzene	ug/g	2.4	<0.040	0.040	8218324	<0.040	0.040	8218324
Chloroform	ug/g	0.05	<0.040	0.040	8218324	<0.040	0.040	8218324
Dibromochloromethane	ug/g	2.3	<0.040	0.040	8218324	<0.040	0.040	8218324
1,2-Dichlorobenzene	ug/g	1.2	<0.040	0.040	8218324	<0.040	0.040	8218324
1,3-Dichlorobenzene	ug/g	4.8	<0.040	0.040	8218324	<0.040	0.040	8218324
1,4-Dichlorobenzene	ug/g	0.083	<0.040	0.040	8218324	<0.040	0.040	8218324
Dichlorodifluoromethane (FREON 12)	ug/g	16	<0.040	0.040	8218324	<0.040	0.040	8218324
1,1-Dichloroethane	ug/g	0.47	<0.040	0.040	8218324	<0.040	0.040	8218324
1,2-Dichloroethane	ug/g	0.05	<0.049	0.049	8218324	<0.049	0.049	8218324
1,1-Dichloroethylene	ug/g	0.05	<0.040	0.040	8218324	<0.040	0.040	8218324
cis-1,2-Dichloroethylene	ug/g	1.9	<0.040	0.040	8218324	<0.040	0.040	8218324
trans-1,2-Dichloroethylene	ug/g	0.084	<0.040	0.040	8218324	<0.040	0.040	8218324
1,2-Dichloropropane	ug/g	0.05	<0.040	0.040	8218324	<0.040	0.040	8218324
cis-1,3-Dichloropropene	ug/g	0.05	<0.030	0.030	8218324	<0.030	0.030	8218324
trans-1,3-Dichloropropene	ug/g	0.05	<0.040	0.040	8218324	<0.040	0.040	8218324
Ethylbenzene	ug/g	1.1	<0.010	0.010	8218324	<0.010	0.010	8218324
No Fill	No Exceedance							
Grey	Exceeds 1 criteria policy/level							
Black	Exceeds both criteria/levels							
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								
Lab-Dup = Laboratory Initiated Duplicate								
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)								
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition								
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil								



O.REG 153 VOCs BY HS & F1-F4 (SOIL)

Bureau Veritas ID			TRH315			TRH315		
Sampling Date			2022/09/07			2022/09/07		
COC Number			n/a			n/a		
	UNITS	Criteria	TP1	RDL	QC Batch	TP1 Lab-Dup	RDL	QC Batch
Ethylene Dibromide	ug/g	0.05	<0.040	0.040	8218324	<0.040	0.040	8218324
Hexane	ug/g	2.8	<0.040	0.040	8218324	<0.040	0.040	8218324
Methylene Chloride(Dichloromethane)	ug/g	0.1	<0.049	0.049	8218324	<0.049	0.049	8218324
Methyl Ethyl Ketone (2-Butanone)	ug/g	16	<0.40	0.40	8218324	<0.40	0.40	8218324
Methyl Isobutyl Ketone	ug/g	1.7	<0.40	0.40	8218324	<0.40	0.40	8218324
Methyl t-butyl ether (MTBE)	ug/g	0.75	<0.040	0.040	8218324	<0.040	0.040	8218324
Styrene	ug/g	0.7	<0.040	0.040	8218324	<0.040	0.040	8218324
1,1,1,2-Tetrachloroethane	ug/g	0.058	<0.040	0.040	8218324	<0.040	0.040	8218324
1,1,2,2-Tetrachloroethane	ug/g	0.05	<0.040	0.040	8218324	<0.040	0.040	8218324
Tetrachloroethylene	ug/g	0.28	<0.040	0.040	8218324	<0.040	0.040	8218324
Toluene	ug/g	2.3	<0.020	0.020	8218324	<0.020	0.020	8218324
1,1,1-Trichloroethane	ug/g	0.38	<0.040	0.040	8218324	<0.040	0.040	8218324
1,1,2-Trichloroethane	ug/g	0.05	<0.040	0.040	8218324	<0.040	0.040	8218324
Trichloroethylene	ug/g	0.061	0.022	0.010	8218324	0.020	0.010	8218324
Trichlorofluoromethane (FREON 11)	ug/g	4	<0.040	0.040	8218324	<0.040	0.040	8218324
Vinyl Chloride	ug/g	0.02	<0.019	0.019	8218324	<0.019	0.019	8218324
p+m-Xylene	ug/g	-	<0.020	0.020	8218324	<0.020	0.020	8218324
o-Xylene	ug/g	-	<0.020	0.020	8218324	<0.020	0.020	8218324
Total Xylenes	ug/g	3.1	<0.020	0.020	8218324	<0.020	0.020	8218324
F1 (C6-C10)	ug/g	55	<10	10	8218324	<10	10	8218324
F1 (C6-C10) - BTEX	ug/g	55	<10	10	8218324	<10	10	8218324
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	98	<10	10	8220554			
F3 (C16-C34 Hydrocarbons)	ug/g	300	<50	50	8220554			
F4 (C34-C50 Hydrocarbons)	ug/g	2800	<50	50	8220554			
Reached Baseline at C50	ug/g	-	Yes		8220554			
No Fill	No Exceedance							
Grey	Exceeds 1 criteria policy/level							
Black	Exceeds both criteria/levels							
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								
Lab-Dup = Laboratory Initiated Duplicate								
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)								
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition								
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil								



Bureau Veritas Job #: C2P8440
Report Date: 2022/11/04

DS Consultants Limited
Client Project #: 21-386-100
Site Location: 14259 HUMBER STATION RD, BOLTON
Sampler Initials: NP

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID			TRH315			TRH315		
Sampling Date			2022/09/07			2022/09/07		
COC Number			n/a			n/a		
	UNITS	Criteria	TP1	RDL	QC Batch	TP1 Lab-Dup	RDL	QC Batch
Surrogate Recovery (%)								
o-Terphenyl	%	-	95		8220554			
4-Bromofluorobenzene	%	-	91		8218324	91		8218324
D10-o-Xylene	%	-	88		8218324	89		8218324
D4-1,2-Dichloroethane	%	-	99		8218324	100		8218324
D8-Toluene	%	-	90		8218324	91		8218324
No Fill	No Exceedance							
Grey	Exceeds 1 criteria policy/level							
Black	Exceeds both criteria/levels							
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								
Lab-Dup = Laboratory Initiated Duplicate								
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)								
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition								
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil								



O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID			TRH319			TRH319		
Sampling Date			2022/09/07			2022/09/07		
COC Number			n/a			n/a		
	UNITS	Criteria	BH22-36 SS7	RDL	QC Batch	BH22-36 SS7 Lab-Dup	RDL	QC Batch
Inorganics								
Moisture	%	-	14	1.0	8217816			
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	0.05	<0.050	0.050	8215347			
Volatile Organics								
Acetone (2-Propanone)	ug/g	16	<0.49	0.49	8218324			
Benzene	ug/g	0.21	<0.0060	0.0060	8218324			
Bromodichloromethane	ug/g	1.5	<0.040	0.040	8218324			
Bromoform	ug/g	0.27	<0.040	0.040	8218324			
Bromomethane	ug/g	0.05	<0.040	0.040	8218324			
Carbon Tetrachloride	ug/g	0.05	<0.040	0.040	8218324			
Chlorobenzene	ug/g	2.4	<0.040	0.040	8218324			
Chloroform	ug/g	0.05	<0.040	0.040	8218324			
Dibromochloromethane	ug/g	2.3	<0.040	0.040	8218324			
1,2-Dichlorobenzene	ug/g	1.2	<0.040	0.040	8218324			
1,3-Dichlorobenzene	ug/g	4.8	<0.040	0.040	8218324			
1,4-Dichlorobenzene	ug/g	0.083	<0.040	0.040	8218324			
Dichlorodifluoromethane (FREON 12)	ug/g	16	<0.040	0.040	8218324			
1,1-Dichloroethane	ug/g	0.47	<0.040	0.040	8218324			
1,2-Dichloroethane	ug/g	0.05	<0.049	0.049	8218324			
1,1-Dichloroethylene	ug/g	0.05	<0.040	0.040	8218324			
cis-1,2-Dichloroethylene	ug/g	1.9	<0.040	0.040	8218324			
trans-1,2-Dichloroethylene	ug/g	0.084	<0.040	0.040	8218324			
1,2-Dichloropropane	ug/g	0.05	<0.040	0.040	8218324			
cis-1,3-Dichloropropene	ug/g	0.05	<0.030	0.030	8218324			
trans-1,3-Dichloropropene	ug/g	0.05	<0.040	0.040	8218324			
Ethylbenzene	ug/g	1.1	<0.010	0.010	8218324			
No Fill	No Exceedance							
Grey	Exceeds 1 criteria policy/level							
Black	Exceeds both criteria/levels							
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								
Lab-Dup = Laboratory Initiated Duplicate								
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)								
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition								
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil								



