Phase Two Environmental Site Assessment

1470 Williamsport Drive

Mississauga, Ontario

Prepared For:

1470 Williamsport Holdings Inc.

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DS Project No: 24-300-100

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Executive Summary

DS Consultants Ltd. (DS) was retained by 1470 Williamsport Holdings Inc. (the "Client") to conduct a Phase Two Environmental Site Assessment (ESA) of the Property located at 1470 Williamsport Drive, Mississauga, Ontario, herein referred to as the "Phase Two Property" or "Site". DS understands that Phase Two ESA has been requested for due diligence purposes in association with the proposed redevelopment of the Property for residential purposes. It is further understood that the proposed development will consist of two (2), mid- to high-rise residential buildings, with a shared podium and underground parking.

The intended future residential property use is not considered to be a more sensitive property use as defined under O.Reg. 153/04 (as amended) than the current residential property use; therefore, the filing of a Record of Site Condition (RSC) with the Ontario Ministry of Environment, Conservation and Parks (MECP) is not mandated under O.Reg. 153/04.

The Phase Two ESA was completed in general accordance with 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 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 One Property is a rectangular shaped 0.59-hectare (1.46 acres) parcel of land situated within a mixed residential and commercial neighbourhood in the City of Mississauga, Ontario. The Phase One Property is located approximately 140 m northeast of the intersection of Bloor Street and Dixie Road. The Property currently includes a residential apartment building (Site Building) with a brick façade, consisting of 6 storeys with one level of basement and a building envelope approximately 850 m^2 in area. Adjoining the Site Building to the southwest is ground level parking extending into a one-level underground garage with an approximate footprint of 1,700 m^2. The Site Building was utilized by residential tenants at the time of this investigation, and has operated as an apartment building dating to at least 1954.

A total of twelve (12) Potentially Contaminating Activities (PCAs) were identified in the Phase One ESA, of which four (4) were considered to be contributing to four (4) 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 Identified on Phase One Property

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	Northeastern portion of the Phase One Property	N/S: Operation of an Incinerator	On Site: PCA-1	PAHs, Dioxins and Furans	Soil and ground water
APEC-2	Entire Phase One Property	#30 - Importation of Fill Material of Unknown Quality	On Site: PCA-8	PHCs, VOCs, BTEX, Metals, As, Sb, Se, B-HWS, CN-, Cr (VI), Hg, low or high pH, PAHs	Soil
APEC-3	Southern portion of the Phase One Property	#N/S- Inferred application of de-icing agents	On Site: PCA-9	Electrical Conductivity, SAR	Soil
				Na, Cl-	Groundwater
APEC-4	Southwestern portion of the Property	#40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications	On Site PCA-12	Metals, As, Sb, Se, CN-, Hg, OC Pesticides	Soil

Notes:

Note that the PCA numbers used are per Table 2, Schedule D of O.Reg. 153/04.
N/S: PCA Not Listed in Table 2, Schedule D of O. Reg 153/04.
PAHs: Polycyclic Aromatic Hydrocarbons
PHCs: Petroleum Hydrocarbons
VOCs: Volatile Organic Compounds
SAR: Sodium Adsorption Ratio
OC Pesticides: Organochlorine Pesticides

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 involved the advancement of five (5) boreholes (BH24-1 to BH24-4, MW24-5), which was completed between August 9, 2024. The boreholes were advanced to a maximum depth of 9.7 metres below ground surface (mbgs) under the supervision of DS personnel. Groundwater monitoring wells were installed in one (1) of the boreholes (MW24-5) to facilitate the collection of groundwater samples. Three (3) monitoring wells previously installed on the property by Terraprobe Inc. (2022) were utilized for the purposes of groundater monitoring and flow direction assessment. The borehole locations were determined based on the findings of the Phase One ESA. All APECs were investigated with boreholes and/or monitoring wells in accordance with the requirements of O.Reg. 153/04

(as amended). Soil and groundwater samples were collected and submitted for analysis of all COPCs as follows:

- Soil - PHCs, VOCs, BTEX, Metals, As, Sb, Se, B-HWS, CN-, electrical conductivity, Cr (VI), Hg, low or high pH, SAR, PAHs, Dioxins and Furans, and OC Pesticides.
- Groundwater - PAHs, Na, Cl, Dioxins and Furans.

The soil and groundwater analytical results were compared to the "Table 2 SCS: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Residential/Parkland/Institutional Use" 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 results of the Phase Two ESA, DS presents the following findings:

- A surficial layer of topsoil approximately 100 to 150 mm in thickness was encountered in all the boreholes advanced. Fill material consisting of silty sand was encountered below the topsoil. The fill material was generally heterogeneous and ranged in thickness from 1.5 to 2.44 metres. No deleterious materials, staining or odours were observed. The native material encountered below the fill consisted of sand to silty sand for approximately 0.7 m, below this silty sand till was present for approximately 2.3 m, below which sandy silt was present to approximately 7.6 mbgs followed by silty sand till. The silty sand till unit extended to the full depth of the boreholes until maximum termination depth at 9.7 mbgs. Bedrock was not encountered;
- The depth to groundwater was measured in four (4) monitoring wells; one (1) installed during this investigation and two (2) pre-existing wells. The monitoring wells were screened to intercept the groundwater water table. The groundwater levels were found to range between 8.11 to 11.45 mbgs, with corresponding elevations of 131.05 to 129.06 metres above sea level (masl). Per the Terraprobe (2022) Hydrogeological Investigation completed at the Site, groundwater flow direction was considered to be southeast. The groundwater levels may 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 seasonal monitoring.
- Soil samples were collected from the boreholes advanced on the Phase Two Property and submitted for analysis of Metals, As, Sb, Se, B-HWS, CN, EC, Cr (VI), Hg, low or high

pH, SAR, PAHs, PHCs, VOCs, OCPs, PCBs, and dioxins and furans. The results of the chemical analyses conducted indicated the following exceedances of the Table 2 Standards:

Table E-2: Summary of Soil Impacts Identified

Sample ID	Sample Depth (mbgs)	Parameter	Units	Table 2 SCS	Reported Value
BH24-1 SS2	0-0.6	Electrical Conductivity	mS/cm	0.7	7.9*

- *Per Section 49.1 (1) of O.Reg. 153/04, "*If an applicable site condition standard is exceeded at a property solely because of one of the following reasons, the applicable site condition standard is deemed not to be exceeded for the purpose of Part XV.1 of the Act": "…that a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both*". Based on this provision, the Site condition standards for EC and SAR are deemed not to be exceeded.
- Groundwater sample was collected from monitoring well MW24-5 installed on the Phase Two Property and submitted for analysis of PAHs and Dioxins and Furans. The results of the chemical analyses conducted indicated that all samples analyzed met the applicable Site Condition Standards.

Based on a review of the findings of this Phase Two ESA, DS presents the following conclusions and recommendations:

- The results of the chemical analyses conducted on soil and groundwater samples indicate that the applicable Site Condition Standards have been met. No further environmental site assessment is recommended at this time.
- Based on the findings of this Phase Two ESA, a Record of Site Condition may be filed for the Phase Two Property (if required);
- Note: further chemical testing of the soils on the property may be required in the future to support the export of excess soils generated by the proposed redevelopment. DS recommends completing this work prior to tendering the construction earthworks.
- All monitoring wells should be decommissioned in accordance with O.Reg. 903 when no longer required.

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Introduction

DS Consultants Ltd. (DS) was retained by 1470 Williamsport Holdings Inc. to complete a Phase Two Environmental Site Assessment (ESA) of the Property located at 1470 Williamsport Drive, Mississauga, Ontario, herein referred to as the "Phase Two Property" or "Site". It is DS's understanding that this Phase Two ESA has been requested for due diligence purposes in association with the proposed redevelopment of the Property for residential purposes. It is further understood that the proposed development will consist of two (2), mid- to high-rise residential buildings, with a shared podium and underground parking.

The intended future residential property use is not considered to be a more sensitive property use as defined under O.Reg. 153/04 (as amended) than the current residential property use; therefore, the filing of a Record of Site Condition (RSC) with the Ontario Ministry of Environment, Conservation and Parks (MECP) is not mandated under O.Reg. 153/04.

The Phase Two ESA was completed in general accordance with 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 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 a rectangular-shaped 0.59-hectare (1.46 acres) parcel of land situated within a mixed residential and commercial neighbourhood in the City of Mississauga, Ontario. The Phase Two Property is located approximately 140 m northeast of the intersection of Bloor Street and Dixie. A Site Location Plan is provided in Figure 1.

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

The Property currently includes a residential apartment building (Site Building) with a brick façade, consisting of 6 storeys with one level of basement and a building envelope approximately 850 m^2 in area. A boiler room is located in the northeastern portion of the basement. Adjoining the Site Building to the southwest is ground level parking extending into a one-level underground garage with an approximate footprint of 1,700 m^2. A Site Plan depicting the orientation of the Site Building and parking area on-Site 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 BLK C PL 729 TORONTO AS IN VS108942; S/T TT184226 MISSISSAUGA	Ontario Land Registry
Property Identification Number (PIN)	13328-0037	Client Interview
Current Site Occupants	Residential Apartments	Site Reconnaissance
Site Area	0.59 hectares (1.46 acres)	Google Earth

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
1470 Williamsport Holdings Inc.	181 Eglinton Avenue East, Suite 204 Toronto, Ontario, M4P 1J4	Jack Greenberg 1470 Williamsport Holdings Inc. Phone: 416-485-8833 Email: jackgreenberg@greenberglawyers.ca

1.3 Current and Proposed Future Use

The Phase Two Property is currently occupied by a rectangular shaped six–storey residential apartment building, an adjoining ground level parking lot with one-level underground garage. The land use at the Site is residential, as defined in O.Reg. 153/04 (as amended). It is DS' understanding that the Client intends to redevelop the Site into two (2) mid- to high-rise residential buildings, with a shared podium and underground parking.

1.4 Applicable Site Condition Standards

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 coarse-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:

- The City of Mississauga obtains its potable water from Lake Ontario, and does not rely on groundwater as a potable water source. However, permission for the application of non-

potable groundwater standards has not been sought nor granted from the City of Mississauga;

- The Site is not considered to be environmentally sensitive, as defined under O.Reg. 153/04 (as amended);
- The proposed future use of the Phase Two Property will be residential;
- The Site is not located within 30 m of a water body;
- 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 metres 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, standing water was not observed on the Property. The nearest body of water to the Phase Two Property is Little Etobicoke Creek, located approximately 800 m to the south and southwest. Environmentally Significant Areas are natural areas that have been identified as significant and worthy of protection on three criteria – ecology, hydrology and geology. Municipalities have developed policies to protect natural heritage features. The Region uses Environmentally Significant Areas to protect natural areas like wetlands, fish habitat, woodlands, habitat of rare species, groundwater recharge and discharge areas, and Areas of Natural and Scientific Interest.

The Property includes no Areas of Natural Significance.

2.1.2 Topography and Surface Water Draining Features

The topography of the Phase Two Property is generally flat with a slight slope to the south. The surface elevation ranges from 138 to 141 metres above sea level (masl). The topography within the surrounding area generally slopes to the southwest, towards Little Etobicoke Creek, located approximately 800 m southwest of the Phase Two Property. Based on a review of the MECP well records, the depth to groundwater in the vicinity of the Phase Two Property is between 2.9 and 4.4 metres below ground surface (mbgs). The Terraprobe (2022) Hydrogeological Investigation quantified groundwater levels on the Site at depths of between 9.4 to 10.7 mbgs, and interpreted the groundwater flow direction as southeast in February 2022.

The Site is situated within a Till Plains physiographic region. The surficial geology within the surrounding area is described as “ice-contact stratified deposits” consisting of sand and

gravel, minor silt, clay and till, and the bedrock is described as "shale, limestone, dolostone, siltstone, Georgian Bay Formation; Blue Mountain Formation; Billings Formation; Collingwood Member; Eastview Member". Based on a review of the MECP well records, the bedrock in this area is anticipated to be encountered at an approximate depth of 18.3 mbgs.

2.2 Past Investigations

2.2.1 Previous Report Summary

DS reviewed the following environmental reports prepared for the Property. The reports were provided by the client to DS.

- *"Phase One Environmental Site Assessment, 1470 Williamsport Drive, Mississauga, Ontario",* prepared for c/o Law Offices of Jack Greenberg, prepared by McIntosh Perry Consulting Engineers Ltd., dated May 17, 2022 (McIntosh Perry 2022 Phase One ESA);
- *"Geotechnical Investigation Residential Development, 1470 Williamsport Drive, Mississauga, Ontario",* prepared for Compten Management Inc, prepared by Terraprobe Inc. dated March 11, 2022 (Terraprobe 2022 Geotechnical Investigation), and;
- *"Hydrogeological Assessment, 1470 Williamsport Drive, Mississauga, Ontario",* prepared for 1470 Williamsport Holdings Inc, prepared by Terraprobe Inc. dated May 17, 2022 (Terraprobe 2022 Hydrogeological Assessment).

These reports were reviewed to assess the presence of known or suspected PCAs and APECs, and to determine if there are known soil and/or groundwater impacts on the Phase Two Property or on Properties within the surrounding area.

Based on the information reviewed by DS, the location of the Phase One Property, and the proposed future land use (residential) the most applicable Site Condition Standards as defined by the Ministry of the Environment, Conservation, and Parks (MECP) in the document "*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*", dated April 15, 2011 are considered to be:

- Table 2 SCS: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Residential/Parkland/Institutional Use with coarse-textured soils.

<u>McIntosh Perry 2022 Phase One ESA</u>

The McIntosh Perry 2022 Phase One ESA report was conducted in general accordance with Ontario Regulation 153/04, dated April 15, 2011 (as amended), and included a review of readily available historical records and reasonably ascertainable regulatory information, a

Site Reconnaissance, interviews, evaluation of information, and reporting. The following pertinent information was noted by DS:

- The Phase One Property is currently used for residential purposes as an apartment building with an underground parking lot.
- The Site was first developed with the current site building in 1968, and was used for agricultural purposes prior to 1966.
- The PCAs identified contributing to APECs include:
    - A decommissioned incinerator was located in the basement of the building on the Phase One Property;
    - A transformer was identified on the northwest limit of the Site; and
    - Construction debris was found in the fill material during the 2022 geotechnical investigation.

Based on the findings of the Phase One ESA, McIntosh Perry recommended a Phase Two ESA be completed.

Terraprobe 2022 Geotechnical Investigation

The Terraprobe 2022 Geotechnical Investigation was conducted to investigate subsurface conditions and provide geotechnical design recommendations for the development plans at the Site. A total of 4 boreholes were advanced by Terraprobe on the Site, ranging from 4.6 to 12.3 mbgs.

The topsoil thickness ranged from 75 to 200 mm. The asphalt pavement structure consisted of 90 mm thick asphaltic concrete underlain by 100 mm thick granular base course was encountered in one borehole. Fill materials were encountered within all boreholes. The fill material consisted of sandy silt to silty sand, with trace amounts of clay, gravel and organics, extending to a depth of 2.3-2.5 mbgs. No deleterious materials were noted. Sand deposit with trace amounts of silt, clay and gravel were encountered beneath the earth fill zone in each borehole and extended to 12.2 mbgs. The till-shale complex/weathered shale (inferred Bedrock of Georgian Bay Formation) was identified in each borehole at 12.2 mbgs.

Terraprobe 2022 Hydrogeological Assessment

The Terraprobe 2022 Hydrogeological Assessment report was conducted based on the most updated design drawing for future development at the time. The following pertinent information was noted by DS:

- Two (2) local stratigraphic units were identified underneath the Site, impacting short-term construction efforts and long-term drainage flow rates. The units of the subsoil profile beneath the Site were fill and sand.
- The estimated hydraulic conductivity of $1.0x10^{-6}$ and $6.45\ x10^{-6}$ m/sec, were established for the fill and clayey silt till units within which construction and excavation should take place.
- Groundwater levels on the Site were measured at depths of between 9.4 to 10.7 mbgs.
- Utilizing groundwater elevations measured in monitoring wells on February 3, 2022, the groundwater flow direction was calculated as southeast towards the Little Etobicoke Creek.

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 (BH24-1 to BH24-4, MW24-5) on the Phase Two Property, to depths ranging between 2.1 to 9.7 mbgs. One (1) of the boreholes was instrumented with a groundwater monitoring wells upon completion (MW24-5). 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 a 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 well installed as well as historic 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 the newly installed monitoring well 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.
Sediment	Excluded	Sediment is not present on the Phase Two Property and was not identified as a media of concern by the Phase One ESA.
Surface Water	Excluded	Surface water is not present on the Phase Two Property, and was not identified as a media of concern by the Phase One ESA.

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 were advanced on the Phase Two Property, to a maximum depth of 9.7 mbgs. Soil samples were collected and submitted for analysis of COPCs and general soil characterization, as follows: - BH24-1: Metals, As, Sb, Se, SAR, pH, EC, Hg, B-HWS, CN-, Cr (VI), PHCs, VOCs, BTEX, OC Pesticides - BH24-2 and BH24-3: Metals, As, Sb, Se, SAR, pH, EC, Hg, B-HWS, CN-, Cr (VI), PHCs, VOCs, BTEX; - BH24-4: PCBs and pH - MW24-5: Metals, As, Sb, Se, SAR, pH, EC, Hg, B-HWS, CN-, Cr (VI), PHCs, VOCs, BTEX, Dioxins and Furans
Groundwater	A total of four (4) monitoring wells were present on the Phase Two Property at the time of the investigation. Representative groundwater samples were collected from MW24-5 and submitted for analysis of PAHs, Dioxins and Furans. The remaining monitoring wells were utilized for groundwater level monitoring only.