O.REG 153 VOCs BY HS & F1-F4 (SOIL)

Bureau Veritas ID			TRH319			TRH319		
Sampling Date			2022/09/07			2022/09/07		
COC Number			n/a			n/a		
	UNITS	Criteria	BH22-36 SS7	RDL	QC Batch	BH22-36 SS7 Lab-Dup	RDL	QC Batch
Ethylene Dibromide	ug/g	0.05	<0.040	0.040	8218324			
Hexane	ug/g	2.8	<0.040	0.040	8218324			
Methylene Chloride(Dichloromethane)	ug/g	0.1	<0.049	0.049	8218324			
Methyl Ethyl Ketone (2-Butanone)	ug/g	16	<0.40	0.40	8218324			
Methyl Isobutyl Ketone	ug/g	1.7	<0.40	0.40	8218324			
Methyl t-butyl ether (MTBE)	ug/g	0.75	<0.040	0.040	8218324			
Styrene	ug/g	0.7	<0.040	0.040	8218324			
1,1,1,2-Tetrachloroethane	ug/g	0.058	<0.040	0.040	8218324			
1,1,2,2-Tetrachloroethane	ug/g	0.05	<0.040	0.040	8218324			
Tetrachloroethylene	ug/g	0.28	<0.040	0.040	8218324			
Toluene	ug/g	2.3	<0.020	0.020	8218324			
1,1,1-Trichloroethane	ug/g	0.38	<0.040	0.040	8218324			
1,1,2-Trichloroethane	ug/g	0.05	<0.040	0.040	8218324			
Trichloroethylene	ug/g	0.061	0.021	0.010	8218324			
Trichlorofluoromethane (FREON 11)	ug/g	4	<0.040	0.040	8218324			
Vinyl Chloride	ug/g	0.02	<0.019	0.019	8218324			
p+m-Xylene	ug/g	-	<0.020	0.020	8218324			
o-Xylene	ug/g	-	<0.020	0.020	8218324			
Total Xylenes	ug/g	3.1	<0.020	0.020	8218324			
F1 (C6-C10)	ug/g	55	<10	10	8218324			
F1 (C6-C10) - BTEX	ug/g	55	<10	10	8218324			
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	98	<10	10	8220554	<10	10	8220554
F3 (C16-C34 Hydrocarbons)	ug/g	300	<50	50	8220554	<50	50	8220554
F4 (C34-C50 Hydrocarbons)	ug/g	2800	<50	50	8220554	<50	50	8220554
Reached Baseline at C50	ug/g	-	Yes		8220554	Yes		8220554
No Fill	No Exceedance							
Grey	Exceeds 1 criteria policy/level							
Black	Exceeds both criteria/levels							
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								
Lab-Dup = Laboratory Initiated Duplicate								
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)								
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition								
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil								



Bureau Veritas Job #: C2P8440
Report Date: 2022/11/04

DS Consultants Limited
Client Project #: 21-386-100
Site Location: 14259 HUMBER STATION RD, BOLTON
Sampler Initials: NP

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID			TRH319			TRH319		
Sampling Date			2022/09/07			2022/09/07		
COC Number			n/a			n/a		
	UNITS	Criteria	BH22-36 SS7	RDL	QC Batch	BH22-36 SS7 Lab-Dup	RDL	QC Batch
Surrogate Recovery (%)								
o-Terphenyl	%	-	95		8220554	96		8220554
4-Bromofluorobenzene	%	-	91		8218324			
D10-o-Xylene	%	-	93		8218324			
D4-1,2-Dichloroethane	%	-	100		8218324			
D8-Toluene	%	-	90		8218324			
No Fill	No Exceedance							
Grey	Exceeds 1 criteria policy/level							
Black	Exceeds both criteria/levels							
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								
Lab-Dup = Laboratory Initiated Duplicate								
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)								
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition								
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil								



Bureau Veritas Job #: C2P8440
Report Date: 2022/11/04

DS Consultants Limited
Client Project #: 21-386-100
Site Location: 14259 HUMBER STATION RD, BOLTON
Sampler Initials: NP

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID			TRH324		TRH329		
Sampling Date			2022/09/07		2022/09/07		
COC Number			n/a		n/a		
	UNITS	Criteria	BH22-39 SS6	QC Batch	DUP-3	RDL	QC Batch
Inorganics							
Moisture	%	-	14	8217816	15	1.0	8217816
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/g	0.05	<0.050	8215347	<0.050	0.050	8215347
Volatile Organics							
Acetone (2-Propanone)	ug/g	16	<0.49	8218324	<0.49	0.49	8218324
Benzene	ug/g	0.21	<0.0060	8218324	<0.0060	0.0060	8218324
Bromodichloromethane	ug/g	1.5	<0.040	8218324	<0.040	0.040	8218324
Bromoform	ug/g	0.27	<0.040	8218324	<0.040	0.040	8218324
Bromomethane	ug/g	0.05	<0.040	8218324	<0.040	0.040	8218324
Carbon Tetrachloride	ug/g	0.05	<0.040	8218324	<0.040	0.040	8218324
Chlorobenzene	ug/g	2.4	<0.040	8218324	<0.040	0.040	8218324
Chloroform	ug/g	0.05	<0.040	8218324	<0.040	0.040	8218324
Dibromochloromethane	ug/g	2.3	<0.040	8218324	<0.040	0.040	8218324
1,2-Dichlorobenzene	ug/g	1.2	<0.040	8218324	<0.040	0.040	8218324
1,3-Dichlorobenzene	ug/g	4.8	<0.040	8218324	<0.040	0.040	8218324
1,4-Dichlorobenzene	ug/g	0.083	<0.040	8218324	<0.040	0.040	8218324
Dichlorodifluoromethane (FREON 12)	ug/g	16	<0.040	8218324	<0.040	0.040	8218324
1,1-Dichloroethane	ug/g	0.47	<0.040	8218324	<0.040	0.040	8218324
1,2-Dichloroethane	ug/g	0.05	<0.049	8218324	<0.049	0.049	8218324
1,1-Dichloroethylene	ug/g	0.05	<0.040	8218324	<0.040	0.040	8218324
cis-1,2-Dichloroethylene	ug/g	1.9	<0.040	8218324	<0.040	0.040	8218324
trans-1,2-Dichloroethylene	ug/g	0.084	<0.040	8218324	<0.040	0.040	8218324
1,2-Dichloropropane	ug/g	0.05	<0.040	8218324	<0.040	0.040	8218324
cis-1,3-Dichloropropene	ug/g	0.05	<0.030	8218324	<0.030	0.030	8218324
trans-1,3-Dichloropropene	ug/g	0.05	<0.040	8218324	<0.040	0.040	8218324
Ethylbenzene	ug/g	1.1	<0.010	8218324	<0.010	0.010	8218324
Ethylene Dibromide	ug/g	0.05	<0.040	8218324	<0.040	0.040	8218324
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)							
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition							
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil							



O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID				TRH324		TRH329		
Sampling Date				2022/09/07		2022/09/07		
COC Number				n/a		n/a		
	UNITS	Criteria	BH22-39 SS6	QC Batch	DUP-3	RDL	QC Batch	
Hexane		ug/g	2.8	<0.040	8218324	<0.040	0.040	8218324
Methylene Chloride(Dichloromethane)		ug/g	0.1	<0.049	8218324	<0.049	0.049	8218324
Methyl Ethyl Ketone (2-Butanone)		ug/g	16	<0.40	8218324	<0.40	0.40	8218324
Methyl Isobutyl Ketone		ug/g	1.7	<0.40	8218324	<0.40	0.40	8218324
Methyl t-butyl ether (MTBE)		ug/g	0.75	<0.040	8218324	<0.040	0.040	8218324
Styrene		ug/g	0.7	<0.040	8218324	<0.040	0.040	8218324
1,1,1,2-Tetrachloroethane		ug/g	0.058	<0.040	8218324	<0.040	0.040	8218324
1,1,2,2-Tetrachloroethane		ug/g	0.05	<0.040	8218324	<0.040	0.040	8218324
Tetrachloroethylene		ug/g	0.28	<0.040	8218324	<0.040	0.040	8218324
Toluene		ug/g	2.3	<0.020	8218324	<0.020	0.020	8218324
1,1,1-Trichloroethane		ug/g	0.38	<0.040	8218324	<0.040	0.040	8218324
1,1,2-Trichloroethane		ug/g	0.05	<0.040	8218324	<0.040	0.040	8218324
Trichloroethylene		ug/g	0.061	0.046	8218324	0.043	0.010	8218324
Trichlorofluoromethane (FREON 11)		ug/g	4	<0.040	8218324	<0.040	0.040	8218324
Vinyl Chloride		ug/g	0.02	<0.019	8218324	<0.019	0.019	8218324
p+m-Xylene		ug/g	-	<0.020	8218324	<0.020	0.020	8218324
o-Xylene		ug/g	-	<0.020	8218324	<0.020	0.020	8218324
Total Xylenes		ug/g	3.1	<0.020	8218324	<0.020	0.020	8218324
F1 (C6-C10)		ug/g	55	<10	8218324	<10	10	8218324
F1 (C6-C10) - BTEX		ug/g	55	<10	8218324	<10	10	8218324
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)		ug/g	98	12	8255942	<10	10	8220554
F3 (C16-C34 Hydrocarbons)		ug/g	300	55	8255942	<50	50	8220554
F4 (C34-C50 Hydrocarbons)		ug/g	2800	<50	8255942	<50	50	8220554
Reached Baseline at C50		ug/g	-	Yes	8255942	Yes		8220554
Surrogate Recovery (%)								
o-Terphenyl		%	-	87	8255942	92		8220554
4-Bromofluorobenzene		%	-	91	8218324	91		8218324
No Fill	No Exceedance							
Grey	Exceeds 1 criteria policy/level							
Black	Exceeds both criteria/levels							
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)								
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition								
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil								



BUREAU
VERITAS

Bureau Veritas Job #: C2P8440

Report Date: 2022/11/04

DS Consultants Limited

Client Project #: 21-386-100

Site Location: 14259 HUMBER STATION RD, BOLTON

Sampler Initials: NP

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID				TRH324		TRH329		
Sampling Date				2022/09/07		2022/09/07		
COC Number				n/a		n/a		
		UNITS	Criteria	BH22-39 SS6	QC Batch	DUP-3	RDL	QC Batch
D10-o-Xylene		%	-	86	8218324	89		8218324
D4-1,2-Dichloroethane		%	-	102	8218324	100		8218324
D8-Toluene		%	-	91	8218324	90		8218324
No Fill	No Exceedance							
Grey	Exceeds 1 criteria policy/level							
Black	Exceeds both criteria/levels							
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)								
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition								
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil								



Bureau Veritas Job #: C2P8440
Report Date: 2022/11/04

DS Consultants Limited
Client Project #: 21-386-100
Site Location: 14259 HUMBER STATION RD, BOLTON
Sampler Initials: NP

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		TRH328	
Sampling Date		2022/09/07	
COC Number		n/a	
	UNITS	DUP-2	QC Batch
Inorganics			
Available (CaCl ₂) pH	pH	7.82	8326718
QC Batch = Quality Control Batch			



Bureau Veritas Job #: C2P8440
Report Date: 2022/11/04

DS Consultants Limited
Client Project #: 21-386-100
Site Location: 14259 HUMBER STATION RD, BOLTON
Sampler Initials: NP

TEST SUMMARY

Bureau Veritas ID: TRH315
Sample ID: TP1
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8215081	N/A	2022/09/15	Automated Statchk
Hot Water Extractable Boron	ICP	8220638	2022/09/13	2022/09/14	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	8215347	N/A	2022/09/13	Automated Statchk
Free (WAD) Cyanide	TECH	8219558	2022/09/12	2022/09/13	Prgya Panchal
Conductivity	AT	8223190	2022/09/14	2022/09/14	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8220566	2022/09/13	2022/09/13	Sousan Besharatlou
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8220554	2022/09/13	2022/09/13	Suleeqa Nurr
Acid Extractable Metals by ICPMS	ICP/MS	8220978	2022/09/13	2022/09/13	Daniel Teclu
Moisture	BAL	8217816	N/A	2022/09/12	Pankti Patel
OC Pesticides (Selected) & PCB	GC/ECD	8222176	2022/09/13	2022/09/14	Li Peng
OC Pesticides Summed Parameters	CALC	8215766	N/A	2022/09/12	Automated Statchk
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8220546	2022/09/13	2022/09/14	Joe Petrillo
pH CaCl2 EXTRACT	AT	8221170	2022/09/13	2022/09/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8215077	N/A	2022/09/15	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8218324	N/A	2022/09/12	Denis Reid

Bureau Veritas ID: TRH315 Dup
Sample ID: TP1
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8218324	N/A	2022/09/12	Denis Reid

Bureau Veritas ID: TRH316
Sample ID: BH22-37 SS1
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8220638	2022/09/13	2022/09/14	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8219558	2022/09/12	2022/09/13	Prgya Panchal
Conductivity	AT	8223190	2022/09/14	2022/09/14	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8220566	2022/09/13	2022/09/13	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8220978	2022/09/13	2022/09/13	Daniel Teclu
Moisture	BAL	8217606	N/A	2022/09/10	Mathew Bowles
OC Pesticides (Selected) & PCB	GC/ECD	8222176	2022/09/13	2022/09/14	Li Peng
OC Pesticides Summed Parameters	CALC	8215766	N/A	2022/09/12	Automated Statchk
pH CaCl2 EXTRACT	AT	8221170	2022/09/13	2022/09/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8215077	N/A	2022/09/15	Automated Statchk



Bureau Veritas Job #: C2P8440
Report Date: 2022/11/04

DS Consultants Limited
Client Project #: 21-386-100
Site Location: 14259 HUMBER STATION RD, BOLTON
Sampler Initials: NP

TEST SUMMARY

Bureau Veritas ID: TRH317
Sample ID: BH22-36 SS1
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8220638	2022/09/13	2022/09/14	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8219558	2022/09/12	2022/09/13	Prgya Panchal
Conductivity	AT	8223190	2022/09/14	2022/09/14	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8220566	2022/09/13	2022/09/13	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8220978	2022/09/13	2022/09/13	Daniel Teclu
Moisture	BAL	8217606	N/A	2022/09/10	Mathew Bowles
OC Pesticides (Selected) & PCB	GC/ECD	8222176	2022/09/13	2022/09/14	Li Peng
OC Pesticides Summed Parameters	CALC	8215766	N/A	2022/09/12	Automated Statchk
pH CaCl2 EXTRACT	AT	8221170	2022/09/13	2022/09/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8215077	N/A	2022/09/15	Automated Statchk

Bureau Veritas ID: TRH317 Dup
Sample ID: BH22-36 SS1
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8220638	2022/09/13	2022/09/14	Jaswinder Kaur

Bureau Veritas ID: TRH318
Sample ID: BH22-36 SS2
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8215081	N/A	2022/09/15	Automated Statchk
Hot Water Extractable Boron	ICP	8220638	2022/09/13	2022/09/14	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8223208	2022/09/14	2022/09/14	Prgya Panchal
Conductivity	AT	8223190	2022/09/14	2022/09/14	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8223180	2022/09/14	2022/09/14	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8220978	2022/09/13	2022/09/13	Daniel Teclu
Moisture	BAL	8217816	N/A	2022/09/12	Pankti Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8220546	2022/09/13	2022/09/14	Joe Petrillo
pH CaCl2 EXTRACT	AT	8221136	2022/09/13	2022/09/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8215077	N/A	2022/09/15	Automated Statchk

Bureau Veritas ID: TRH318 Dup
Sample ID: BH22-36 SS2
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	8223190	2022/09/14	2022/09/14	Surinder Rai