3.3 Phase One Conceptual Site Model

A Conceptual Site Model was developed for the Phase One Property, located at 1470 Williamsport Drive, Mississauga, Ontario. The Phase One Conceptual Site Model is presented in Figures 2 to 5 and visually depict the following:

- Any existing buildings and structures
- Water bodies located in whole, or in part, on the Phase One Study Area
- Areas of natural significance located in whole, or in part, on the Phase One Study Area
- Water wells at the Phase One Property or within the Phase One Study Area
- Roads, including names, within the Phase One Study Area
- Uses of properties adjacent to the Phase One Property
- Areas where any PCAs have occurred, including location of any tanks
- Areas of Potential Environmental Concern

3.3.1 Potentially Contaminating Activity Affecting the Phase One Property

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	APEC
PCA-1	#58- Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	A decommissioned incinerator, previously purposed for waste management, is in the basement of the Phase One Property.	Yes – APEC-1
PCA-8	#30 - Importation of Fill Material of Unknown Quality	Fill material of unknown quality is inferred to have been used for grading purposes at the time of development.	Yes – APEC-2
PCA-9	#N/S - Inferred application of de-icing agents	De-icing agents may have been utilized for road safety purposes on the Phase One Property's parking lot.	Yes – APEC-3
PCA-12	#40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications	A historical orchard was located on the west portion of the Site according to the 1946 aerial image.	Yes – APEC-4

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

3.3.2 Contaminants of Potential Concern

The following contaminants of potential concern were identified for the Phase One Property:

- Soil - PHCs, VOCs, BTEX, Metals, As, Sb, Se, B-HWS, CN-, electrical conductivity, Cr (VI), Hg, low or high pH, SAR, PAHs, Dioxins and Furans, and OC Pesticides.
- Groundwater - PAHs, Na, Cl, Dioxins and Furans.

3.3.3 Underground Utilities and Contaminant Distribution and Transport

Underground utilities can affect contaminant distribution and transport. Trenches excavated to install utility services, and the associated granular backfill may provide preferential pathways for horizontal contaminant migration in the shallow subsurface.

Plans were not available to confirm the depths of these utilities, however they are estimated to be installed at depths ranging from 2 to 3 metres below ground surface. Groundwater is reportedly present on the Site from 2.9 to 9.6 mbgs. As such utility corridors may act as preferential pathways for contaminant distribution and transport, in the event that shallow subsurface contaminants exist at the Phase One Property.

3.3.4 Geological and Hydrogeological Information

The topography of the Phase One Property is generally flat with a slight slope to the south. The surface elevation ranges from 138 to 141 metres above sea level (masl). The topography within the Phase One Study Area generally slopes to the southwest, towards Little Etobicoke Creek, located approximately 800 m southwest of the Phase One Property. Based on a review of the MECP well records, the depth to groundwater in the vicinity of the Phase One Property is between 2.9 and 4.4 m. The Terraprobe (2022) Hydrogeological Investigation quantified groundwater levels on the Site at depths of between 9.4 to 10.7 mbgs, and interpreted the groundwater flow direction as southeast in January 2022.

The Site is situated within a Till Plains physiographic region. The surficial geology within the Phase One Study area is described as “ice-contact stratified deposits” consisting of sand and gravel, minor silt, clay and till, and the bedrock is described as “shale, limestone, dolostone, siltstone, Georgian Bay Formation; Blue Mountain Formation; Billings Formation; Collingwood Member; Eastview Member”. Based on a review of the MECP well records, the bedrock in the Phase One Study Area is anticipated to be encountered at an approximate depth range of 18.3 mbgs.

3.3.5 Uncertainty and Absence of Information

DS has relied upon information obtained from federal, provincial, municipal, and private databases, in addition to records and summaries provided by ERIS. All information obtained was reviewed and assessed for consistency, however the conclusions drawn by DS are subject to the nature and accuracy of the records reviewed.

All reasonable inquiries were made to obtain reasonably accessible information, as mandated by O.Reg.153/04 (as amended). All responses to database requests were received prior to completion of this report. This report reflects the best judgement of DS based on the information available at the time of the investigation.

Information used in this report was evaluated based on proximity to the Phase One Property, anticipated direction of local groundwater flow, and the potential environmental impact on the Phase One Property as a result of potentially contaminating activities.

The QP has determined that the uncertainty does not affect the validity of the Phase One ESA Conceptual Site Model or the conclusions of this report.

3.4 Deviations from Sampling and Analysis Plan

The Phase Two ESA was completed in accordance with the 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 to identify the borehole locations based on the APECs identified in the Phase One ESA. The selected borehole 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	Groundworks Drilling Inc.
Drilling Dates	August 9, 2024
Drilling Equipment Used	Track-mounted 6M2
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 ◆ Soil samples were extracted from the interior of the sampler rather than from areas in contact with the sampler sidewalls; ◆ 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 stainless split spoon samplers. Discrete soil samples were collected from the split-spoon 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 B. 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: ± 10% display reading + one digit Hydrocarbons: ± 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 +/- 10%.

A summary of the soil headspace measurements are provided in the borehole logs, provided under Appendix B.

4.5 Groundwater Monitoring Well Installation

A monitoring well was installed upon completion of one (1) of the 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 3.0 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 well was completed with protective flush mount casing.

Details regarding the monitoring well construction can be found in Table 1 (Enclosed), and on the borehole logs provided in Appendix B.

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.

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 Maxim Environmental and Safety in accordance with the manufacturer's specifications.

The measurements were conducted at regular intervals 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 wells were purged using a Geotech™ submersible bladder pump equipped with dedicated polyethylene tubing. A YSI Water Quality Meter equipped with a flow-through cell was used to monitor the geochemical conditions during purging to assess whether steady-state conditions were achieved prior to sampling.

Samples were collected upon stabilization of the water quality parameters. 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

No sediment as defined under O.Reg. 153/04 (as amended) was present on the Phase Two Property at the time of this investigation, and the Phase One ESA did not identify sediment as a media of concern. Sediment sampling was not conducted as a result.

4.9 Analytical Testing

The soil and groundwater samples collected were submitted to Bureau Veritas under chain of custody protocols. Bureau Veritas is an independent laboratory accredited by the Canadian Association for Laboratory Accreditation. Bureau Veritas 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 for disposal by a MECP approved waste-hauler for disposal at a MECP-approved waste management facility.

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 B.

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 Dioxins/Furans OC Pesticides	120 mL or 250 mL unpreserved glass jar with Teflon™-lined lid.
Groundwater	PAHs	250 mL amber glass bottle (unpreserved)
	Dioxins/Furans	Two (2) 1L unpreserved amber glass bottle

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.

All field screening devices (i.e. RKI Eagle 2 MultiGas Detector, 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 B. 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.

A surficial layer of topsoil approximately 100 to 150 mm in thickness was encountered in all the boreholes advanced. Fill material consisting of silty sand was encountered below the topsoil. The fill material was generally heterogeneous and ranged in thickness from 1.5 to 2.44 metres. No deleterious materials, staining or odours were observed. The native material encountered below the fill consisted of sand to silty sand for approximately 0.7 m, below this silty sand till was present for approximately 2.3 m, below which sandy silt was present to approximately 7.6 mbgs followed by silty sand till. The silty sand till unit extended to the full depth of the boreholes until maximum termination depth at 9.7 mbgs. Bedrock was not encountered.

Table 5-1: Summary of Geologic Units Investigated

Geologic Unit	Inferred Thickness (m)	Top Elevation (masl)	Bottom Elevation (masl)	Properties
Fill Material	1.4-2.6	139	136.9	
Sand to Silty Sand	1.4-2.2	137.8	135.6	
Silty Clay Till to Silty Sand Till	0.8	136.2	135.4	Water table encountered
Sandy Silt	3.8	135.4	131.6	

5.2 Ground Water Elevations and Flow Direction

5.2.1 Rationale for Monitoring Well Location and Well Screen Intervals

A single monitoring well (MW24-5) was installed on the Phase Two Property in order to assess the groundwater quality in relation to APEC-1. The COPCs associated with this APEC was PAHs, furans and dioxins. Three (3) monitoring wells previously installed by others were present on the Phase One Property (BH1, BH2 and BH3S).

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 sandy silt to silty clay till to silty sand unit encountered at an approximate depth of 3.8 to 9.7 mbgs. This unit is inferred to be a confined aquifer.

5.2.2 Results of Interface Probe Measurements

A summary of the groundwater level measurements is provided in Table 1 (Enclosed). The groundwater level measurements were collected using a (Solinst) interface probe. The depth to groundwater was found to be 8.11 to 11.45 mbgs on August 14, 2024. 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 be between 129.06 and 131.05 mbgs in the aquifer investigated.

5.2.5 Groundwater Flow Direction

The pre-existing monitoring well BH3S was found to be dry at the time of this assessment. BH3D could not be located. The remaining monitoring wells for which a water level was obtained were located positionally along the same axis, as such a determination of groundwater flow direction utilizing data collected by DS in 2024 was not possible. The groundwater flow direction was interpreted using the groundwater elevations calculated for the monitoring wells installed on the Phase Two Property based upon the January 13, 2022 water monitoring completed by Terraprobe (2022). Based on the groundwater elevations calculated, the groundwater flow direction is interpreted to be southeast. The groundwater elevation contours and flow direction are presented on Figure 6.

5.2.6 Assessment of Potential for Temporal Variability in Groundwater Flow Direction

The aquifer investigated is inferred to be a confined aquifer, based on the soil stratigraphy observed, and based on the groundwater levels measured on August 14, 2024. This confined aquifer is considered to be less susceptible to seasonal fluctuations in groundwater levels. It is possible that long-term changes in precipitation patterns to influence the groundwater levels on the Phase Two Property.

Several high-rise developments were observed in the immediate vicinity of the Phase Two Property at the time of the investigation, including the existing six-storey residential building on-Site. It is possible that local de-watering activities may be influencing the groundwater levels on the Phase Two Property.

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 groundwater table was encountered at depths ranging from 8.11 to 11.45 mbgs on the Phase Two Property. Buried utility services are present on the Phase Two Property, and are inferred to be situated at depths ranging between 2 and 3 mbgs. No groundwater impacts were identified, therefore the potential for preferential migration of contaminants is not of concern at this time.

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 August 14, 2024.

Table 5-2: Summary of Horizontal Hydraulic Gradient Calculations

Hydrogeological Unit	Calculated Horizontal Hydraulic Gradient
Overburden – (silty sand till)	Minimum: 0.015549613 Average: 0.020603379 Maximum: 0.036600463

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

Not Applicable – more than one-third of the soils encountered on the Phase Two Property are considered to be coarse textured. For the purposes of evaluating the SCS, all soils on the Phase Two Property are considered coarse textured.

5.5 Soil Field Screening

Soil vapour headspace readings were collected at the time of sample collection, the results of which are presented on the borehole logs (Appendix B). The soil vapour headspace readings were collected using a PID and CGD in methane elimination mode. The PID readings ranged between non-detect (0 ppm) and 35 ppm. The CGD readings ranged between non-detect (0 ppm) and 1 ppm.

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

5.6 Soil Quality

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

5.6.1 Metals and Other Regulated Parameters

A total of seven (7) samples, including two (2) field duplicates for QA/QC purposes were submitted for analysis of metals and Other Regulated Parameters (metals, As, Sb, Se and

ORPs (SAR, pH, EC, Hg, B-HWS, CN-, Cr (VI)). Five (5) soil samples were submitted for analysis of pH only. The results of the analyses are tabulated in Table 5 (Enclosed), and presented on Figures 7A and 7B. The results of the analyses indicated the following exceedances of the Table 2 SCS:

Table 5-3: Summary of Metals and ORPs Exceedances in Soil

Sample ID	Sample Depth (mbgs)	Parameter	Units	Table 2 SCS	Reported Value
BH24-1 SS2	0-0.6	EC	mS/cm	0.7	7.9*

Note:
#* - Per Section 49.1 (1) of O.Reg. 153/04 the analytical results associated with the indicated samples are deemed not to exceed the applicable Site Condition Standards, due to the seasonal application of de-icing agents on the Site.

5.6.2 Petroleum Hydrocarbons

A total of six (6) samples, including one (1) field duplicate for QA/QC purposes were submitted for analysis of PHCs (incl. BTEX). The results of the analyses are tabulated in Table 6 (Enclosed), and presented on Figure 7C. The results of the analyses indicated that all samples analyzed met the MECP Table 2 SCS.

5.6.3 Volatile Organic Compounds

A total of four (4) samples were submitted for analysis of VOCs. The results of the analyses are tabulated in Table 7 (Enclosed), and presented on Figure 7D. The results of the analyses indicated that all samples analyzed met the MECP Table 2 SCS.

5.6.4 Polycyclic Aromatic Hydrocarbons

A total of six (6) 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 (Enclosed), and presented on Figure 7E. The results of the analyses indicated that all samples analyzed met the MECP Table 2 SCS.

5.6.1 Organochlorine Pesticides and Polychlorinated Biphenyls

A total of two (2) samples, including one (1) field duplicate for QA/QC purposes were submitted for analysis of PCBs. The results of the analyses are tabulated in Table 9 (Enclosed), and presented on Figure 7F. The results of the analyses indicated that all samples analyzed met the MECP Table 2 SCS.

A total of three (3) samples, including one (1) field duplicates for QA/QC purposes were submitted for analysis of PCBs. The results of the analyses are tabulated in Table 9 (Enclosed), and presented on Figures 7F and 7G. The results of the analyses indicated no exceedances.

5.6.2 Dioxins and Furans

A total of two (2) samples, including one (1) field duplicate for QA/QC purposes were submitted for analysis of Dioxins and Furans. The results of the analyses are tabulated in Table 10, and presented on Figure 7H. The results of the analyses indicated that the samples analyzed met the MECP Table 2 SCS.

5.6.3 Commentary on Soil Quality

Electrical conductivity impacts in soil were present in BH24-1 SS2, located adjacent to the on-Site parking lot. Per Section 49.1 (1) of O.Reg. 153/04, "*If an applicable site condition standard is exceeded at a property solely because of one of the following reasons, the applicable site condition standard is deemed not to be exceeded for the purpose of Part XV.1 of the Act": "…that a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both*". Based on this provision, the Site condition standards for EC are deemed not to be exceeded. It should be noted that soil disposal premiums may still be incurred for the off-Site disposal of the salt-impacted material.

5.7 Ground Water Quality

The results of the chemical analyses conducted are presented in Tables 11 and 12 (Enclosed). A visual summary of the location of the sample locations is provided in Figures 8A and 8B. The laboratory certificates of analysis have been provided under Appendix C.

5.7.1 Dioxins and Furans

A total of two (2) samples, including one (1) field duplicate for QA/QC purposes, were submitted for analysis of Dioxins and Furans. The results of the analyses are tabulated in Table 11 (Enclosed), and presented on Figure 8A. The results of the analyses indicated that all samples analyzed met the MECP Table 2 SCS.

5.7.2 Polycyclic Aromatic Hydrocarbons

A total of two (2) 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 12 (Enclosed), and presented on Figure 8B. The results of the analyses indicated that all samples analyzed met the MECP Table 2 SCS.

5.7.3 Commentary on Groundwater Quality

No evidence of chemical or biological transformations of the parameters analyzed was observed.

No evidence of NAPL was observed in the samples recovered during the field investigation.

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. 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 is provided in the table below.

Table 5-4: Summary of QA/QC Results

Sample ID	QA/QC duplicate	Medium	Parameter Analyzed	QA/QC Result
BH24-1 SS1	DUP1	Soil	Metals and ORPs	All results were within the analytical protocol criteria for RPD
MW24-5 SS1	DUP4	Soil	Metals and ORPs	All results were within the analytical protocol criteria for RPD
BH24-3 SS4	DUP3	Soil	PHCs	All results were within the analytical protocol criteria for RPD
BH24-1 SS2	DUP2	Soil	PAHs	All results were within the analytical protocol criteria for RPD
BH24-4 SS1	DUP5	Soil	OCPs and PCBs	All results were within the analytical protocol criteria for RPD
MW24-5 SS4	DUP6	Soil	Dioxins and Furans	All results were within the analytical protocol criteria for RPD
BH24-1 SS1	DUP7	Soil	OCPs	All results were within the analytical protocol criteria for RPD
MW24-5	DUP1	Groundwater	Dioxins and Furans	All results were within the analytical protocol criteria for RPD

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

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 C.

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.

6.0 Conclusions

This Phase Two ESA involved that advancement of five (5) boreholes, the installation of one (1) monitoring well on the Phase Two Property, and the collection of soil and groundwater samples for analysis of the potential contaminants of concern, including:

- Soil - PHCs, VOCs, BTEX, Metals, As, Sb, Se, B-HWS, CN-, electrical conductivity, Cr (VI), Hg, low or high pH, SAR, PAHs, Dioxins and Furans, and OC Pesticides.
- Groundwater - PAHs, Na, Cl, Dioxins and Furans.

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

- A surficial layer of topsoil approximately 100 to 150 mm in thickness was encountered in all the boreholes advanced. Fill material consisting of silty sand was encountered below the topsoil. The fill material was generally heterogeneous and ranged in thickness from 1.5 to 2.44 metres. No deleterious materials, staining or odours were observed. The native material encountered below the fill consisted of sand to silty sand for approximately 0.7 m, below this silty sand till was present for approximately 2.3 m, below which sandy silt was present to approximately 7.6 mbgs

followed by silty sand till. The silty sand till unit extended to the full depth of the boreholes until maximum termination depth at 9.7 mbgs. Bedrock was not encountered.

- Per the Terraprobe (2022) Hydrogeological Investigation completed at the Site, groundwater flow direction was considered to be southeast. The groundwater levels may 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 seasonal monitoring.
- The groundwater levels may be impacted by other factors such as potential local dewatering activities, 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 soil chemical analyses identified elevated levels of EC associated with BH24-1 SS2 between 0.8 and 1.4 mbgs. BH24-1 is located near the road (Williamsport Drive) and on-Site surface parking area. The elevated levels of EC are inferred to be linked to the application of de-icing agents during winter. Per Section 49.1 (1) of O.Reg. 407/19, published December 4, 2019 "If an applicable site condition standard is exceeded at a property solely because of one of the following reasons, the applicable site condition standard is deemed not to be exceeded for the purpose of Part XV.1 of the Act": "...that a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both". Based on this provision, the Site Condition Standards (SCS) for EC are deemed not to be exceeded.
- The results of the chemical analyses conducted on soil and groundwater samples indicate that the applicable Site Condition Standards have been met. No further environmental site assessment is recommended at this time.
- Based on the findings of this Phase Two ESA, a Record of Site Condition may be filed for the Phase Two Property (if required);
- Note: further chemical testing of the soils on the property may be required in the future to support the export of excess soils generated by the proposed redevelopment. DS recommends completing this work prior to tendering the construction earthworks.
- 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 August 14, 2024. No further sub-

surface investigation is required regarding the environmental quality of the soil and groundwater at the Phase Two Property.

6.1 Qualifications of the Assessors

Dina Al-Shalah, B.Eng., MDP, EIT

Ms. Al-Shalah is an environmental EIT with DS Consultants Ltd. Dina holds a Bachelor of Engineering Degree from McMaster University and a Master of Development Practices from the University of Waterloo. Dina has an extensive background in manufacturing and sustainability as well as experience in conducting Phase One and Phase Two Environmental Site Assessments, soil/groundwater sampling, excess soil projects, and drilling supervision.

Kirstin Olsen, M.Sc., C.E.T., LET, QP_{ESA}

Ms. Olsen is a Senior Project Manager in the Environmental Services Department at DS Consultants Limited. Kirstin has a Master of Science Degree in Environmental Science, Ecology and Conservation from the University of the Witwatersrand, and 9 years of professional experience. Kirstin has personally completed hundreds of detailed environmental assessments across a wide array of scientific disciplines including: Phase One & Two Environmental Site Assessments, Remedial Excavation & Injection Oversight, Hydrogeological Investigations, EASR Registration/PTTW Application, Aquatic Ecological Delineation, Assessment & Planning, Toxicological, Soil & Water Impact and Risk Assessment, as well as Environmental Construction Monitoring & Performance Auditing. Kirstin is a Certified Engineering Technologist and holds a Limited Engineering License issued by the Professional Engineers of Ontario. Kirstin is considered a Qualified Person to conduct Environmental Site Assessments as defined by Ontario Regulation 153/04 (as amended) and manage Excess Soil as defined by Ontario Regulation 406/19.

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

Mr. Fioravanti is the Vice President 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 a decade 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

DS Consultants Ltd. conducted this Phase One Environmental Site Assessment and confirms the findings and conclusions contained within this report.

Yours truly,

DS Consultants Ltd.

Prepared by:

Dina Al-Shalah

Environmental EIT, B.Eng.

Reviewed by:

Kirstin Olsen – M.Sc., C.E.T., LET, QP$_{ESA}$

Senior Project Manager

Patrick Fioravanti, B.Sc., P.Geo., QP$_{ESA}$

Vice President – Environmental

6.3 Limitations

This report was prepared for the sole use of 1470 Williamsport Holdings Inc. and is intended to provide an assessment of the environmental condition on the property located at 1470 Williamsport Drive, Mississauga, 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.

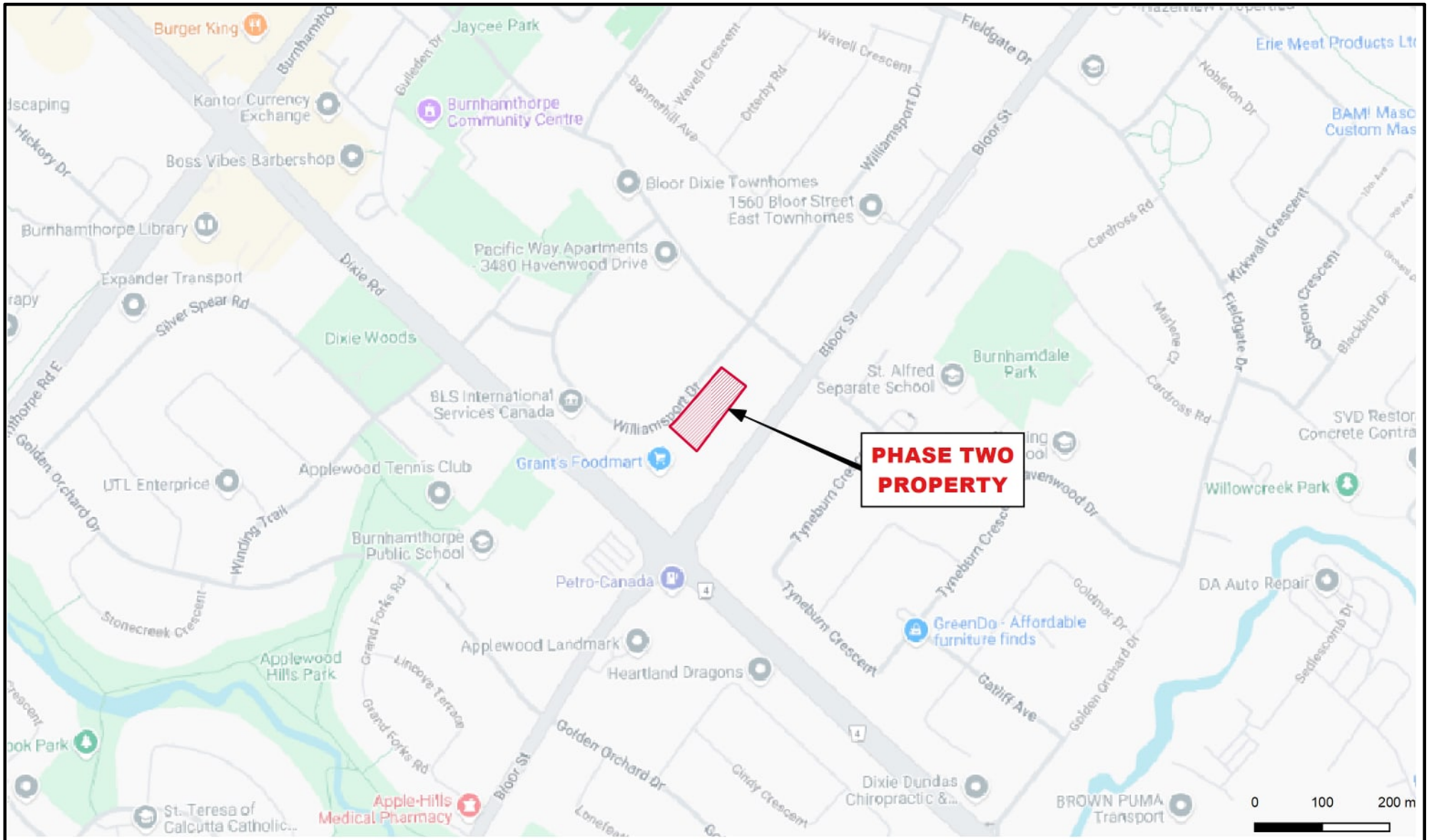
The conclusions drawn from the Phase Two ESA were based on information at selected observation and sampling locations. Conditions between and beyond these locations may become apparent during future investigations or on-Site work, which could not be detected or anticipated at the time of this investigation. 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

- Armstrong, D.K. and Dodge, J.E.P. *Paleozoic Geology Map of Southern Ontario*. Ontario Geological Survey, Miscellaneous Release--Data 219.
- Chapman, L.J. and Putnam, D.F. 2007. *The Physiography of Southern Ontario*. Ontario Geological Survey, Miscellaneous Release--Data 228.
- Freeze, R. Allen and Cherry, John A., 1979. *Ground water*. Page 29.
- Ontario Ministry of the Environment, December 1996. *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario.*
- Ontario Ministry of Environment, 15 April 2011. *Soil, Ground Water and Sediment Standards for use under part XV.1of the Environmental Protection Act.*
- Ontario Ministry of the Environment, June 2011. *Guide for Completing Phase Two Environmental Site Assessments under Ontario regulation 153/04.*
- Ontario Ministry of the Environment, July 2011. *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.*
- The Ontario Geological Survey. 2003. *Surficial Geology of Southern Ontario*.
- *"Phase One Environmental Site Assessment, 1470 Williamsport Drive, Mississauga, Ontario"*, prepared for c/o Law Offices of Jack Greenberg, prepared by McIntosh Perry Consulting Engineers Ltd., dated May 17, 2022 (McIntosh Perry 2022 Phase One ESA);
- *"Geotechnical Investigation Residential Development, 1470 Williamsport Drive, Mississauga, Ontario"*, prepared for Compten Management Inc, prepared by Terraprobe Inc. dated March 11, 2022 (Terraprobe 2022 Geotechnical Investigation), and;
- *"Hydrogeological Assessment, 1470 Williamsport Drive, Mississauga, Ontario"*, prepared for 1470 Williamsport Holdings Inc, prepared by Terraprobe Inc. dated May 17, 2022 (Terraprobe 2022 Hydrogeological Assessment).

Figures

C:\0Sharon\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 1 - Site Location Plan.qgs Oct-18 11:50



Legend

Property Boundary

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
1470 Williamsport Drive, Mississauga, ON

Title: **SITE LOCATION PLAN**

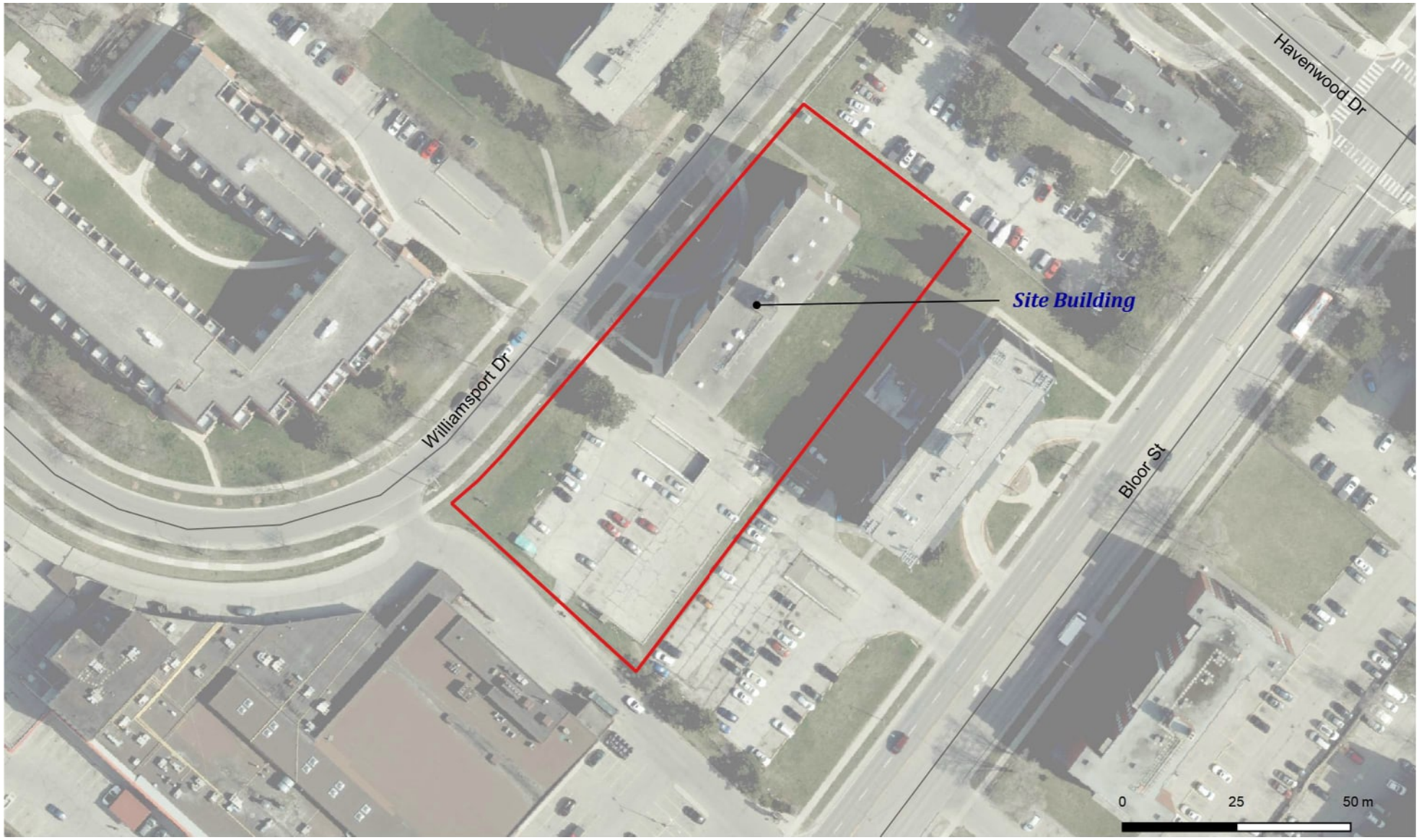
N

Client: 1470 WILLIAMSPORT HOLDINGS INC.

Size:	Approved By:	Drawn By:	Date:
8.5 x 11	K.O	S.Y	October 2024
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: 1

Image/Map Source: *Google Street Map*

J:\-GIS\2024 PROJECTS\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 2 – Phase Two Property Site Plan.qgs Jan-03 15:49



Legend

Property Boundary

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Telephone: (905) 264-9393
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Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1470 Williamsport Drive, Mississauga, ON

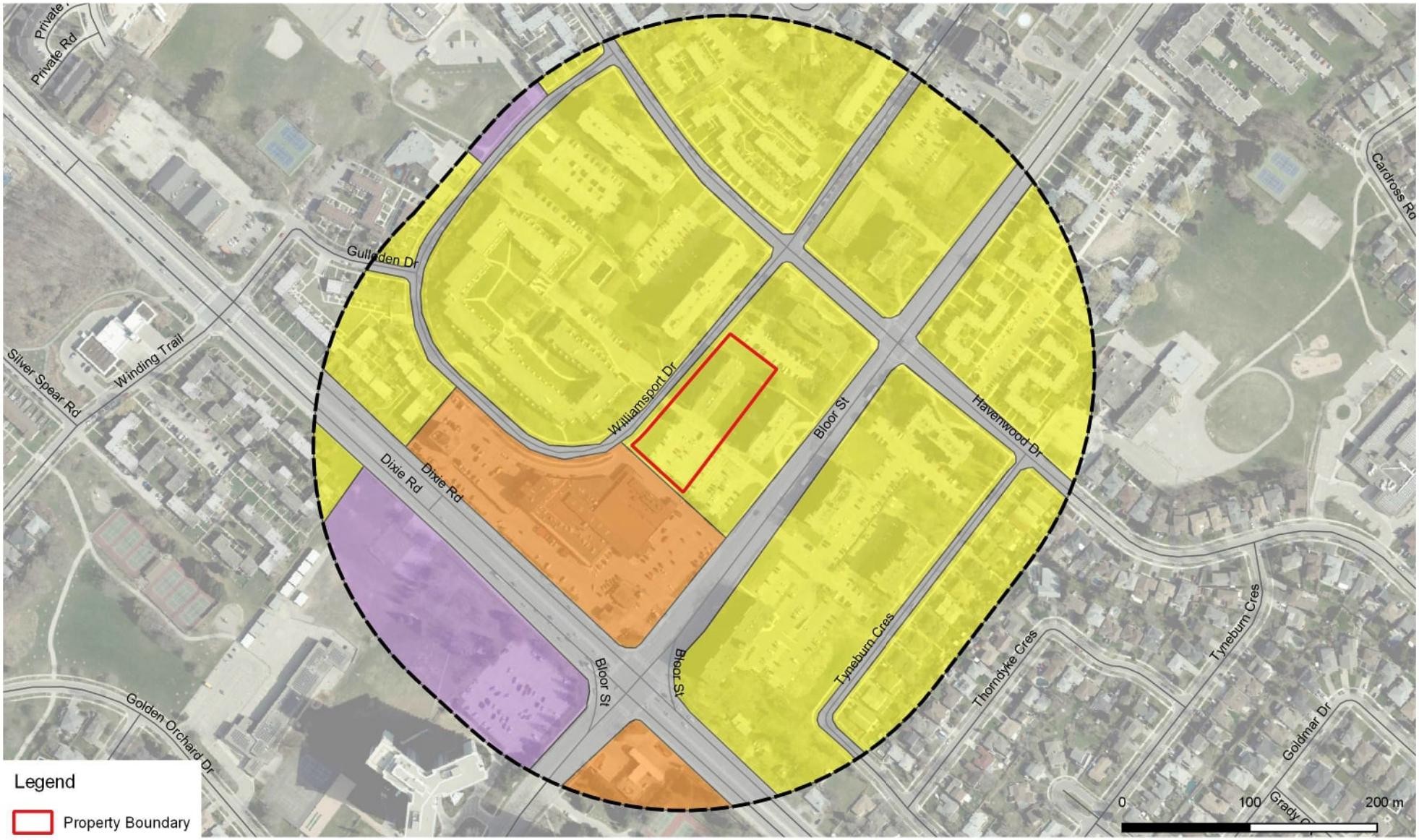
Title: **PHASE TWO PROPERTY SITE PLAN**

N

Client: 1470 WILLIAMSPORT HOLDINGS INC.