Bureau Veritas Job #: C2P8440
Report Date: 2022/11/04

DS Consultants Limited
Client Project #: 21-386-100
Site Location: 14259 HUMBER STATION RD, BOLTON
Sampler Initials: NP

TEST SUMMARY

Bureau Veritas ID: TRH319
Sample ID: BH22-36 SS7
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8215347	N/A	2022/09/13	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8220554	2022/09/13	2022/09/13	Suleeqa Nurr
Moisture	BAL	8217816	N/A	2022/09/12	Pankti Patel
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8218324	N/A	2022/09/12	Denis Reid

Bureau Veritas ID: TRH319 Dup
Sample ID: BH22-36 SS7
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8220554	2022/09/13	2022/09/13	Suleeqa Nurr

Bureau Veritas ID: TRH320
Sample ID: BH22-40 SS1
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8220638	2022/09/13	2022/09/14	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8219558	2022/09/12	2022/09/13	Prgya Panchal
Conductivity	AT	8223190	2022/09/14	2022/09/14	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8220566	2022/09/13	2022/09/13	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8220978	2022/09/13	2022/09/13	Daniel Teclu
Moisture	BAL	8217606	N/A	2022/09/10	Mathew Bowles
OC Pesticides (Selected) & PCB	GC/ECD	8222176	2022/09/13	2022/09/14	Li Peng
OC Pesticides Summed Parameters	CALC	8215766	N/A	2022/09/12	Automated Statchk
pH CaCl2 EXTRACT	AT	8221170	2022/09/13	2022/09/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8215077	N/A	2022/09/15	Automated Statchk

Bureau Veritas ID: TRH321
Sample ID: BH22-40 SS3
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8215081	N/A	2022/09/15	Automated Statchk
Moisture	BAL	8217816	N/A	2022/09/12	Pankti Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8220546	2022/09/13	2022/09/14	Joe Petrillo

Bureau Veritas ID: TRH321 Dup
Sample ID: BH22-40 SS3
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8220546	2022/09/13	2022/09/14	Joe Petrillo



Bureau Veritas Job #: C2P8440
Report Date: 2022/11/04

DS Consultants Limited
Client Project #: 21-386-100
Site Location: 14259 HUMBER STATION RD, BOLTON
Sampler Initials: NP

TEST SUMMARY

Bureau Veritas ID: TRH322
Sample ID: BH22-39 SS1
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8217606	N/A	2022/09/10	Mathew Bowles
OC Pesticides (Selected) & PCB	GC/ECD	8227164	2022/09/15	2022/09/16	Joy Zhang
OC Pesticides Summed Parameters	CALC	8215766	N/A	2022/09/12	Automated Statchk

Bureau Veritas ID: TRH323
Sample ID: BH22-39 SS2
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8215081	N/A	2022/09/15	Automated Statchk
Hot Water Extractable Boron	ICP	8220638	2022/09/13	2022/09/14	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8223208	2022/09/14	2022/09/14	Prgya Panchal
Conductivity	AT	8223190	2022/09/14	2022/09/14	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8223180	2022/09/14	2022/09/14	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8220978	2022/09/13	2022/09/13	Daniel Teclu
Moisture	BAL	8217606	N/A	2022/09/10	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8220546	2022/09/13	2022/09/14	Joe Petrillo
pH CaCl ₂ EXTRACT	AT	8221136	2022/09/13	2022/09/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8215077	N/A	2022/09/15	Automated Statchk

Bureau Veritas ID: TRH324
Sample ID: BH22-39 SS6
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8215347	N/A	2022/09/13	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8255942	2022/09/29	2022/09/30	Anna Stuglik-Rolland
Moisture	BAL	8217816	N/A	2022/09/12	Pankti Patel
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8218324	N/A	2022/09/12	Denis Reid

Bureau Veritas ID: TRH325
Sample ID: BH22-38 SS1
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8220638	2022/09/13	2022/09/14	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8223208	2022/09/14	2022/09/14	Prgya Panchal
Conductivity	AT	8223190	2022/09/14	2022/09/14	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8223180	2022/09/14	2022/09/14	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8220978	2022/09/13	2022/09/13	Daniel Teclu
Moisture	BAL	8217816	N/A	2022/09/12	Pankti Patel
OC Pesticides (Selected) & PCB	GC/ECD	8222176	2022/09/13	2022/09/14	Li Peng
OC Pesticides Summed Parameters	CALC	8215766	N/A	2022/09/12	Automated Statchk
pH CaCl ₂ EXTRACT	AT	8221136	2022/09/13	2022/09/13	Surinder Rai



Bureau Veritas Job #: C2P8440
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DS Consultants Limited
Client Project #: 21-386-100
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Sampler Initials: NP

TEST SUMMARY

Bureau Veritas ID: TRH325
Sample ID: BH22-38 SS1
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sodium Adsorption Ratio (SAR)	CALC/MET	8215077	N/A	2022/09/15	Automated Statchk

Bureau Veritas ID: TRH326
Sample ID: BH22-38 SS3
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8217606	N/A	2022/09/10	Mathew Bowles
OC Pesticides (Selected) & PCB	GC/ECD	8227164	2022/09/15	2022/09/16	Joy Zhang
OC Pesticides Summed Parameters	CALC	8215766	N/A	2022/09/12	Automated Statchk

Bureau Veritas ID: TRH327
Sample ID: DUP-1
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8220638	2022/09/13	2022/09/14	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8219558	2022/09/12	2022/09/13	Prgya Panchal
Conductivity	AT	8223190	2022/09/14	2022/09/14	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8220566	2022/09/13	2022/09/13	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8220978	2022/09/13	2022/09/13	Daniel Teclu
Moisture	BAL	8218709	N/A	2022/09/12	Abhijot Kaur
pH CaCl2 EXTRACT	AT	8221170	2022/09/13	2022/09/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8215077	N/A	2022/09/15	Automated Statchk

Bureau Veritas ID: TRH327 Dup
Sample ID: DUP-1
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	8219558	2022/09/12	2022/09/13	Prgya Panchal
Hexavalent Chromium in Soil by IC	IC/SPEC	8220566	2022/09/13	2022/09/13	Sousan Besharatlou

Bureau Veritas ID: TRH328
Sample ID: DUP-2
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8215081	N/A	2022/09/15	Automated Statchk
Moisture	BAL	8217816	N/A	2022/09/12	Pankti Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8220546	2022/09/13	2022/09/14	Joe Petrillo
pH CaCl2 EXTRACT	AT	8326718	2022/11/04	2022/11/04	Taslma Aktar



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DS Consultants Limited
Client Project #: 21-386-100
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Sampler Initials: NP

TEST SUMMARY

Bureau Veritas ID: TRH329
Sample ID: DUP-3
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8215347	N/A	2022/09/13	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8220554	2022/09/13	2022/09/13	Suleeqa Nurr
Moisture	BAL	8217816	N/A	2022/09/12	Pankti Patel
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8218324	N/A	2022/09/12	Denis Reid

Bureau Veritas ID: TRH330
Sample ID: DUP-4
Matrix: Soil

Collected: 2022/09/07
Shipped:
Received: 2022/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8222894	N/A	2022/09/13	Abhijot Kaur
OC Pesticides (Selected) & PCB	GC/ECD	8227164	2022/09/15	2022/09/16	Joy Zhang
OC Pesticides Summed Parameters	CALC	8215766	N/A	2022/09/14	Automated Statchk



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Site Location: 14259 HUMBER STATION RD, BOLTON
Sampler Initials: NP

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.0°C
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Revised Report[10/5/2022]: Table 2 criteria added to C of A.

Sample TRH324 [BH22-39 SS6] : F2 - F4 Analysis: Analysis was performed past sample holding time. This may increase the variability associated with these results.

Results relate only to the items tested.