Size:	Approved By:	K.O	Drawn By:	S.Y	Date:	October 2024
8.5 x 11	Scale:	As Shown	Project No.:	24-300-100	Figure No.:	2
Rev: 0	Image/Map Source:	*Esri Satellite Image*				

J:\-GIS\2024 PROJECTS\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 3 - Phase One Study Area.qgs Jan-03 15:53



Legend

- Property Boundary
- 250m Buffer
- Residential
- Commercial
- Institutional
- Community

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1470 Williamsport Drive, Mississauga, ON

Title: **PHASE ONE STUDY AREA**

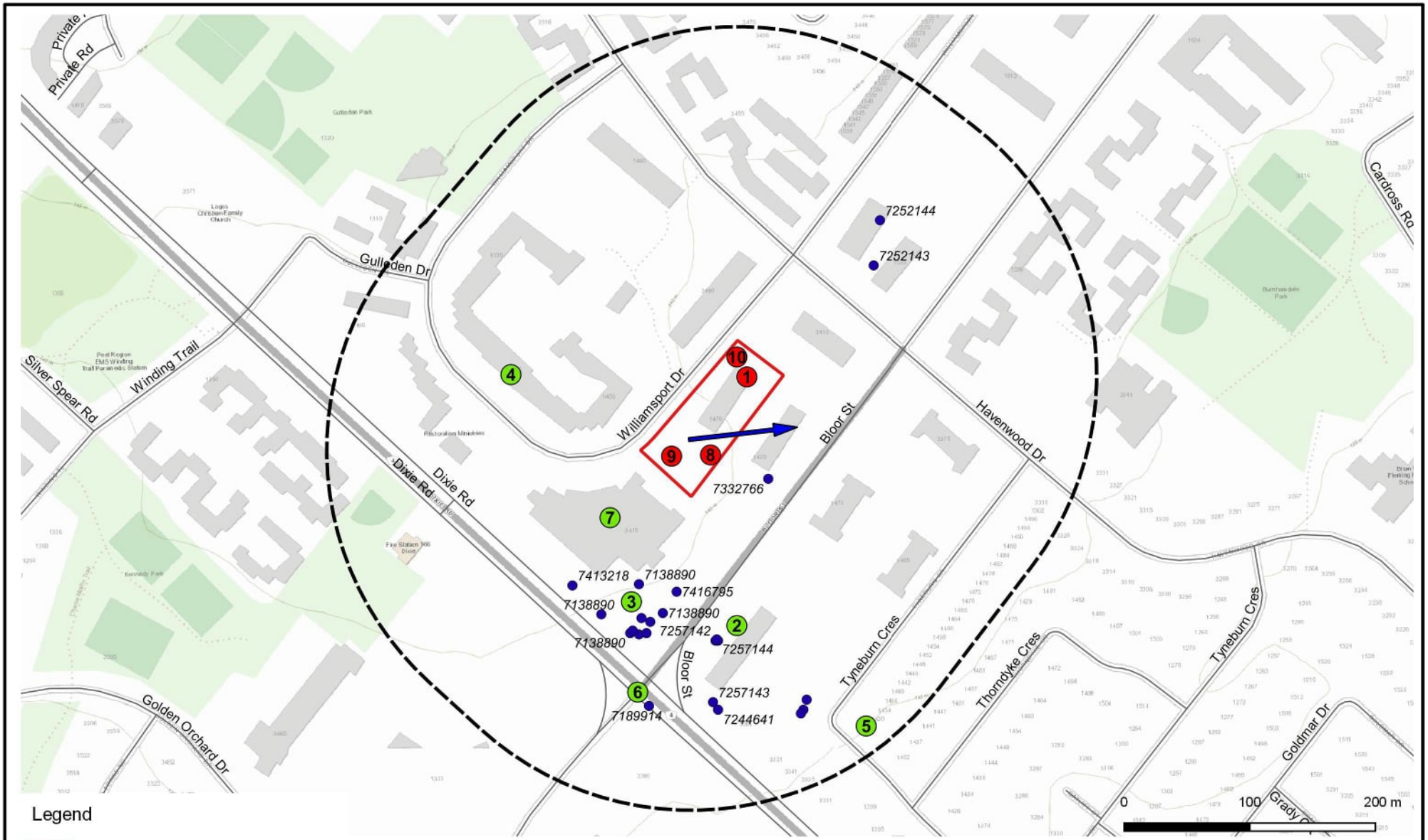
N

Client: 1470 WILLIAMSPORT HOLDINGS INC.

Size:	Approved By:	Drawn By:	Date:
8.5 x 11	K.O	S.Y	October 2024
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: 3

Image/Map Source: *Esri Satellite Image*

C:\0Sharon\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 4 - PCAs within Phase One Study Area.qgs Oct-18 12:00



Legend

- Property Boundary
- 250m Buffer
- Inferred Groundwater Flow Direction
- Registered Water Well (MECP WWR)
- PCA not contributing to APEC
- PCA contributing to APEC

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1470 Williamsport Drive, Mississauga, ON

Title: **PCAs WITHIN PHASE ONE STUDY AREA**

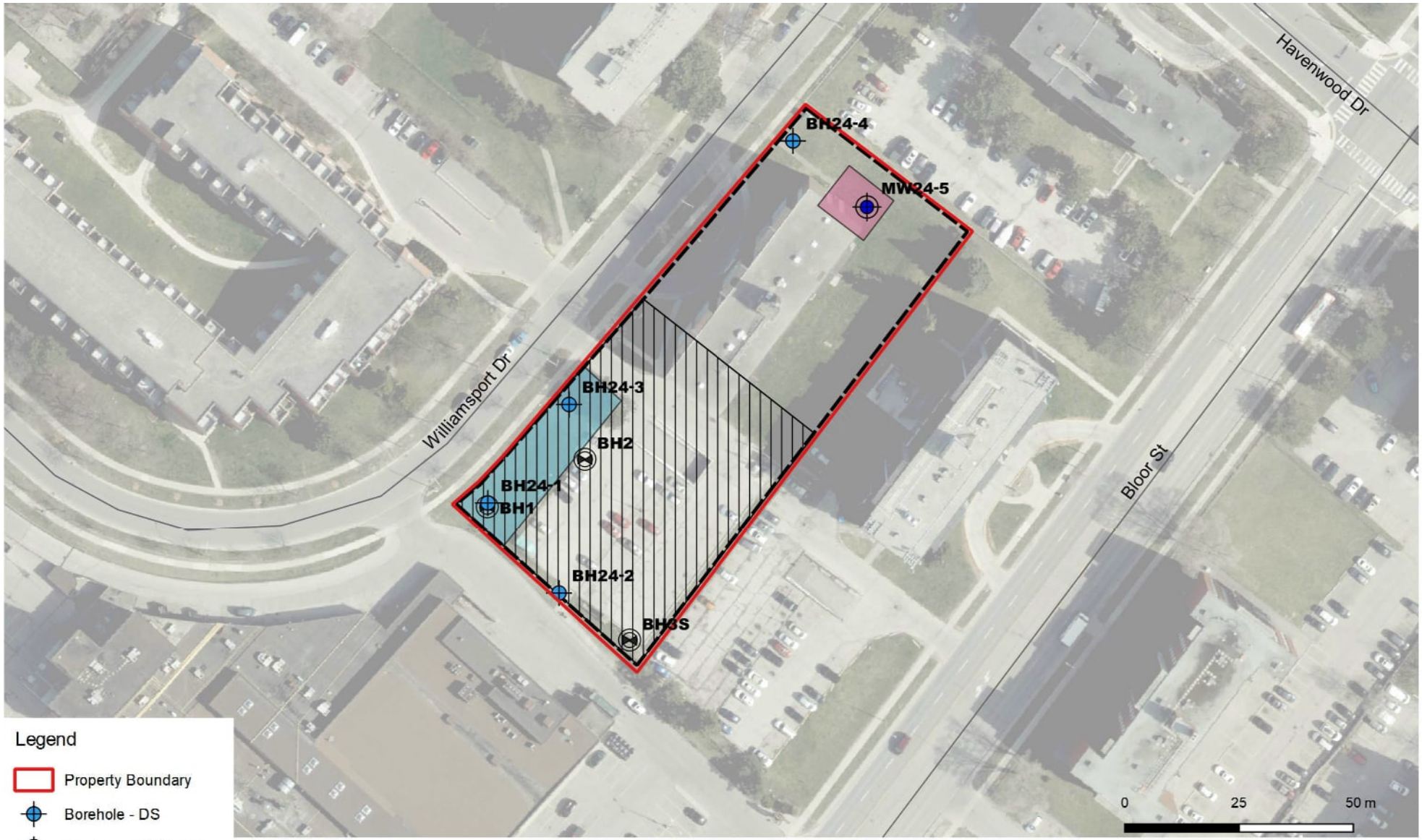
N

Client: 1470 WILLIAMSPORT HOLDINGS INC.

Size:	Approved By:	Drawn By:	Date:
8.5 x 11	K.O	S.Y	October 2024
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: 4

Image/Map Source: *Esri Satellite Image*

J:\-GIS\2024 PROJECTS\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 5 - APEC With Borehole Location.qgs Jan-07 10:02



Legend

- Property Boundary
- Borehole - DS
- Monitoring Well - DS
- Monitoring Well - Other
- APEC-1
- APEC-2
- APEC-3
- APEC-4

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1470 Williamsport Drive, Mississauga, ON

Title: **BOREHOLE LOCATION PLAN WITH APECs**

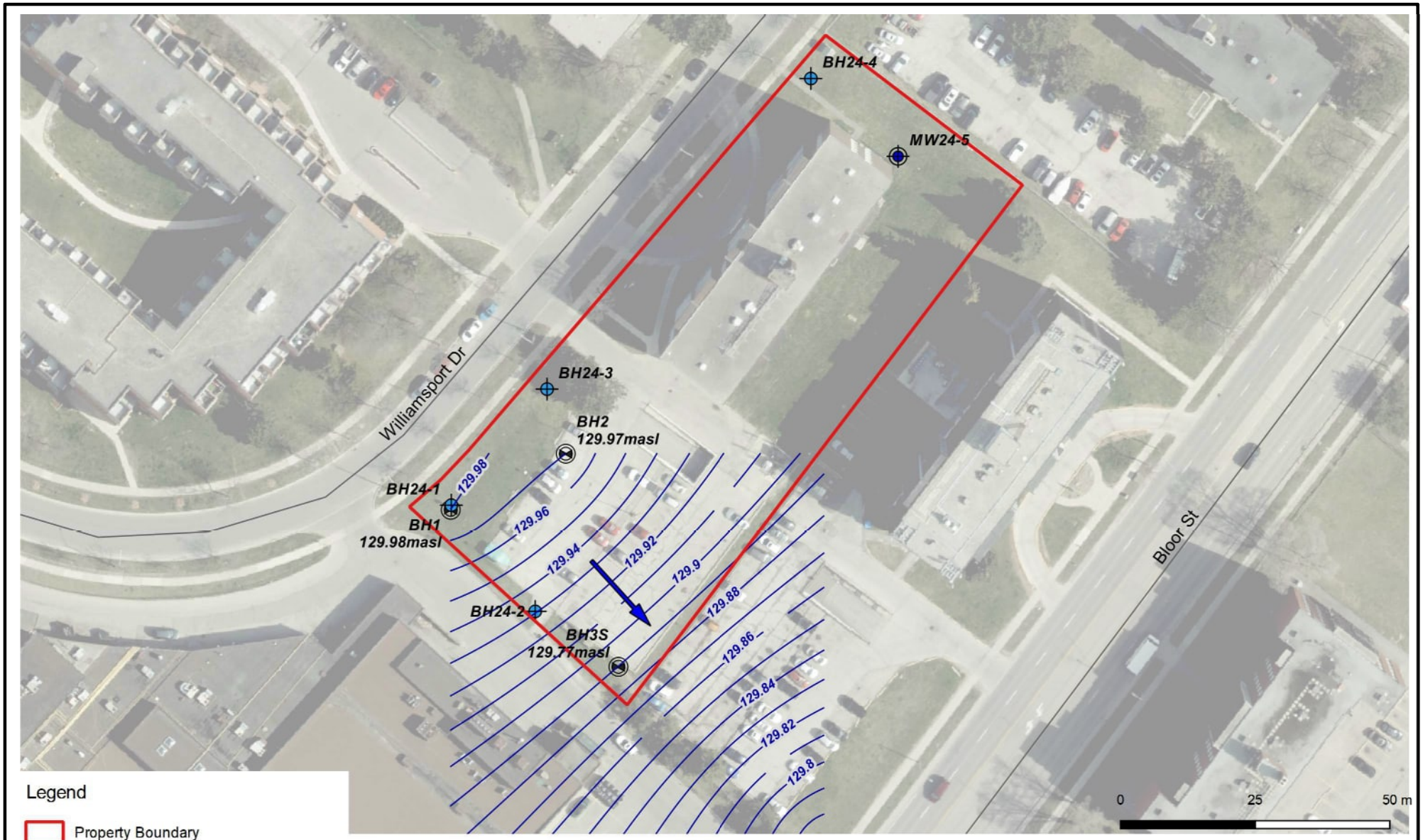
N

Client: 1470 WILLIAMSPORT HOLDINGS INC.

Size:	Approved By:	Drawn By:	Date:
8.5 x 11	K.O	S.Y	October 2024
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: 5

Image/Map Source: *Esri Satellite Image*

J:\-GIS\2024 PROJECTS\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 6 – Groundwater Elevation Contours and Flow Direction.qgs Jan-08 14:05



Legend

- Property Boundary
- Borehole - DS
- Monitoring Well - DS
- Monitoring Well - Other
- Groundwater Flow Direction
- Groundwater Elevation Contour based upon groundwater elevations taken by Terraprobe (January 13, 2022)

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1470 Williamsport Drive, Mississauga, ON

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

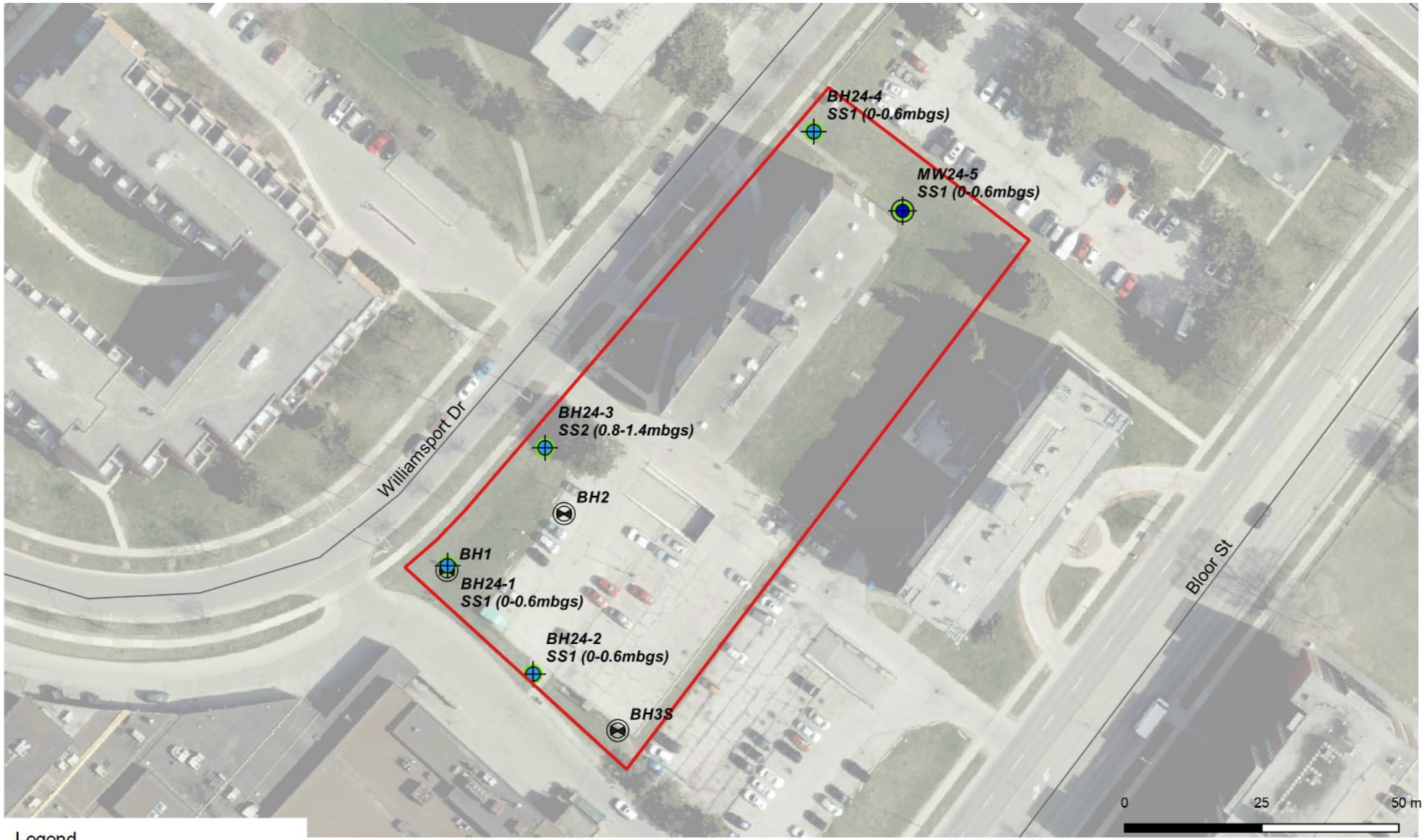
N

Client: 1470 WILLIAMSPORT HOLDINGS INC.