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Bureau Veritas Job #: C2P8440

Report Date: 2022/11/04

QUALITY ASSURANCE REPORT

DS Consultants Limited

Client Project #: 21-386-100

Site Location: 14259 HUMBER STATION RD, BOLTON

Sampler Initials: NP

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8218324	4-Bromofluorobenzene	2022/09/12	106	60 - 140	104	60 - 140	90	%		
8218324	D10-o-Xylene	2022/09/12	110	60 - 130	103	60 - 130	87	%		
8218324	D4-1,2-Dichloroethane	2022/09/12	94	60 - 140	98	60 - 140	101	%		
8218324	D8-Toluene	2022/09/12	106	60 - 140	106	60 - 140	91	%		
8220546	D10-Anthracene	2022/09/14	96	50 - 130	100	50 - 130	104	%		
8220546	D14-Terphenyl (FS)	2022/09/14	96	50 - 130	95	50 - 130	96	%		
8220546	D8-Acenaphthylene	2022/09/14	89	50 - 130	94	50 - 130	90	%		
8220554	o-Terphenyl	2022/09/13	90	60 - 130	88	60 - 130	95	%		
8222176	2,4,5,6-Tetrachloro-m-xylene	2022/09/14	85	50 - 130	75	50 - 130	79	%		
8222176	Decachlorobiphenyl	2022/09/14	85	50 - 130	85	50 - 130	104	%		
8227164	2,4,5,6-Tetrachloro-m-xylene	2022/09/16	90	50 - 130	72	50 - 130	85	%		
8227164	Decachlorobiphenyl	2022/09/16	119	50 - 130	92	50 - 130	117	%		
8255942	o-Terphenyl	2022/09/30	88	60 - 130	86	60 - 130	89	%		
8217606	Moisture	2022/09/10							1.6	20
8217816	Moisture	2022/09/12							5.1	20
8218324	1,1,1,2-Tetrachloroethane	2022/09/12	99	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8218324	1,1,1-Trichloroethane	2022/09/12	97	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8218324	1,1,2,2-Tetrachloroethane	2022/09/12	103	60 - 140	108	60 - 130	<0.040	ug/g	NC	50
8218324	1,1,2-Trichloroethane	2022/09/12	98	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8218324	1,1-Dichloroethane	2022/09/12	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8218324	1,1-Dichloroethylene	2022/09/12	95	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8218324	1,2-Dichlorobenzene	2022/09/12	99	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8218324	1,2-Dichloroethane	2022/09/12	90	60 - 140	93	60 - 130	<0.049	ug/g	NC	50
8218324	1,2-Dichloropropane	2022/09/12	99	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8218324	1,3-Dichlorobenzene	2022/09/12	100	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8218324	1,4-Dichlorobenzene	2022/09/12	121	60 - 140	115	60 - 130	<0.040	ug/g	NC	50
8218324	Acetone (2-Propanone)	2022/09/12	100	60 - 140	94	60 - 140	<0.49	ug/g	NC	50
8218324	Benzene	2022/09/12	95	60 - 140	94	60 - 130	<0.0060	ug/g	NC	50
8218324	Bromodichloromethane	2022/09/12	100	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
8218324	Bromoform	2022/09/12	102	60 - 140	107	60 - 130	<0.040	ug/g	NC	50
8218324	Bromomethane	2022/09/12	103	60 - 140	99	60 - 140	<0.040	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

DS Consultants Limited

Client Project #: 21-386-100

Site Location: 14259 HUMBER STATION RD, BOLTON

Sampler Initials: NP

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8218324	Carbon Tetrachloride	2022/09/12	94	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8218324	Chlorobenzene	2022/09/12	98	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8218324	Chloroform	2022/09/12	97	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8218324	cis-1,2-Dichloroethylene	2022/09/12	103	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
8218324	cis-1,3-Dichloropropene	2022/09/12	103	60 - 140	98	60 - 130	<0.030	ug/g	NC	50
8218324	Dibromochloromethane	2022/09/12	98	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8218324	Dichlorodifluoromethane (FREON 12)	2022/09/12	105	60 - 140	102	60 - 140	<0.040	ug/g	NC	50
8218324	Ethylbenzene	2022/09/12	90	60 - 140	87	60 - 130	<0.010	ug/g	NC	50
8218324	Ethylene Dibromide	2022/09/12	98	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8218324	F1 (C6-C10) - BTEX	2022/09/12					<10	ug/g	NC	30
8218324	F1 (C6-C10)	2022/09/12	109	60 - 140	100	80 - 120	<10	ug/g	NC	30
8218324	Hexane	2022/09/12	102	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8218324	Methyl Ethyl Ketone (2-Butanone)	2022/09/12	93	60 - 140	92	60 - 140	<0.40	ug/g	NC	50
8218324	Methyl Isobutyl Ketone	2022/09/12	84	60 - 140	88	60 - 130	<0.40	ug/g	NC	50
8218324	Methyl t-butyl ether (MTBE)	2022/09/12	90	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
8218324	Methylene Chloride(Dichloromethane)	2022/09/12	112	60 - 140	112	60 - 130	<0.049	ug/g	NC	50
8218324	o-Xylene	2022/09/12	96	60 - 140	94	60 - 130	<0.020	ug/g	NC	50
8218324	p+m-Xylene	2022/09/12	95	60 - 140	92	60 - 130	<0.020	ug/g	NC	50
8218324	Styrene	2022/09/12	91	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
8218324	Tetrachloroethylene	2022/09/12	90	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
8218324	Toluene	2022/09/12	91	60 - 140	90	60 - 130	<0.020	ug/g	NC	50
8218324	Total Xylenes	2022/09/12					<0.020	ug/g	NC	50
8218324	trans-1,2-Dichloroethylene	2022/09/12	101	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8218324	trans-1,3-Dichloropropene	2022/09/12	114	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
8218324	Trichloroethylene	2022/09/12	103	60 - 140	101	60 - 130	<0.010	ug/g	6.4	50
8218324	Trichlorofluoromethane (FREON 11)	2022/09/12	91	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
8218324	Vinyl Chloride	2022/09/12	92	60 - 140	91	60 - 130	<0.019	ug/g	NC	50
8218709	Moisture	2022/09/12							1.5	20
8219558	WAD Cyanide (Free)	2022/09/13	102	75 - 125	95	80 - 120	<0.01	ug/g	NC	35
8220546	1-Methylnaphthalene	2022/09/14	99	50 - 130	107	50 - 130	<0.0050	ug/g	NC	40
8220546	2-Methylnaphthalene	2022/09/14	95	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40



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DS Consultants Limited
Client Project #: 21-386-100
Site Location: 14259 HUMBER STATION RD, BOLTON
Sampler Initials: NP

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8220546	Acenaphthene	2022/09/14	97	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
8220546	Acenaphthylene	2022/09/14	94	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8220546	Anthracene	2022/09/14	105	50 - 130	106	50 - 130	<0.0050	ug/g	NC	40
8220546	Benzo(a)anthracene	2022/09/14	114	50 - 130	110	50 - 130	<0.0050	ug/g	NC	40
8220546	Benzo(a)pyrene	2022/09/14	93	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
8220546	Benzo(b/j)fluoranthene	2022/09/14	103	50 - 130	105	50 - 130	<0.0050	ug/g	NC	40
8220546	Benzo(g,h,i)perylene	2022/09/14	97	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
8220546	Benzo(k)fluoranthene	2022/09/14	106	50 - 130	107	50 - 130	<0.0050	ug/g	NC	40
8220546	Chrysene	2022/09/14	104	50 - 130	107	50 - 130	<0.0050	ug/g	NC	40
8220546	Dibenzo(a,h)anthracene	2022/09/14	93	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40
8220546	Fluoranthene	2022/09/14	111	50 - 130	110	50 - 130	<0.0050	ug/g	NC	40
8220546	Fluorene	2022/09/14	101	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
8220546	Indeno(1,2,3-cd)pyrene	2022/09/14	97	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
8220546	Naphthalene	2022/09/14	86	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8220546	Phenanthrene	2022/09/14	100	50 - 130	104	50 - 130	<0.0050	ug/g	NC	40
8220546	Pyrene	2022/09/14	111	50 - 130	111	50 - 130	<0.0050	ug/g	NC	40
8220554	F2 (C10-C16 Hydrocarbons)	2022/09/13	101	60 - 130	98	80 - 120	<10	ug/g	NC	30
8220554	F3 (C16-C34 Hydrocarbons)	2022/09/13	102	60 - 130	99	80 - 120	<50	ug/g	NC	30
8220554	F4 (C34-C50 Hydrocarbons)	2022/09/13	104	60 - 130	100	80 - 120	<50	ug/g	NC	30
8220566	Chromium (VI)	2022/09/13	81	70 - 130	88	80 - 120	<0.18	ug/g	NC	35
8220638	Hot Water Ext. Boron (B)	2022/09/14	97	75 - 125	109	75 - 125	<0.050	ug/g	2.1	40
8220978	Acid Extractable Antimony (Sb)	2022/09/13	94	75 - 125	100	80 - 120	<0.20	ug/g	NC	30
8220978	Acid Extractable Arsenic (As)	2022/09/13	95	75 - 125	96	80 - 120	<1.0	ug/g	0.19	30
8220978	Acid Extractable Barium (Ba)	2022/09/13	NC	75 - 125	98	80 - 120	<0.50	ug/g	8.7	30
8220978	Acid Extractable Beryllium (Be)	2022/09/13	98	75 - 125	97	80 - 120	<0.20	ug/g	15	30
8220978	Acid Extractable Boron (B)	2022/09/13	93	75 - 125	96	80 - 120	<5.0	ug/g	NC	30
8220978	Acid Extractable Cadmium (Cd)	2022/09/13	95	75 - 125	96	80 - 120	<0.10	ug/g	NC	30
8220978	Acid Extractable Chromium (Cr)	2022/09/13	98	75 - 125	97	80 - 120	<1.0	ug/g	4.6	30
8220978	Acid Extractable Cobalt (Co)	2022/09/13	95	75 - 125	97	80 - 120	<0.10	ug/g	0.15	30
8220978	Acid Extractable Copper (Cu)	2022/09/13	91	75 - 125	96	80 - 120	<0.50	ug/g	1.2	30
8220978	Acid Extractable Lead (Pb)	2022/09/13	95	75 - 125	100	80 - 120	<1.0	ug/g	3.0	30