Size:	Approved By:	Drawn By:	Date:
8.5 x 11	K.O	S.Y	January 2025
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: 6

Image/Map Source: *Esri Satellite Image*

J:\-GIS\2024 PROJECTS\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 7A – Soil Characterization – Metals.qgs Jan-07 10:08



Legend

- Property Boundary
- Borehole - DS
- Monitoring Well - DS
- Monitoring Well - Other
- Sample Met Applicable Standards

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Client: 1470 WILLIAMSPORT HOLDINGS INC.

Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1470 Williamsport Drive, Mississauga, ON

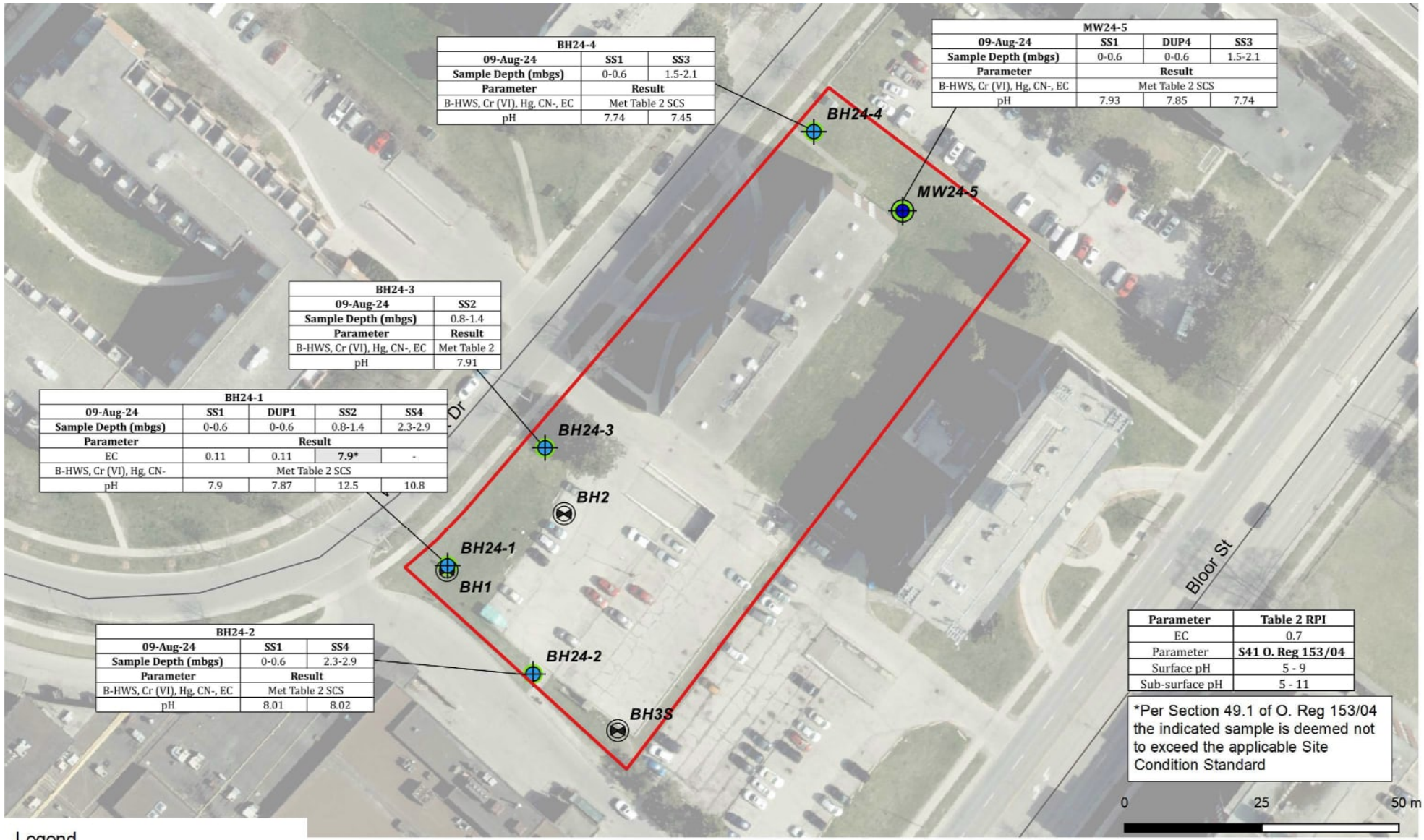
Title: **SOIL CHARACTERIZATION – METALS AND HYDRIDES FORMING METALS**

N

Size:	Approved By:	Drawn By:	Date:
8.5 x 11	K.O	S.Y	October 2024
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: **7A**

Image/Map Source: *Esri Satellite Image*

J:\-GIS\2024 PROJECTS\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 7B – Soil Characterization – ORPs.qgs Jan-07 10:20



BH24-4		
09-Aug-24	SS1	SS3
Sample Depth (mbgs)	0-0.6	1.5-2.1
Parameter	Result	
B-HWS, Cr (VI), Hg, CN-, EC	Met Table 2 SCS	
pH	7.74	7.45

MW24-5			
09-Aug-24	SS1	DUP4	SS3
Sample Depth (mbgs)	0-0.6	0-0.6	1.5-2.1
Parameter	Result		
B-HWS, Cr (VI), Hg, CN-, EC	Met Table 2 SCS		
pH	7.93	7.85	7.74

BH24-3	
09-Aug-24	SS2
Sample Depth (mbgs)	0.8-1.4
Parameter	Result
B-HWS, Cr (VI), Hg, CN-, EC	Met Table 2
pH	7.91

BH24-1				
09-Aug-24	SS1	DUP1	SS2	SS4
Sample Depth (mbgs)	0-0.6	0-0.6	0.8-1.4	2.3-2.9
Parameter	Result			
EC	0.11	0.11	**7.9***	-
B-HWS, Cr (VI), Hg, CN-	Met Table 2 SCS			
pH	7.9	7.87	12.5	10.8

BH24-2		
09-Aug-24	SS1	SS4
Sample Depth (mbgs)	0-0.6	2.3-2.9
Parameter	Result	
B-HWS, Cr (VI), Hg, CN-, EC	Met Table 2 SCS	
pH	8.01	8.02

Parameter	Table 2 RPI
EC	0.7
Parameter	**S41 O. Reg 153/04**
Surface pH	5 - 9
Sub-surface pH	5 - 11

*Per Section 49.1 of O. Reg 153/04 the indicated sample is deemed not to exceed the applicable Site Condition Standard

Legend

- Property Boundary
- Borehole - DS
- Monitoring Well - DS
- Monitoring Well - Other
- Sample Met Applicable Standards

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1470 Williamsport Drive, Mississauga, ON

Title: **SOIL CHARACTERIZATION – ORPs**

N

Client: 1470 WILLIAMSPORT HOLDINGS INC.

Size:	Approved By:	Drawn By:	Date:
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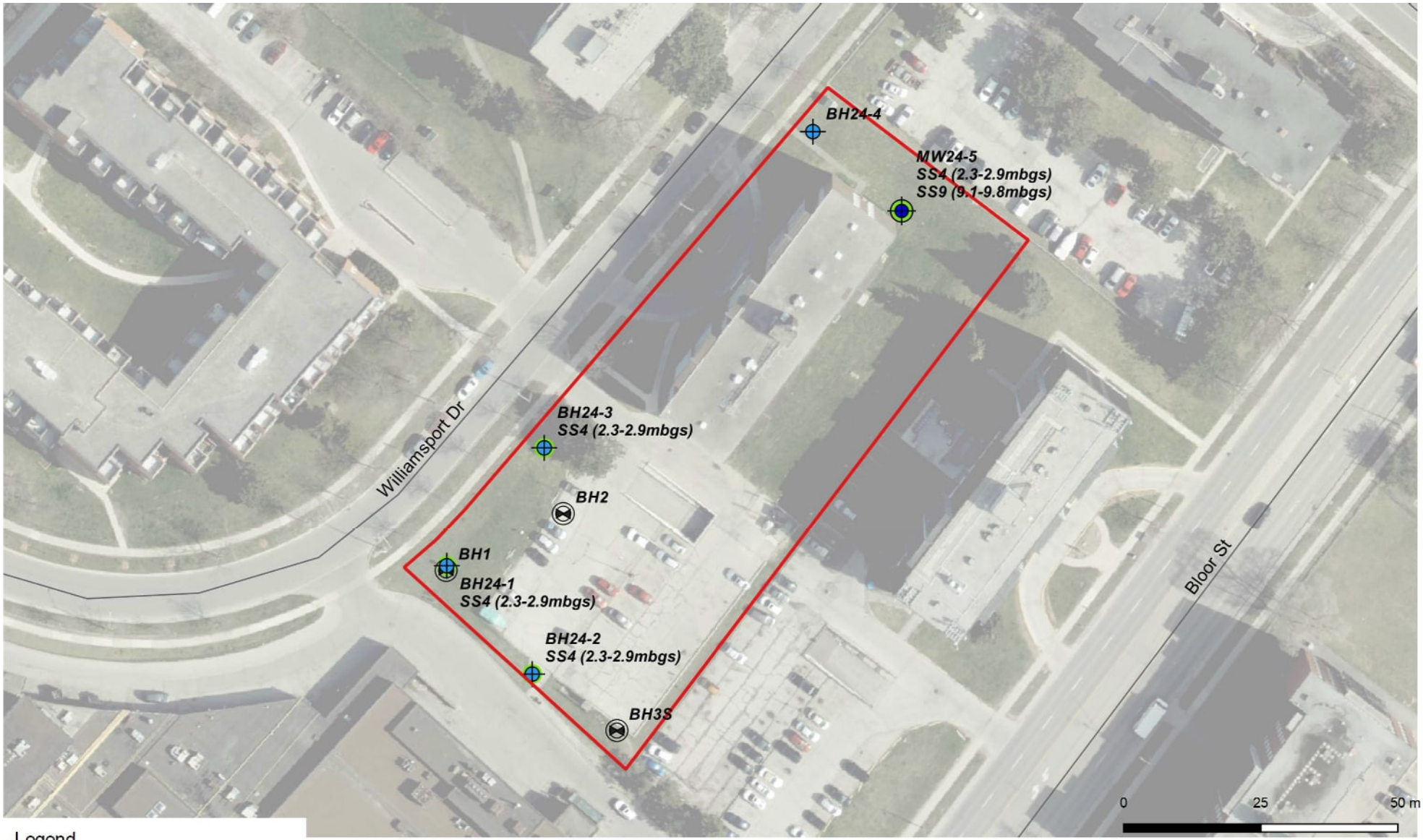
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: **7B**

Image/Map Source: *Esri Satellite Image*

C:\0Sharon\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 7C – Soil Characterization – PHCs.qgs Oct-18 13:16



Legend

- Property Boundary
- Borehole - DS
- Monitoring Well - DS
- Monitoring Well - Other
- Sample Met Applicable Standards

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Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1470 Williamsport Drive, Mississauga, ON

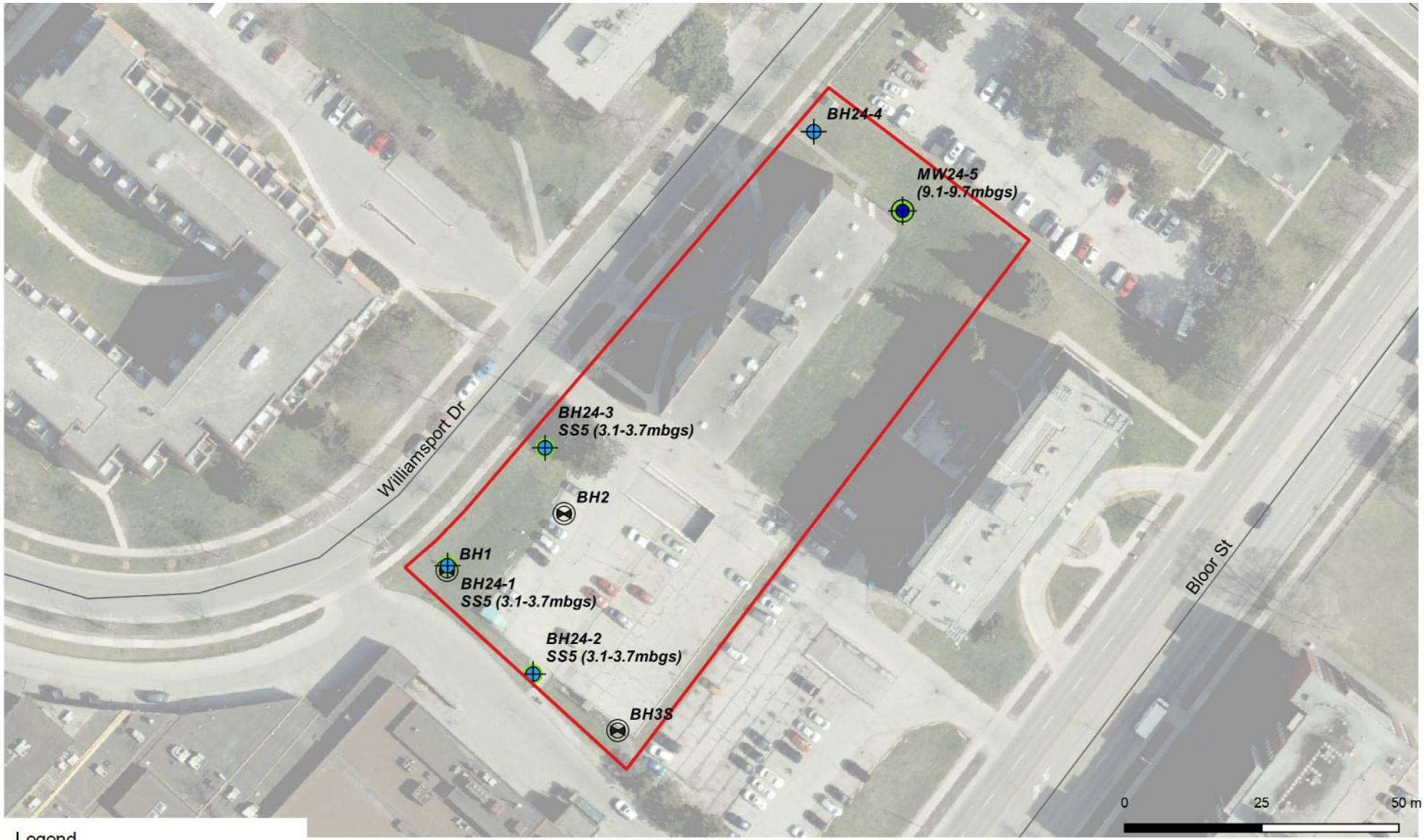
Title: **SOIL CHARACTERIZATION – PHCs & BTEX**

N

Size:	Approved By:	Drawn By:	Date:
8.5 x 11	K.O	S.Y	October 2024
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: **7C**

Image/Map Source: *Esri Satellite Image*

J:\-GIS\2024 PROJECTS\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 7D – Soil Characterization – VOCs.qgs Jan-03 15:55



Legend

- Property Boundary
- Borehole - DS
- Monitoring Well - DS
- Monitoring Well - Other
- Sample Met Applicable Standards

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Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1470 Williamsport Drive, Mississauga, ON

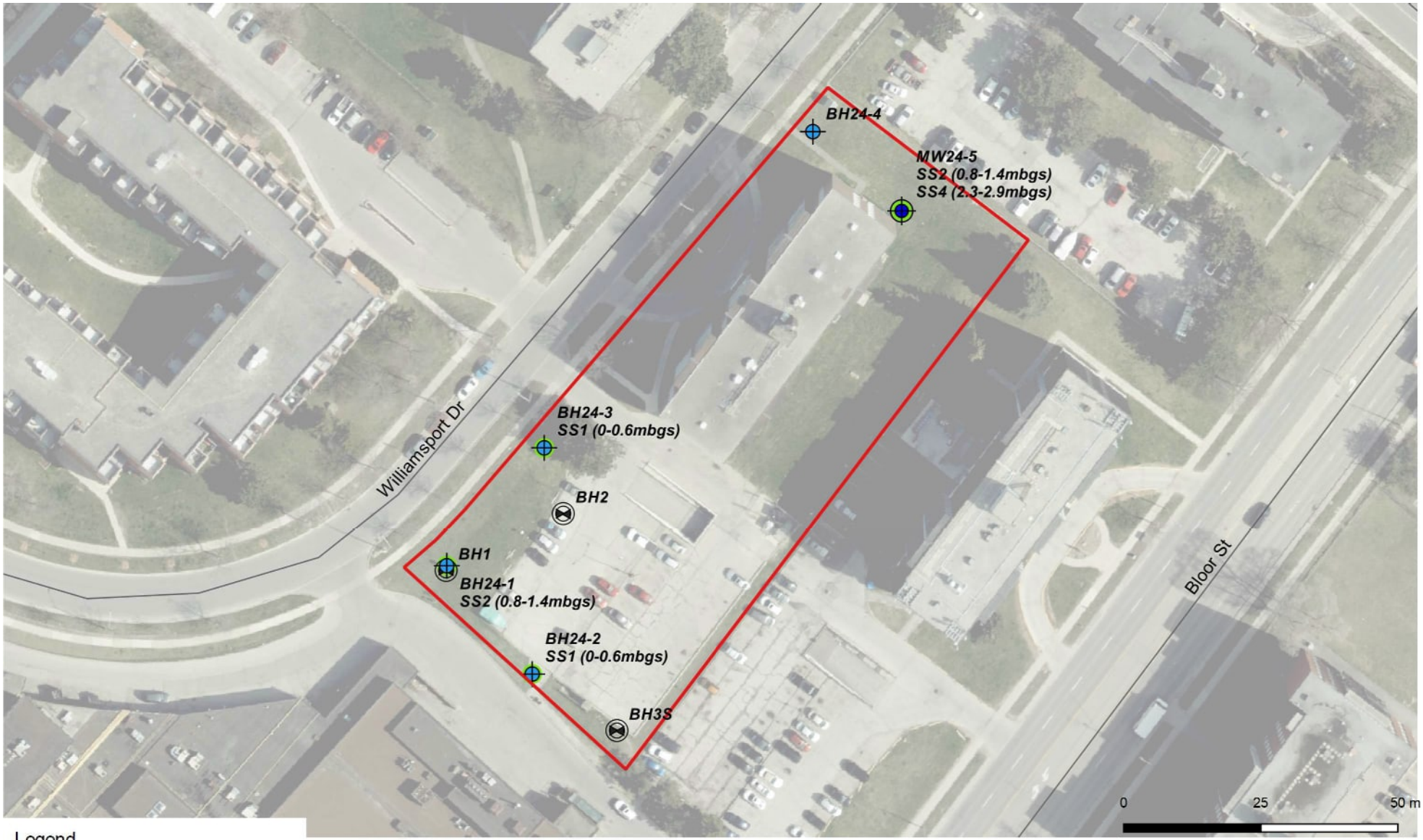
Title: **SOIL CHARACTERIZATION – VOCs**

N

Size:	Approved By:	Drawn By:	Date:
8.5 x 11	K.O	S.Y	October 2024
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: **7D**