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QUALITY ASSURANCE REPORT(CONT'D)

DS Consultants Limited

Client Project #: 21-386-100

Site Location: 14259 HUMBER STATION RD, BOLTON

Sampler Initials: NP

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8220978	Acid Extractable Mercury (Hg)	2022/09/13	87	75 - 125	94	80 - 120	<0.050	ug/g	NC	30
8220978	Acid Extractable Molybdenum (Mo)	2022/09/13	99	75 - 125	98	80 - 120	<0.50	ug/g	NC	30
8220978	Acid Extractable Nickel (Ni)	2022/09/13	95	75 - 125	97	80 - 120	<0.50	ug/g	5.0	30
8220978	Acid Extractable Selenium (Se)	2022/09/13	95	75 - 125	98	80 - 120	<0.50	ug/g	NC	30
8220978	Acid Extractable Silver (Ag)	2022/09/13	99	75 - 125	101	80 - 120	<0.20	ug/g	NC	30
8220978	Acid Extractable Thallium (Tl)	2022/09/13	96	75 - 125	101	80 - 120	<0.050	ug/g	3.2	30
8220978	Acid Extractable Uranium (U)	2022/09/13	97	75 - 125	100	80 - 120	<0.050	ug/g	6.9	30
8220978	Acid Extractable Vanadium (V)	2022/09/13	99	75 - 125	98	80 - 120	<5.0	ug/g	1.6	30
8220978	Acid Extractable Zinc (Zn)	2022/09/13	NC	75 - 125	95	80 - 120	<5.0	ug/g	2.0	30
8221136	Available (CaCl ₂) pH	2022/09/13			100	97 - 103			0.58	N/A
8221170	Available (CaCl ₂) pH	2022/09/13			100	97 - 103			0.051	N/A
8222176	a-Chlordane	2022/09/14	103	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
8222176	Aldrin	2022/09/14	102	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
8222176	Aroclor 1242	2022/09/14					<0.015	ug/g	NC	40
8222176	Aroclor 1248	2022/09/14					<0.015	ug/g	NC	40
8222176	Aroclor 1254	2022/09/14					<0.015	ug/g	NC	40
8222176	Aroclor 1260	2022/09/14					<0.015	ug/g	NC	40
8222176	Dieldrin	2022/09/14	76	50 - 130	89	50 - 130	<0.0020	ug/g	NC	40
8222176	Endosulfan I (alpha)	2022/09/14	52	50 - 130	61	50 - 130	<0.0020	ug/g	NC	40
8222176	Endosulfan II (beta)	2022/09/14	54	50 - 130	66	50 - 130	<0.0020	ug/g	NC	40
8222176	Endrin	2022/09/14	70	50 - 130	80	50 - 130	<0.0020	ug/g	NC	40
8222176	g-Chlordane	2022/09/14	114	50 - 130	98	50 - 130	<0.0020	ug/g	NC	40
8222176	Heptachlor epoxide	2022/09/14	72	50 - 130	80	50 - 130	<0.0020	ug/g	NC	40
8222176	Heptachlor	2022/09/14	99	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40
8222176	Hexachlorobenzene	2022/09/14	87	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40
8222176	Hexachlorobutadiene	2022/09/14	77	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40
8222176	Hexachloroethane	2022/09/14	53	50 - 130	67	50 - 130	<0.0020	ug/g	NC	40
8222176	Lindane	2022/09/14	94	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
8222176	Methoxychlor	2022/09/14	74	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8222176	o,p-DDD	2022/09/14	100	50 - 130	100	50 - 130	<0.0020	ug/g	NC	40
8222176	o,p-DDE	2022/09/14	87	50 - 130	75	50 - 130	<0.0020	ug/g	NC	40

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Sampler Initials: NP

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8222176	o,p-DDT	2022/09/14	123	50 - 130	110	50 - 130	<0.0020	ug/g	NC	40
8222176	p,p-DDD	2022/09/14	92	50 - 130	89	50 - 130	<0.0020	ug/g	NC	40
8222176	p,p-DDE	2022/09/14	93	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
8222176	p,p-DDT	2022/09/14	99	50 - 130	93	50 - 130	<0.0020	ug/g	NC	40
8222894	Moisture	2022/09/13							1.4	20
8223180	Chromium (VI)	2022/09/14	76	70 - 130	89	80 - 120	<0.18	ug/g	NC	35
8223190	Conductivity	2022/09/14			99	90 - 110	<0.002	mS/cm	0.92	10
8223208	WAD Cyanide (Free)	2022/09/14	98	75 - 125	97	80 - 120	<0.01	ug/g	NC	35
8227164	a-Chlordane	2022/09/16	105	50 - 130	80	50 - 130	<0.0020	ug/g	NC	40
8227164	Aldrin	2022/09/16	99	50 - 130	75	50 - 130	<0.0020	ug/g	NC	40
8227164	Aroclor 1242	2022/09/16					<0.015	ug/g		
8227164	Aroclor 1248	2022/09/16					<0.015	ug/g		
8227164	Aroclor 1254	2022/09/16					<0.015	ug/g		
8227164	Aroclor 1260	2022/09/16					<0.015	ug/g		
8227164	Dieldrin	2022/09/16	70	50 - 130	63	50 - 130	<0.0020	ug/g	NC	40
8227164	Endosulfan I (alpha)	2022/09/16	54	50 - 130	51	50 - 130	<0.0020	ug/g	NC	40
8227164	Endosulfan II (beta)	2022/09/16	62	50 - 130	52	50 - 130	<0.0020	ug/g	NC	40
8227164	Endrin	2022/09/16	65	50 - 130	60	50 - 130	<0.0020	ug/g	NC	40
8227164	g-Chlordane	2022/09/16	134 (1)	50 - 130	100	50 - 130	<0.0020	ug/g	NC	40
8227164	Heptachlor epoxide	2022/09/16	79	50 - 130	68	50 - 130	<0.0020	ug/g	NC	40
8227164	Heptachlor	2022/09/16	108	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40
8227164	Hexachlorobenzene	2022/09/16	92	50 - 130	79	50 - 130	<0.0020	ug/g	NC	40
8227164	Hexachlorobutadiene	2022/09/16	100	50 - 130	91	50 - 130	<0.0020	ug/g	NC	40
8227164	Hexachloroethane	2022/09/16	78	50 - 130	69	50 - 130	<0.0020	ug/g	NC	40
8227164	Lindane	2022/09/16	98	50 - 130	82	50 - 130	<0.0020	ug/g	NC	40
8227164	Methoxychlor	2022/09/16	80	50 - 130	62	50 - 130	<0.0050	ug/g	NC	40
8227164	o,p-DDD	2022/09/16	111	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
8227164	o,p-DDE	2022/09/16	92	50 - 130	80	50 - 130	<0.0020	ug/g	NC	40
8227164	o,p-DDT	2022/09/16	107	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40
8227164	p,p-DDD	2022/09/16	107	50 - 130	79	50 - 130	<0.0020	ug/g	NC	40
8227164	p,p-DDE	2022/09/16	99	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40

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Site Location: 14259 HUMBER STATION RD, BOLTON

Sampler Initials: NP

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8227164	p,p-DDT	2022/09/16	124	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40
8255942	F2 (C10-C16 Hydrocarbons)	2022/09/30	103	60 - 130	103	80 - 120	<10	ug/g	NC	30
8255942	F3 (C16-C34 Hydrocarbons)	2022/09/30	98	60 - 130	97	80 - 120	<50	ug/g	NC	30
8255942	F4 (C34-C50 Hydrocarbons)	2022/09/30	98	60 - 130	98	80 - 120	<50	ug/g	NC	30
8326718	Available (CaCl ₂) pH	2022/11/04			100	97 - 103			0.20	N/A

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) The recovery was above the upper control limit. This may represent a high bias in some results for flagged analytes.