Image/Map Source: *Esri Satellite Image*

C:\0Sharon\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 7E – Soil Characterization – PAHs.qgs Oct-18 13:19



Legend

- Property Boundary
- Borehole - DS
- Monitoring Well - DS
- Monitoring Well - Other
- Sample Met Applicable Standards

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Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1470 Williamsport Drive, Mississauga, ON

Title: **SOIL CHARACTERIZATION – PAHs**

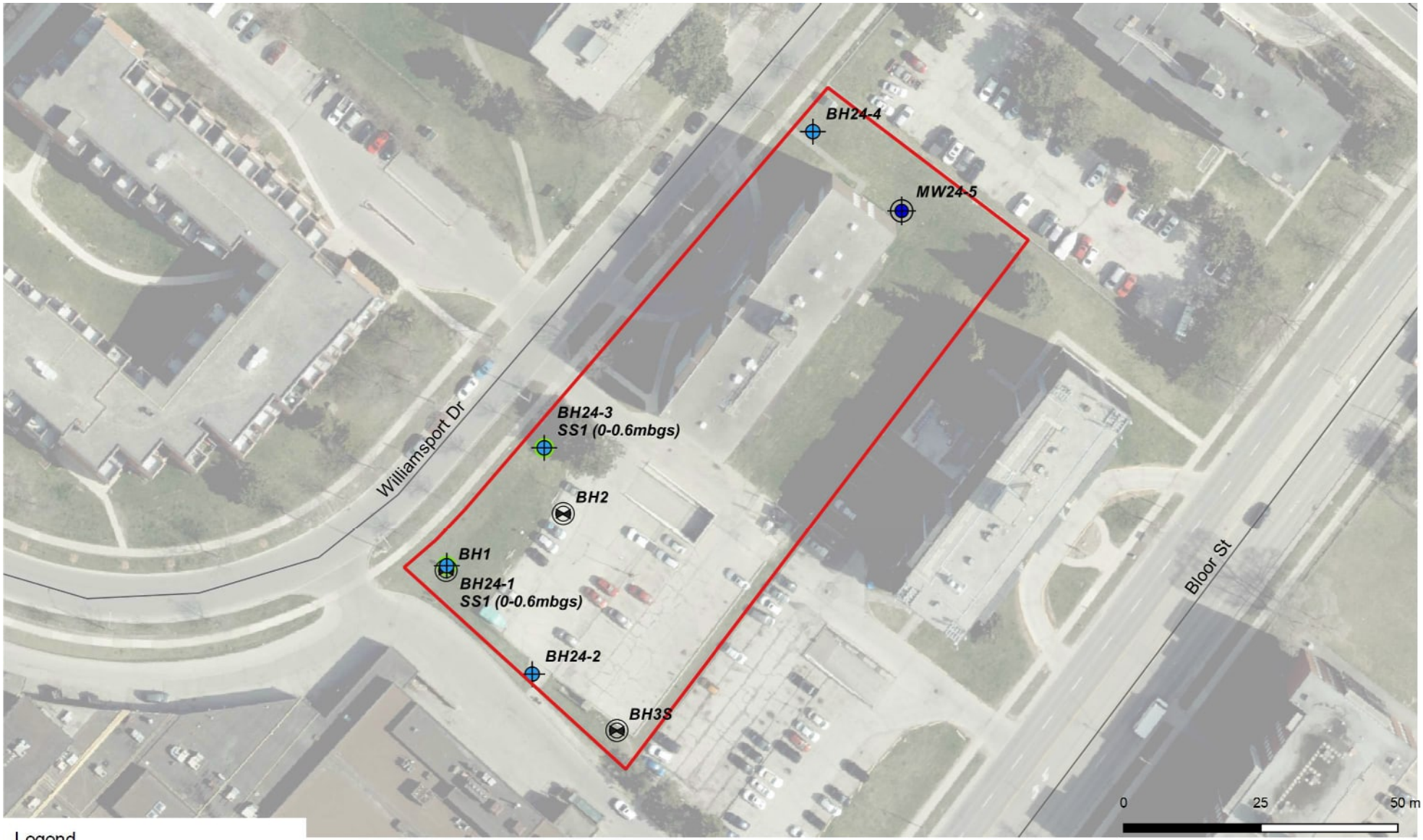
N

Client: 1470 WILLIAMSPORT HOLDINGS INC.

Size:	Approved By:	Drawn By:	Date:
8.5 x 11	K.O	S.Y	October 2024
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: **7E**

Image/Map Source: *Esri Satellite Image*

C:\0Sharon\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 7F – Soil Characterization – OCPs.qgs Oct-18 13:21



Legend

- Property Boundary
- Borehole - DS
- Monitoring Well - DS
- Monitoring Well - Other
- Sample Met Applicable Standards

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Client: 1470 WILLIAMSPORT HOLDINGS INC.

Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1470 Williamsport Drive, Mississauga, ON

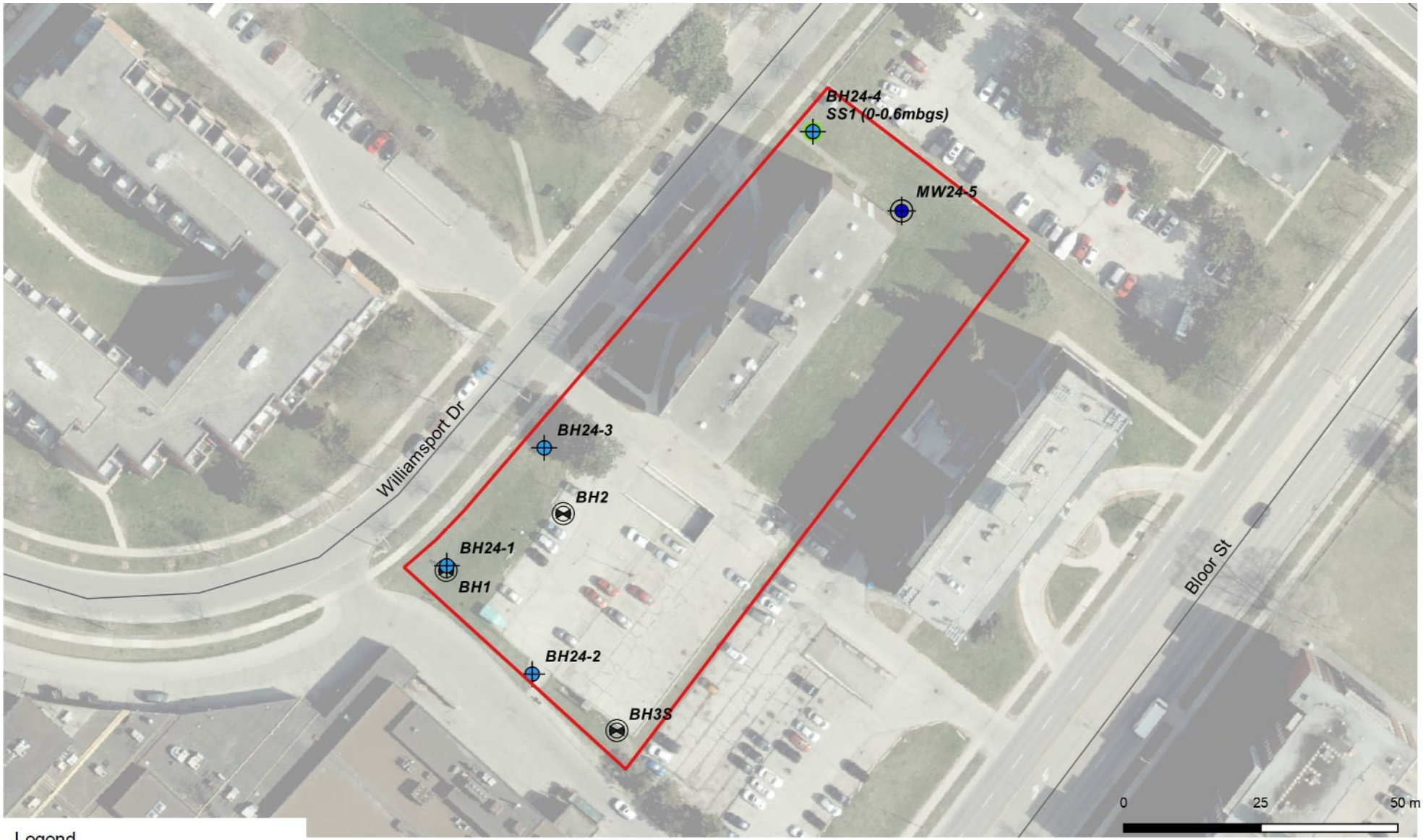
Title: **SOIL CHARACTERIZATION – OCPs**

N

Size:	Approved By:	Drawn By:	Date:
8.5 x 11	K.O	S.Y	October 2024
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: 7F

Image/Map Source: *Esri Satellite Image*

C:\0Sharon\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 7G – Soil Characterization – PCBs.qgs Oct-18 13:22



Legend

- Property Boundary
- Borehole - DS
- Monitoring Well - DS
- Monitoring Well - Other
- Sample Met Applicable Standards

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Vaughan, Ontario L4H 0K8
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Client: 1470 WILLIAMSPORT HOLDINGS INC.

Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1470 Williamsport Drive, Mississauga, ON

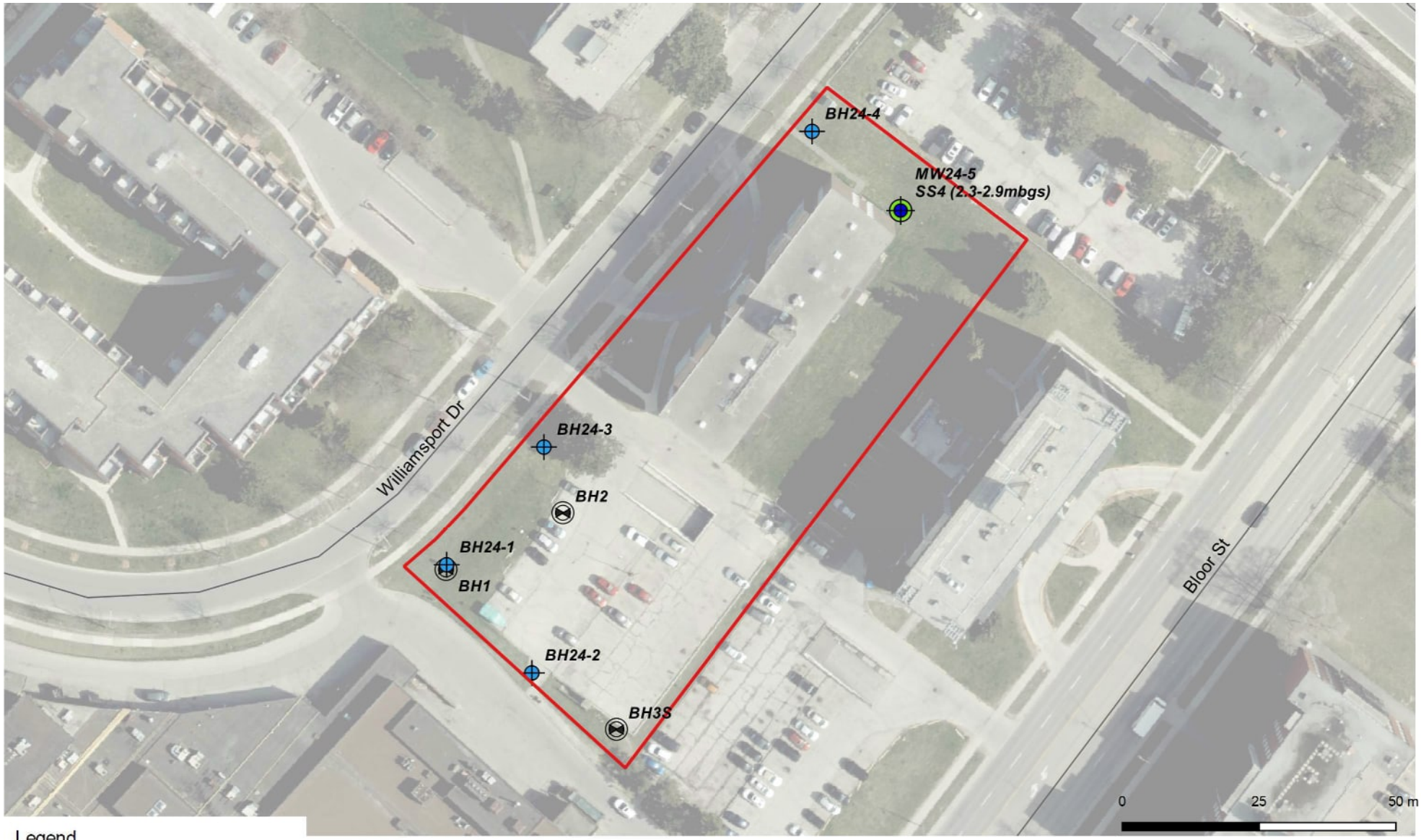
Title: **SOIL CHARACTERIZATION – PCBs**

N

Size:	Approved By:	Drawn By:	Date:
8.5 x 11	K.O	S.Y	October 2024
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: **7G**

Image/Map Source: *Esri Satellite Image*

C:\0Sharon\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 7H – Soil Characterization – Dioxins.qgs Oct-18 13:26



Legend

- Property Boundary
- Borehole - DS
- Monitoring Well - DS
- Monitoring Well - Other
- Sample Met Applicable Standards

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Client: 1470 WILLIAMSPORT HOLDINGS INC.

Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1470 Williamsport Drive, Mississauga, ON

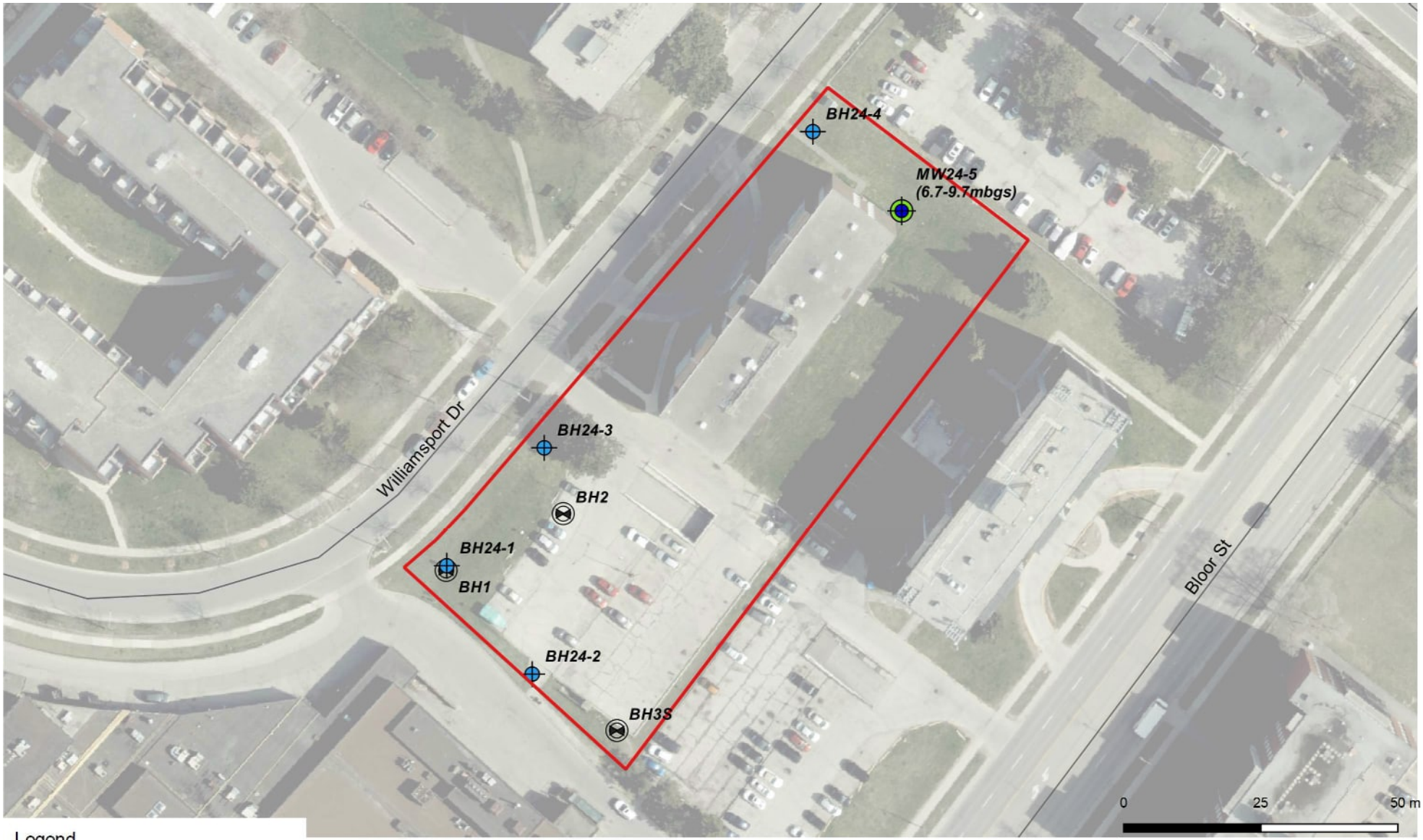
Title: **SOIL CHARACTERIZATION – DIOXINS & FURANS**

N

Size:	Approved By:	Drawn By:	Date:
8.5 x 11	K.O	S.Y	October 2024
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: **7H**

Image/Map Source: *Esri Satellite Image*

C:\0Sharon\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 8A – Soil Characterization – PAHs.qgs Oct-18 13:27



Legend

- Property Boundary
- Borehole - DS
- Monitoring Well - DS
- Monitoring Well - Other
- Sample Met Applicable Standards

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Vaughan, Ontario L4H 0K8
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1470 Williamsport Drive, Mississauga, ON

Title: **GROUNDWATER CHARACTERIZATION – PAHs**

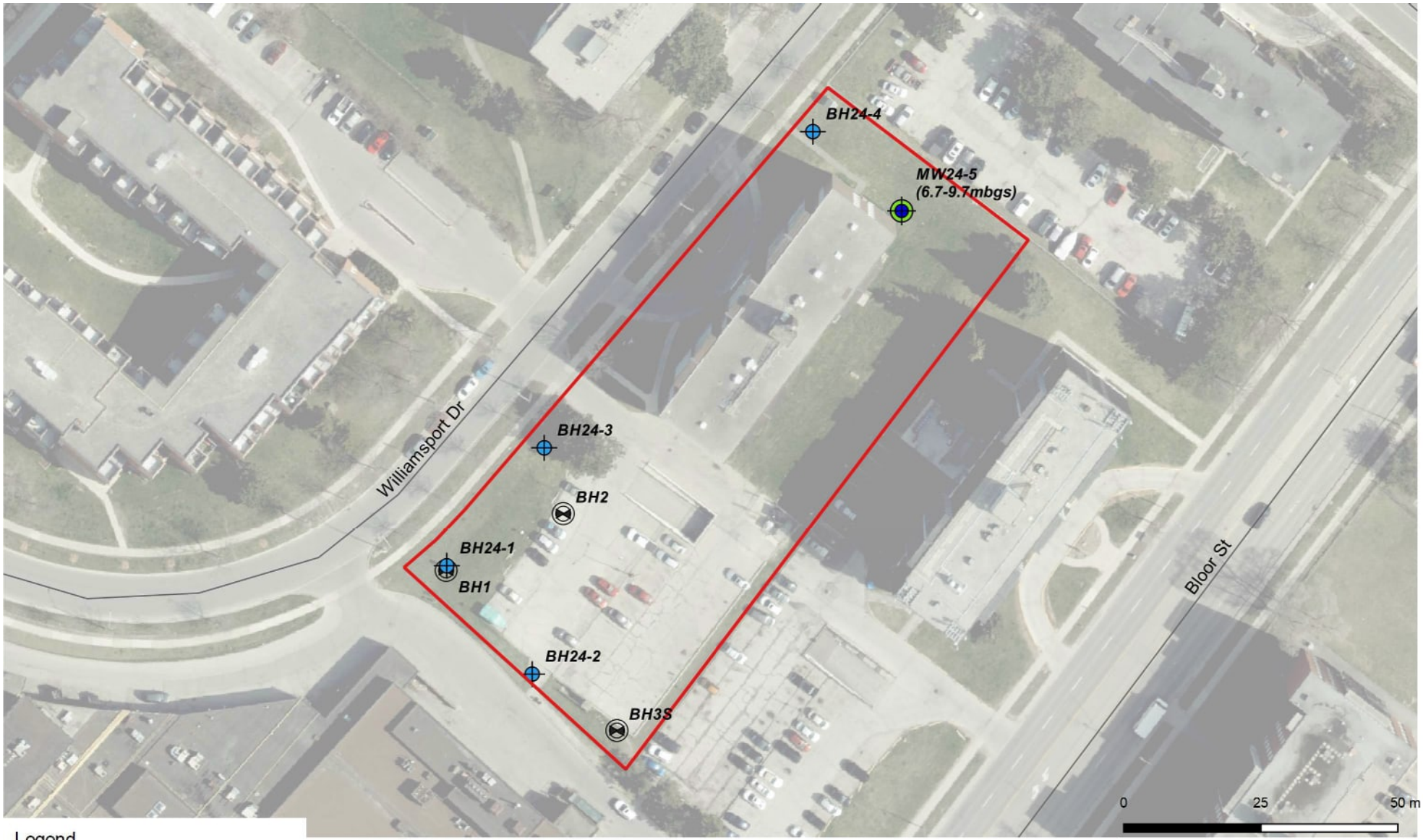
N

Client: 1470 WILLIAMSPORT HOLDINGS INC.

Size:	Approved By:	Drawn By:	Date:
8.5 x 11	K.O	S.Y	October 2024
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: **8A**

Image/Map Source: *Esri Satellite Image*

C:\0Sharon\24-300-100 1470 Williamsport Drive, Mississauga, ON\1-QGIS\Phase Two\Figure 8B – GW Characterization – Dioxins.qgs Oct-18 13:30



Legend

- Property Boundary
- Borehole - DS
- Monitoring Well - DS
- Monitoring Well - Other
- Sample Met Applicable Standards

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

Client: 1470 WILLIAMSPORT HOLDINGS INC.

Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1470 Williamsport Drive, Mississauga, ON

Title: **GROUNDWATER CHARACTERIZATION – DIOXINS & FURANS**

N

Size:	Approved By:	Drawn By:	Date:
8.5 x 11	K.O	S.Y	October 2024
Rev: 0	Scale: As Shown	Project No.: 24-300-100	Figure No.: **8B**

Image/Map Source: *Esri Satellite Image*

Tables

Table 1: Summary of Monitoring Well Installation and Groundwater Data

Well ID			MW24-5	BH1	BH2	BH3S	BH3D
Installed By:			DS	Terraprobe	Terraprobe	Terraprobe	Terraprobe
Installation Date:			9-Aug-24	7-Jan-22	6-Jan-22	6-Jan-22	6-Jan-22
Well Status:			Active	Active	Active	Active	Not Found
EastUTM17			613491	613407.89	613429.258	613477.208	613477.208
NorthUTM17			4830524	4830459.144	4830469.557	4830397.816	4830397.82
Inner Diameter		mm	50	50	50	50	50
Surface Elevation		masl	139.16	140.51	139.52	139.18	139.18
Bottom of Concrete Seal/Top of Bentonite Seal		mbgs	0.30	0.30	0.30	0.30	0.30
		masl	138.86	140.21	139.22	138.88	138.88
Bottom of Bentonite Seal/Top of Sand Pack		mbgs	2.50	2.50	2.50	2.50	2.50
		masl	136.66	138.01	137.02	136.68	136.68
Top of Well Screen		mbgs	6.70	9.10	9.10	3.10	3.10
		masl	132.46	131.41	130.42	136.08	136.08
Well Screen Length		m	3.00	3.00	3.00	3.00	3.00
Bottom of Well Screen		mbgs	9.70	12.20	12.20	4.60	4.60
		masl	129.46	128.31	127.32	134.58	134.58
Groundwater (GW) Monitoring							
14-Aug-24	Depth to GW	mbgs	8.11	11.45	9.60	Dry	Not Found
	GW Elevation	masl	131.05	129.06	129.92	-	-

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
BH24-1	SS1	0-0.6	Silty sand	Metals and ORPs, OCPs	APEC-3, APEC-4
	DUP1			Metals and ORPs	
	DUP7			OCPs	APEC-4
	SS2	0.8-1.4	Silty sand	PAHs, Metals and ORPs	APEC-2
	DUP2			PAHs	
	SS4	2.3-2.9	Sand	PHCs, BTEX, pH	APEC-2, General Soil Characterization
	DUP3			PHCs, BTEX	APEC-2
	SS5	3.1-3.7	Sand	VOCs	
BH24-2	SS1	0-0.6	Silty sand	PAHs, Metals and ORPs	APEC-2, APEC-3
	SS4	2.3-2.9	Sand	PHCs, BTEX, pH	APEC-2, General Soil Characterization
	SS5	3.1-3.7	Sand	VOCs	APEC-2
BH24-3	SS1	0-0.6	Silty sand	PAHs	APEC-2
	SS2	0.8-1.4	Silty sand	Metals and ORPs	APEC-3
	SS4	2.3-2.9	Silty sand	PHCs, BTEX	APEC-2
	SS5	3.1-3.7	Silty sand	VOCs	
BH24-4	SS1	0-0.6	Silty sand	PCBs, pH	General Soil Characterization
	DUP5	0-0.6	Silty sand	PCBs	
	SS3	1.5-2.1	Sandy silt	pH	
MW24-5	SS1	0-0.6	Silty sand	Metals and ORPs	General Soil Characterization
	DUP4	0-0.6	Silty sand	Metals and ORPs	
	SS2	0.8-1.4	Silty clay	PAHs	APEC-1
	SS3	1.5-2.1	Silty sand	pH	General Soil Characterization
	SS4	2.3-2.9	Silty sand	Dioxins and Furans, PAHs, PHCs, BTEX	APEC-1, General Soil Characterization
	DUP6		Silty sand	Dioxins and Furans	APEC-1
	SS9	9.1-9.8	Silty sand	PHCs, BTEX, VOCs	General Soil Characterization

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
MW24-5	129.46	-	132.46	14-Aug-24	PAHs, Dioxins and Furans	APEC-1

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	COPCs	Media	Boreholes Within APEC	Samples Analysed	Parameter Analyzed
APEC-1	The Site has a decommissioned incinerator.	Dioxins, Furans and PAHs	Soil	MW24-5	SS2	PAHs
					SS4	Dioxins and Furans, PAHs
					DUP5	Dioxins and Furans
			Groundwater	MW24-5	MW24-5	Dioxins and Furans, PAHs
APEC-2	Inferred importation of fill material for grading purposes at the time of development of the Site.	PHCs, VOCs, BTEX, Metals, As, Sb, Se, B-HWS, CN-, , Cr (VI), Hg, low or high pH, PAHs	Soil	BH24-1	SS1	Metals, As, Sb, Se, B-HWS, CN-, , Cr (VI), Hg
					DUP1	Metals, As, Sb, Se, B-HWS, CN-, , Cr (VI), Hg
					SS2	Metals, As, Sb, Se, B-HWS, CN-, , Cr (VI), Hg, PAHs
					DUP2	PAHs
					SS4	PHCs, BTEX, pH
					DUP3	PHCs, BTEX
					SS5	VOCs
				BH24-2	SS1	PAHs, Metals, As, Sb, Se, B-HWS, CN-, , Cr (VI), Hg
					SS4	PHCs, BTEX, pH
					SS5	VOCs
				BH24-3	SS1	PAHs
					SS2	Metals, As, Sb, Se, B-HWS, CN-, , Cr (VI), Hg
					SS4	PHCs, BTEX
					SS5	VOCs
APEC-3	Inferred application of de-icing agents in the Site's tenant parking lot during winter.	EC, SAR	Soil	BH24-1	SS1	EC, SAR
					DUP1	EC, SAR
					SS2	EC, SAR
				BH24-2	SS1	EC, SAR
				BH24-3	SS2	EC, SAR
APEC-4	A historical orchard was identified in the 1946 aerial image suggesting large-scale application of pesticides on the Site.	Metals, As, Sb, Se, CN-, Hg, OC Pesticides	Soil	BH24-1	SS1	Metals, As, Sb, Se, CN-, Hg, OC Pesticides
					DUP7	Metals, As, Sb, Se, CN-, Hg, OC Pesticides
				BH24-3	SS1	OC Pesticides

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	BH24-1 SS1	DUP1 (BH24-1 SS1)	BH24-1 SS4	BH24-2 SS1	BH24-2 SS4	BH24-3 SS2	BH24-4 SS1
Date of Collection		9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24
Date Reported		11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24
Sampling Depth (mbgs)		0-0.6	0-0.6	2.3-2.9	0-0.6	2.3-2.9	0.8-1.4	0-0.6
Analytical Report Reference No.		C4O6235	C4O6235	C4O6235	C4O6235	C4O6235	C4O6235	C4O6235
Antimony	7.5	<0.20	<0.20	-	<0.20	-	<0.20	-
Arsenic	18	1.7	1.7	-	1.7	-	1.7	-
Barium	390	22	21	-	14	-	14	-
Beryllium	4	0.21	0.28	-	<0.20	-	<0.20	-
Boron	120	<5.0	<5.0	-	<5.0	-	<5.0	-
Boron (Hot Water Soluble)	1.5	0.086	0.09	-	<0.050	-	0.07	-
Cadmium	1.2	<0.10	<0.10	-	<0.10	-	<0.10	-
Chromium	160	7.4	7.5	-	8.8	-	5.6	-
Chromium VI	8	<0.18	<0.18	-	<0.18	-	<0.18	-
Cobalt	22	3.4	3.1	-	4.7	-	2.5	-
Copper	140	8.1	7.5	-	9.6	-	5	-
Cyanide	0.051	<0.01	<0.01	-	<0.01	-	<0.01	-
Lead	120	6.5	7.2	-	8.7	-	3.2	-
Mercury	0.27	<0.050	<0.050	-	<0.050	-	<0.050	-
Molybdenum	6.9	<0.50	<0.50	-	<0.50	-	<0.50	-
Nickel	100	6.8	6	-	7.5	-	4.8	-
Selenium	2.4	<0.50	<0.50	-	<0.50	-	<0.50	-
Silver	20	<0.20	<0.20	-	<0.20	-	<0.20	-
Thallium	1	0.053	<0.050	-	<0.050	-	<0.050	-
Uranium	23	0.53	0.38	-	0.36	-	0.28	-
Vanadium	86	17	17	-	25	-	13	-
Zinc	340	24	23	-	26	-	13	-
Electrical Conductivity (2:1)	0.7	0.11	0.11	-	0.073	-	0.1	-
Sodium Adsorption Ratio	5	0.31	0.32	-	0.43	-	0.36	-
pH, 2:1 CaCl2 Extraction	NV	7.9	7.87	10.8	8.01	8.02	7.91	7.74

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	BH24-4 SS3	MW24-5 SS1	DUP4 (MW24-5 SS1)	MW24-5 SS3	BH24-1 SS2
Date of Collection		9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24
Date Reported		11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24
Sampling Depth (mbgs)		1.5-2.1	0-0.6	0-0.6	1.5-2.1	0.8-1.4
Analytical Report Reference No.		C4O6235	C4O6235	C4O6235	C4O6235	C4O6235
Antimony	7.5	-	<0.20	<0.20	-	<0.20
Arsenic	18	-	1.5	2	-	1.8
Barium	390	-	16	22	-	32
Beryllium	4	-	<0.20	0.21	-	0.42
Boron	120	-	<5.0	<5.0	-	7.3
Boron (Hot Water Soluble)	1.5	-	0.07	0.073	-	0.34
Cadmium	1.2	-	<0.10	<0.10	-	<0.10
Chromium	160	-	7.1	8.4	-	9.8
Chromium VI	8	-	<0.18	<0.18	-	<0.18
Cobalt	22	-	2.8	3.6	-	3.8
Copper	140	-	6.8	9.1	-	12
Cyanide	0.051	-	<0.01	<0.01	-	0.05
Lead	120	-	9.4	13	-	5.9
Mercury	0.27	-	<0.050	<0.050	-	<0.05
Molybdenum	6.9	-	<0.50	<0.50	-	<0.50
Nickel	100	-	5.4	7.4	-	8.4
Selenium	2.4	-	<0.50	<0.50	-	<0.50
Silver	20	-	<0.20	<0.20	-	<0.20
Thallium	1	-	<0.050	0.054	-	0.057
Uranium	23	-	0.32	0.35	-	0.64
Vanadium	86	-	16	19	-	17
Zinc	340	-	20	24	-	27
Electrical Conductivity (2:1)	0.7	-	0.1	0.11	-	**7.9***
Sodium Adsorption Ratio	5	-	0.33	0.33	-	0.33
pH, 2:1 CaCl2 Extraction	NV	7.45	7.93	7.85	7.74	12.5