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Sampler Initials: NP

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Ewa Pranjić, M.Sc., C.Chem, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



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Site Location: 14259 HUMBER STATION RD, BOLTON

Sampler Initials: NP

Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						

C2R1694

Affix Job Label Here		<div> <div>Maxxam Analytics CAM FCD-01013/5 Page 1 of 1</div> <div> Presence of Visible Particulate/Sediment When there is >1cm of visible particulate/sediment, the amount will be recorded in the field below </div> </div>																												
		Bottle Types																												
		Inorganics							Organics										Hydrocarbons							Volatiles				Other
		Sample ID	All	CrVI	CN	General	Hg	Metals (Diss.)	Organic 1 of 2	Organic 2 of 2	PCB 1 of 2	PCB 2 of 2	Pest/ Herb 1 of 2	Pest/ Herb 2 of 2	SVOC/ ABN 1 of 2	SVOC/ ABN 2 of 2	PAH 1 of 2	PAH 2 of 2	Dioxin /Furan	F1 Vial 1	F1 Vial 2	F1 Vial 3	F1 Vial 4	F2-F4 1 of 2	F2-F4 2 of 2	F4G	VOC Vial 1	VOC Vial 2	VOC Vial 3	VOC Vial 4
1 BH22-39	TS																													
2 BH22-40	TS																													
3 2022/09/20 JOK BDup-1	TS																													
4																														
5																														
6																														
7																														
8																														
9																														
10																														

Comments:

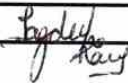
Legend:

P Suspended Particulate

TS Trace Settled Sediment (just covers bottom of container or less)

S Sediment greater than (>) Trace, but less than (<) 1 cm

Recorded By: (signature/print)


JAGDEEP K. Kaur



Bureau Veritas
6740 Campbell Road, Mississauga, Ontario Canada L5N 2L8 Tel (905) 817-5700 Toll-free 800-563-6266 Fax (905) 817-5777 www.bvna.com

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20-Sep-22 18:03

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Ashton Gibson	
Company Name: #32616 DS Consultants Limited		Company Name: Efuange Khumbah		Quotation #: C20545		Bottle Order #:	
Attention: Accounts Payable		Attention:		P.O. #:		897865	
Address: 6221 Highway 7, Unit 16		Address:		Project: 21-386-100		Project Manager:	
Vaughan ON L4H 0K8		Norma.paolucci@dsconsultants.ca		Project Name:		Ashton Gibson	
Tel: (905) 264-9393		Tel:		Site #:		COC #:	
Email: accounting@dsconsultants.ca; bindu.goel@dsconsultant		Email: efuange.khumbah@dsconsultants.ca		Sampled By: Norma Paolucci		CF897865-01-01	

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY					ANALYSIS REQUESTED (PLEASE BE SPECIFIC)										Turnaround Time (TAT) Required: Please provide advance notice for rush projects					
Regulation 153 (2011)			Other Regulations			Special Instructions			Field Filtered (please circle): Metals / Hg / Cr / V / O Reg 153 Metals & Inorganics Pkg (WV) O Reg 153 VOCs by HS & F1-F4 O Reg 153 PAHs										Regular (Standard) TAT: (will be applied if Rush TAT is not specified): Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.	
<input type="checkbox"/> Table 1 <input type="checkbox"/> Res/Park <input type="checkbox"/> Medium/Fine <input type="checkbox"/> Table 2 <input type="checkbox"/> Ind/Comm <input type="checkbox"/> Coarse <input type="checkbox"/> Table 3 <input type="checkbox"/> Agri/Other <input type="checkbox"/> For RSC <input checked="" type="checkbox"/> Table 8			<input type="checkbox"/> CCME <input type="checkbox"/> Sanitary Sewer Bylaw <input type="checkbox"/> Reg 558 <input type="checkbox"/> Storm Sewer Bylaw <input type="checkbox"/> MISA <input type="checkbox"/> Municipality <input type="checkbox"/> PWQO <input type="checkbox"/> Reg 406 Table <input type="checkbox"/> Other																Job Specific Rush TAT (if applies to entire submission) Date Required: Time Required: <input type="checkbox"/> Rush Confirmation Number: (call lab for #)	
Include Criteria on Certificate of Analysis (Y/N)?																				
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix												# of Bottles	Comments			
1	BH22-39	9/20/22	PM	GW	X	X	X	X	X	X	X	X	X	X	X	9				
2	BH22-40				X	X	X	X	X	X	X	X	X	X	X	9				
3	BH22-38				X	X	X	X	X	X	X	X	X	X	X	9				
4	Trip Blank				X	X	X	X	X	X	X	X	X	X	X	2				
5	DUP-1				X	X	X	X	X	X	X	X	X	X	X	9				
6																				
7																				
8																				
9																				
10																				

* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only				
Norma Paolucci		22/9/20		A.S. DIPKA SINGH		2022/09/20	18:03		Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
										17/18/18	Present		
											Intact		

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/RESOURCES/CHAIN-OF-CUSTODY-FORMS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client



Appendix F

Phase Two Conceptual Site Model

This Phase Two Conceptual Site Model was developed through a synthesis of the information obtained through the completion of the Phase One ESA, and the data collected as part of the Phase Two ESA.

I. Description and Assessment of:

A. Areas where potentially contaminating activity has occurred

A total of seven (7) PCAs were identified in the Phase One ESA. A summary of the PCAs considered to be contributing to APECs on the Phase Two Property is provided in the table below.

PCA Item.	PCA Description (Per. Table 2, Schedule D of O.Reg. 153/04)	Description	Rationale
1	#40: Pesticides (including herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	Inferred large scale application of pesticides on the Phase One Property for a previous orchard at the Phase One Property	PCA is on-Site
2	#28: Gasoline and associated products storage in fixed tanks	Historically, the former residential dwelling at the Site contained, two (2) ASTs in the basement.	PCA is on-Site
3	#46: Rail Yards, Tracks and Spurs	Railway tracks are adjacent to the east of the Phase One Property.	PCA is adjacent to the Phase One Property.
5	#30: Importation of Fill Material of Unknown Quality	Observed during the site reconnaissance, the Phase One Property residential dwelling had been demolished and the basement backfilled with fill material.	PCA is on-Site
7	#30: Importation of Fill Material of Unknown Quality	Observed during the site reconnaissance, the Phase One Property barn had been demolished and backfilled with fill material.	PCA is on-Site

N/S - not specified in Table 2, Schedule D, of O.Reg. 153/04

B. Areas of potential environmental concern

A total of five (5) APECs were identified to be present on the Phase Two Property through the completion of the Phase One ESA. A summary of the APECs identified, and the associated PCOCs is provided in the table below.

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	Northwest of the Site	#28: Gasoline and Associated Products Storage in Fixed Tanks	On Site (PCA-2)	PHCs, BTEX	Soil and groundwater
APEC-2	Entire Site	#40: Pesticides (including herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	On Site (PCA-1)	OCPs, Pb,As, Sb, Se, CN-	Soil
APEC-3	Northwest portion of Site	#30: Importation of Fill Material of Unknown Quality	On Site (PCA-5)	PHCs, PAH, VOCs, Metals, As, Sb, Se, B-HWS, CN-, electrical conductivity, Cr (VI), Hg, low or high pH, SAR	Soil
APEC-4	Central portion of Site	#30: Importation of Fill Material of Unknown Quality	On Site (PCA-6)	PHCs, PAH, VOCs, Metals, As, Sb, Se, B-HWS, CN-, electrical conductivity, Cr (VI), Hg, low or high pH, SAR	Soil
APEC-5	East portion of Site	#46: Rail Yards, Tracks and Spurs	Off Site (PCA-3)	PAH, Metals, As, Sb, Se, CN-	Soil and Groundwater

N/S - not specified in Table 2, Schedule D, of O.Reg. 153/04

C. Any subsurface structures and utilities on, in or under the Phase Two Property that may affect contaminant distribution and transport

The groundwater table was encountered at depths ranging from 1.92 to 5.92 mbgs on the Phase Two Property. Given the rural nature of the property, it is inferred that the former

utility services included underground water lines associated with the domestic well, and a septic system.

II. Description of, and as appropriate, figures illustrating, the physical setting of the Phase Two Property and any areas under it including:

A. Stratigraphy from ground surface to the deepest aquifer or aquitard investigated

The surface at the borehole locations is covered with approximately 200 to 250 mm of topsoil. Weathered/disturbed native material consisting of silty sand to clayey silt was encountered below the surface material extending from 0.2 to 0.8 mbgs. Silty clay till was encountered at depths of 0.8 to 10.5 mbgs. Bedrock was not encountered at the maximum drilling depth of 10.5 mbgs.

The borehole locations are depicted on Figure 5.

B. Hydrogeological Characteristics, including aquifers, aquitards and, in each hydrostratigraphic unit where one or more contaminants is present at concentrations above the applicable site condition standards, lateral and vertical gradients

The groundwater table was encountered in a clayey silt till unit, which is considered to be a unconfined aquifer.

Based on the groundwater elevations, the groundwater flow direction is interpreted to be southeast towards Humber River.

The horizontal hydraulic gradient was calculated based on the groundwater levels recorded on September 19, 2022.

Table 5-1: Summary of Horizontal Hydraulic Gradient Calculations

Hydrogeological Unit	Calculated Horizontal Hydraulic Gradient
BH22-39 to BH22-40	0.044
BH22-36 to BH22-40	No significant elevation difference
BH22-39 to BH22-36	0.014

C. Depth to bedrock

Depth to bedrock was not encountered at the maximum drilling depth of 8.2 mbgs. Based on the Ontario Department of Mines Preliminary Map N. 470 and Bolton Bedrock Topography Map 2276, the bedrock underlying the Phase One Property is anticipated at elevations between 183 to 198 masl (600 to 650 ft above sea level). This corresponds to approximately 81 to 90 mbgs.

D. Approximate depth to water table

The depth to groundwater was found to range between 1.92 to 5.92 mbgs on (between September 8 and September 19, 2022).

E. Any respect in which sections 35, 41 or 43.1 of the regulation applies to the property

Section 35

Section 35 is applicable to the property for the following reasons:

1. The property and all other properties located within 250m of the boundaries of the property are supplied by a municipal drinking water system.
2. The RSC submission is for future Residential Use
3. The property is not located within a well-head protection area or other area designated for the protection of groundwater. The property and surrounding properties within 250 m are not reliant on well(s) for human consumption or agriculture.
4. The City of Toronto has provided written notice that there is no objection to the application of non-potable groundwater standards.

Section 41

The pH values measured for both surface and sub-surface soil samples were within the acceptable limits for non-sensitive sites. There are no areas of natural significance on the Phase Two Property, or within 30 m of the Phase Two Property. As such the Phase Two Property is not considered to be environmentally sensitive as defined by Section 41.

Section 43.1

The Phase Two Property is not considered a shallow soil property, nor are there any bodies of water within 30m of the Phase Two Property. Section 43.1 is not applicable.

F. Areas on, in or under the Phase Two Property where excess soil is finally placed

According to the borehole logs, the surface soil was weathered/ disturbed soil in the vicinity of the former residential building and barn on the Property.

G. Approximate locations, if known, of any proposed buildings and other structures

It is our understanding that redevelopment of the Site was requested for due diligence purposes associated with the proposed acquisition of the Site, and that this report may be used in the future for RSC filing purposes. It is further understood that the proposed development will occupy the entirety of the Phase Two Property.

III. Where a contaminant is present on, in or under the Phase Two Property at a concentration greater than the applicable site condition standard, identification of

A. Each area where a contaminant is present on, in or under the Phase Two Property at a concentration greater than the applicable SCS

Soil and groundwater samples were collected from the boreholes/monitoring wells advanced on the Phase Two Property and submitted for analysis of PAHs, OCPs, PHCs including BTEX, VOCs and M&I. The results of the chemical analyses conducted indicated that all samples analyzed met the applicable Site Condition Standards

No contaminant was identified in the soil and groundwater samples tested on, in or under the Phase Two Property.

B. The contaminants associated with each of the areas

No contaminant was identified in the soil and groundwater samples tested on, in or under the Phase Two Property.

C. Medium that contaminants were identified in

No Contaminants were identified greater than the applicable SCS in Table 2 for Soil and Groundwater.

D. Description and assessment of what is know about each of the areas

No contaminant was identified in the soil and groundwater samples tested on, in or under the Phase Two Property.

E. Distribution in which the area of each contaminant is present in the area at a concentration greater than the applicable SCS, for each medium in which the contaminant is present, together with figures showing the distribution

No contaminant was identified in the soil and groundwater samples tested on, in or under the Phase Two Property.

A visual summary of the location of the sample locations is provided in Figures 7A through 8D. The results of the chemical analyses conducted are presented in Tables 5 through 15 of Appendix D. A summary of the maximum concentration for each tested parameter is presented in Table 14 and 15 of Appendix D. The laboratory certificates of analysis have been provided under Appendix E

F. Anything know about the reason for the discharge of the contaminants present on, in or under the Phase Two Property at a concentration greater than the applicable SCS

The Phase Two Property is currently farmland which is considered to be Agricultural Property Use under O.Reg. 153/04 (as amended). It is DS's understanding that the Client intends to redevelop the Site for commercial use.

No contaminant was identified in the soil and groundwater samples tested on, in or under the Phase Two Property. Hence, there is no discharge of contaminants at the Phase Two Property

G. Anything known about migration of the contaminants present on, in or under the phase two property at a concentration greater than the applicable SCS away from any area of potential environmental concern, including the identification of any preferential pathways

No contaminant was identified in the soil and groundwater samples tested on, in or under the Phase Two Property. Hence, there is no potential for contaminants to migrate at the Phase Two Property.

H. Climatic or meteorological conditions that may have influenced distribution and migration of the contaminants, such as temporal fluctuations in groundwater levels

A total of three (3) groundwater monitoring events were recorded throughout the course of this investigation. The groundwater levels were found to fluctuate by a maximum of 1.33 m on September 19, 2022, suggesting that there are relatively minor temporal variations in groundwater levels. As such the effect of temporal fluctuations on contaminant distribution is expected to be minor.

I. Information concerning soil vapour intrusion of the contaminants into buildings

No volatile parameters were identified at concentrations greater than the applicable SCS, therefore vapour intrusion is not considered to be an exposure pathway at this time.

IV. Where contaminants on, in or under the Phase Two Property are present at concentrations greater than the applicable SCS, one or more cross-sections showing

- A. The lateral and vertical distribution of a contaminant in each area where the contaminants are present at concentrations greater than the applicable SCS in soil, groundwater and sediment**
- B. Approximate depth to water table**
- C. Stratigraphy from ground surface to the deepest aquifer or aquitard investigated**
- D. Any subsurface structures and utilities that may affect contaminants distribution and transport**

No contaminant was identified in the soil and groundwater samples tested on, in or under the Phase Two Property. Hence, there cross-sections depicting contaminants at the Phase Two Property was not required.

V. For each area where a contaminant is present on, in or under the property at a concentration greater than the applicable SCS for the contaminant, a diagram identifying, with narrative explanatory notes

- A. The release mechanisms**

- B. Contaminant transport pathway**
- C. The human and ecological receptors located on, in or under the phase two property**
- D. Receptor exposure points**
- E. Routes of exposure**

No contaminant was identified in the soil and groundwater samples tested on, in or under the Phase Two Property. Hence, there is no potential for contaminants exposure routes at the Phase Two Property.