For Table Notes see **Notes for Soil and Groundw**

Table 6: Summary of PHCs in Soil

Parameter	MECP Table 2 SCS	BH24-1 SS4	BH24-2 SS4	BH24-3 SS4	DUP3 (BH24-3 SS4)	MW24-5 SS4	MW24-5 SS9
Date of Collection		9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24
Date Reported		11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24
Sampling Depth (mbgs)		2.3-2.9	2.3-2.9	2.3-2.9	2.3-2.9	2.3-2.9	9.1-9.8
Analytical Report Reference No.		C4O6235	C4O6235	C4O6235	C4O6235	C4O6235	C4O6235
Benzene	0.21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	<0.0060
Ethylbenzene	1.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	<0.010
Toluene	2.3	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	<0.020
Xylenes (Total)	3.1	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	<0.020
F1 (C6-C10) -BTEX	55	< 10	< 10	< 10	< 10	< 10	< 10
F2 (C10-C16)	98	<10	< 10	< 10	< 10	< 10	< 10
F3 (C16-C34)	300	<50	< 50	< 50	< 50	< 50	< 50
F4 (C34-C50)	2800	<50	< 50	< 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	BH24-1 SS5	BH24-2 SS5	BH24-3 SS5	MW24-5 SS9
Date of Collection		9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24
Date Reported		11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24
Sampling Depth (mbgs)		3.1-3.7	3.1-3.7	3.1-3.7	9.1-9.8
Analytical Report Reference No.		C4O6235	C4O6235	C4O6235	C4O6235
Acetone	16	< 0.49	< 0.49	< 0.49	< 0.49
Bromomethane	0.05	< 0.04	< 0.04	< 0.04	< 0.04
Carbon Tetrachloride	0.05	< 0.04	< 0.04	< 0.04	< 0.04
Chlorobenzene	2.4	< 0.04	< 0.04	< 0.04	< 0.04
Chloroform	0.05	< 0.04	< 0.04	< 0.04	< 0.04
Dichlorobenzene, 1,2-	1.2	< 0.04	< 0.04	< 0.04	< 0.04
Dichlorobenzene, 1,3-	4.8	< 0.04	< 0.04	< 0.04	< 0.04
Dichlorobenzene, 1,4-	0.083	< 0.04	< 0.04	< 0.04	< 0.04
Dichlorodifluoromethane	16	< 0.04	< 0.04	< 0.04	< 0.04
Dichloroethane, 1,1-	0.05	< 0.04	< 0.04	< 0.04	< 0.04
Dichloroethane, 1,2-	0.05	< 0.049	< 0.049	< 0.049	< 0.049
Dichloroethylene, 1,1-	0.05	< 0.04	< 0.04	< 0.04	< 0.04
Dichloroethylene, 1,2-cis-	1.9	< 0.04	< 0.04	< 0.04	< 0.04
Dichloroethylene, 1,2-trans-	0.084	< 0.04	< 0.04	< 0.04	< 0.04
Dichloropropane, 1,2-	0.05	< 0.04	< 0.04	< 0.04	< 0.04
Dichloropropene, 1,3-	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethylene dibromide	0.05	< 0.04	< 0.04	< 0.04	< 0.04
Hexane (n)	2.8	< 0.04	< 0.04	< 0.04	< 0.04
Methyl Ethyl Ketone	16	< 0.4	< 0.4	< 0.4	< 0.4
Methyl Isobutyl Ketone	1.7	< 0.04	< 0.04	< 0.04	< 0.04
Methyl tert-Butyl Ether (MTBE)	0.75	< 0.04	< 0.04	< 0.04	< 0.04
Methylene Chloride	0.1	< 0.049	< 0.049	< 0.049	< 0.049
Styrene	0.7	< 0.04	< 0.04	< 0.04	< 0.04
Tetrachloroethane, 1,1,1,2-	0.058	< 0.04	< 0.04	< 0.04	< 0.04
Tetrachloroethane, 1,1,2,2-	0.05	< 0.04	< 0.04	< 0.04	< 0.04
Tetrachloroethylene	0.28	< 0.04	< 0.04	< 0.04	< 0.04
Trichloroethane, 1,1,1-	0.38	< 0.04	< 0.04	< 0.04	< 0.04
Trichloroethane, 1,1,2-	0.05	< 0.04	< 0.04	< 0.04	< 0.04
Trichloroethylene	0.28	< 0.01	< 0.01	< 0.01	< 0.01
Trichlorofluoromethane	4	< 0.04	< 0.04	< 0.04	< 0.04
Vinyl Chloride	0.019	< 0.019	< 0.019	< 0.019	< 0.019

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

Table 8: Summary of PAHs in Soil

Parameter	MECP Table 2 SCS	BH24-1 SS2	DUP2 (BH24-1 SS2)	BH24-2 SS1	BH24-3 SS1	MW24-5 SS2	MW24-5 SS4
Date of Collection		9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24
Date Reported		11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24
Sampling Depth (mbgs)		0.8-1.4	0.8-1.4	0-0.6	0-0.6	0.8-1.4	2.3-2.9
Analytical Report Reference No.		C4O6235	C4O6235	C4O6235	C4O6235	C4O6235	C4O6235
Methylnaphthalene, 2-(1-)	0.99	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071
Acenaphthene	7.9	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	0.15	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	0.67	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benz(a)anthracene	0.5	<0.0050	<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	<0.0050
Benzo(b+j)fluoranthene	0.78	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(g,h,i)perylene	6.6	<0.0050	<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	<0.0050
Chrysene	7	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dibenz(a,h)anthracene	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	0.69	<0.0050	<0.0050	<0.0050	0.0078	<0.0050	<0.0050
Fluorene	62	<0.0050	<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	<0.0050
Naphthalene	0.6	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phenanthrene	6.2	<0.0050	<0.0050	<0.0050	0.006	<0.0050	<0.0050
Pyrene	78	<0.0050	<0.0050	<0.0050	0.0059	<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 and PCBs in Soil

Parameter	MECP Table 2 SCS	BH24-4 SS1	DUP5 (BH24-4 SS1)	BH24-1 SS1	BH24-3 SS1	DUP7 (BH24-3 SS1)
Date of Collection		9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24	9-Aug-24
Date Reported		11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24	11-Sep-24
Sampling Depth (mbgs)		0-0.6	0-0.6	0-0.6	0-0.6	0-0.6
Analytical Report Reference No.		C4O6235	C4O6235	C4O6235	C4O6235	C4O6235
Aldrin	0.05	-	-	<0.002	<0.002	<0.002
Chlordane	0.05	-	-	<0.002	<0.002	<0.002
DDD	3.3	-	-	<0.002	<0.002	<0.002
DDE	0.26	-	-	0.0093	0.022	0.0089
DDT	1.4	-	-	0.0023	0.0068	0.0026
Dieldrin	0.05	-	-	<0.002	<0.002	<0.002
Endosulfan	0.04	-	-	<0.002	<0.002	<0.002
Endrin	0.04	-	-	<0.002	<0.002	<0.002
Heptachlor	0.15	-	-	<0.002	<0.002	<0.002
Heptachlor Epoxide	0.05	-	-	<0.002	<0.002	<0.002
Hexachlorobenzene	0.52	-	-	<0.002	<0.002	<0.002
Hexachlorobutadiene	0.012	-	-	<0.002	<0.002	<0.002
Hexachloroethane	0.089	-	-	<0.002	<0.002	<0.002
Total PCBs	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	0.13	-	-	<0.005	<0.005	<0.005

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

Table 10: Summary of Dioxins and Furans in Soil

Parameter	MECP Table 2 SCS	MW24-5 SS4	DUP6 (MW24-5 SS4)
Date of Collection		9-Aug-24	9-Aug-24
Date Reported		11-Sep-24	11-Sep-24
Sampling Depth (mbgs)		2.3-2.9	2.3-2.9
Analytical Report Reference No.		C4O6235	C4O6235
Dioxin/Furan (TEQ)	0.000013	0.00000101	0.000000459

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

Table 11: Summary of Dioxins and Furans in Groundwater

Parameter	MECP Table 2 SCS	MW24-5	DUP1 (MW24-5)
Date of Collection		14-Aug-24	14-Aug-24
Date Reported		20-Sep-24	20-Sep-24
Screen Interval (mbgs)		6.7-9.7	6.7-9.7
Analytical Report Reference No.		C4O6235	C4O6235
Dioxin/Furan (TEQ)	0.000007	0.00000439	0.0000124

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

Table 12: Summary of PAHs in Groundwater

Parameter	MECP Table 2 SCS	MW24-5	DUP1 (MW24-5)
Date of Collection		14-Aug-24	14-Aug-24
Date Reported		20-Sep-24	20-Sep-24
Screen Interval (mbgs)		6.7-9.7	6.7-9.7
Analytical Report Reference No.		C4P1529	C4P1529
Acenaphthene	4.1	< 30	< 30
Acenaphthylene	1	< 0.5	< 0.5
Anthracene	2.4	< 0.2	< 0.2
Benzo(a)anthracene	1	< 0.5	< 0.5
Benzo(a)pyrene	0.01	< 0.5	< 0.5
Benzo(b/j)fluoranthene	0.1	< 0.5	< 0.5
Benzo(ghi)perylene	0.2	< 0.5	< 0.5
Benzo(k)fluoranthene	0.1	< 0.5	< 0.5
Chrysene	0.1	< 2	< 2
Dibenzo(a,h)anthracene	0.2	< 0.5	< 0.5
Fluoranthene	0.41	< 0.5	< 0.5
Fluorene	120	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.2	< 0.5	< 0.5
Naphthalene	11	< 0.5	< 0.5
Phenanthrene	1	< 0.5	< 0.5
Pyrene	4.1	< 0.5	< 0.5
Methylnaphthalene, 2-(1-)	3.2	<0.71	<0.71

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

Table 13: Summary of Maximum Concentrations in Soil

	Parameter	Standard	Maximum Concentration	Location
Metals and ORPs	Antimony	7.5	<0.20	All Samples
	Arsenic	18	2	DUP4 (MW24-5 SS1)
	Barium	390	32	BH24-1 SS2
	Beryllium	4	0.42	BH24-1 SS2
	Boron	120	7.3	BH24-1 SS2
	Boron (Hot Water Soluble)	1.5	0.34	BH24-1 SS2
	Cadmium	1.2	<0.10	All Samples
	Chromium	160	9.8	BH24-1 SS2
	Chromium VI	8	<0.18	All Samples
	Cobalt	22	4.7	BH24-2 SS1
	Copper	140	12	BH24-1 SS2
	Cyanide	0.051	0.05	BH24-1 SS2
	Lead	120	13	DUP4 (MW24-5 SS1)
	Mercury	0.27	<0.050	All Samples
	Molybdenum	6.9	<0.50	All Samples
	Nickel	100	8.4	BH24-1 SS2
	Selenium	2.4	<0.50	All Samples
	Silver	20	<0.20	All Samples
	Thallium	1	0.057	BH24-1 SS2
	Uranium	23	0.64	BH24-1 SS2
	Vanadium	86	25	BH24-2 SS1
	Zinc	340	27	BH24-1 SS2
	Electrical Conductivity (2:1)	0.7	**7.9***	BH24-1 SS2
	Sodium Adsorption Ratio	5	0.43	BH24-2 SS1
	pH, 2:1 CaCl2 Extraction	NV	12.5	BH24-1 SS2
PHCs & BTEX	Benzene	0.21	< 0.02	All Samples
	Ethylbenzene	1.1	< 0.02	All Samples
	Toluene	2.3	< 0.02	All Samples
	Xylenes (Total)	3.1	< 0.04	All Samples
	F1 (C6-C10) -BTEX	55	< 10	All Samples
	F2 (C10-C16)	98	<10	All Samples
	F3 (C16-C34)	300	<50	All Samples
	F4 (C34-C50)	2800	<50	All Samples
VOCs	Acetone	16	< 0.49	All Samples
	Bromomethane	0.05	< 0.04	All Samples
	Carbon Tetrachloride	0.05	< 0.04	All Samples
	Chlorobenzene	2.4	< 0.04	All Samples
	Chloroform	0.05	< 0.04	All Samples
	Dichlorobenzene, 1,2-	1.2	< 0.04	All Samples
	Dichlorobenzene, 1,3-	4.8	< 0.04	All Samples
	Dichlorobenzene, 1,4-	0.083	< 0.04	All Samples
	Dichlorodifluoromethane	16	< 0.04	All Samples
	Dichloroethane, 1,1-	0.05	< 0.04	All Samples
	Dichloroethane, 1,2-	0.05	< 0.049	All Samples
	Dichloroethylene, 1,1-	0.05	< 0.04	All Samples

Table 13: Summary of Maximum Concentrations in Soil

	Parameter	Standard	Maximum Concentration	Location
VOCs	Dichloroethylene, 1,2-cis-	1.9	< 0.04	All Samples
	Dichloroethylene, 1,2-trans-	0.084	< 0.04	All Samples
	Dichloropropane, 1,2-	0.05	< 0.04	All Samples
	Dichloropropene, 1,3-	0.05	< 0.05	All Samples
	Ethylene dibromide	0.05	< 0.04	All Samples
	Hexane (n)	2.8	< 0.04	All Samples
	Methyl Ethyl Ketone	16	< 0.4	All Samples
	Methyl Isobutyl Ketone	1.7	< 0.04	All Samples
	Methyl tert-Butyl Ether (MTBE)	0.75	< 0.04	All Samples
	Methylene Chloride	0.1	< 0.049	All Samples
	Styrene	0.7	< 0.04	All Samples
	Tetrachloroethane, 1,1,1,2-	0.058	< 0.04	All Samples
	Tetrachloroethane, 1,1,2,2-	0.05	< 0.04	All Samples
	Tetrachloroethylene	0.28	< 0.04	All Samples
	Trichloroethane, 1,1,1-	0.38	< 0.04	All Samples
	Trichloroethane, 1,1,2-	0.05	< 0.04	All Samples
	Trichloroethylene	0.28	< 0.01	All Samples
	Trichlorofluoromethane	4	< 0.04	All Samples
	Vinyl Chloride	0.019	< 0.019	All Samples
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
	Benz(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(g,h,i)perylene	6.6	<0.0050	All Samples
	Benzo(k)fluoranthene	0.78	<0.0050	All Samples
	Chrysene	7	<0.0050	All Samples
	Dibenz(a,h)anthracene	0.1	<0.0050	All Samples
	Fluoranthene	0.69	0.0078	BH24-3 SS1
	Fluorene	62	<0.0050	All Samples
	Indeno(1,2,3-cd)pyrene	0.38	<0.0050	All Samples
	Naphthalene	0.6	<0.0050	All Samples
	Phenanthrene	6.2	0.006	BH24-3 SS1
	Pyrene	78	0.0059	BH24-3 SS1
OCPs	Aldrin	0.05	-	All Samples
	Chlordane	0.05	-	All Samples
	DDD	3.3	-	All Samples
	DDE	0.26	0.022	BH24-3 SS1
	DDT	1.4	0.0068	BH24-3 SS1
	Dieldrin	0.05	-	All Samples
	Endosulfan	0.04	-	All Samples
	Endrin	0.04	-	All Samples
	Heptachlor	0.15	-	All Samples

Table 13: Summary of Maximum Concentrations in Soil

Parameter		Standard	Maximum Concentration	Location
OCPs	Heptachlor Epoxide	0.05	-	All Samples
	Hexachlorobenzene	0.52	-	All Samples
	Hexachlorobutadiene	0.012	-	All Samples
	Hexachloroethane	0.089	-	All Samples
	Methoxychlor	0.13	-	All Samples
Dioxins/Furans	Dioxin/Furan (TEQ)	0.000013	0.00000101	MW24-5 SS4

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 Groundwater

Parameter		Standard	Maximum Concentration	Location
Dioxins/Furans	Dioxin/Furan (TEQ)	0.000007	0.0000124	DUP1 (MW24-5)
PAHs	Acenaphthene	4.1	< 30	All Samples
	Acenaphthylene	1	< 0.5	All Samples
	Anthracene	2.4	< 0.2	All Samples
	Benzo(a)anthracene	1	< 0.5	All Samples
	Benzo(a)pyrene	0.01	< 0.5	All Samples
	Benzo(b/j)fluoranthene	0.1	< 0.5	All Samples
	Benzo(ghi)perylene	0.2	< 0.5	All Samples
	Benzo(k)fluoranthene	0.1	< 0.5	All Samples
	Chrysene	0.1	< 2	All Samples
	Dibenzo(a,h)anthracene	0.2	< 0.5	All Samples
	Fluoranthene	0.41	< 0.5	All Samples
	Fluorene	120	< 0.5	All Samples
	Indeno(1,2,3-cd)pyrene	0.2	< 0.5	All Samples
	Naphthalene	11	< 0.5	All Samples
	Phenanthrene	1	< 0.5	All Samples
	Pyrene	4.1	< 0.5	All Samples
	Methylnaphthalene, 2-(1-)	3.2	<0.71	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	Generic Condition Standards in a Potable Groundwater Condition for Residential/Parkland/Institutional Use and coarse textured soils as contained in Table 2 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 Hydrocarbons
PHC	Petroleum Hydrocarbon
Metals and ORPs	Metals and Other Regulated Parameters:
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 A

Project Number: 24-300-100 2024-07-11

Williamsport Holdings Inc.
181 Eglinton Avenue East, Suite # 204
Toronto, Ontario
M4P, 1J4

Attention: Jack Greenberg
Sent via email: jackgreenberg@greenberglawyers.ca

RE: Sampling and Analysis Plan
Phase Two Environmental Site Assessment
1470 Williamsport Drive, Mississauga, Ontario

Dear: Jack Greenberg

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 1470 Williamsport Drive, Mississauga, Ontario , (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 June, 2024, it is DS's understanding that the Site is a 0.58- hectare (1.43 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 Residential based on the findings of the Phase One ESA. A total of twelve (12) potentially contaminating activities were identified on the Phase One Property or on neighbouring properties within the Phase One Study Area, of which four (4) are 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	Northeastern portion of the Phase One Property	N/S: Operation of an Incinerator	On Site: PCA-1	PAHs, Dioxins and Furans	Soil and ground water
APEC-2	Entire Phase One Property	#30 - Importation of Fill Material of Unknown Quality	On Site: PCA-8	PHCs, VOCs, BTEX, Metals, As, Sb, Se, B-HWS, CN-, Cr (VI), Hg, low or high pH, PAHs	Soil
APEC-3	Southern portion of the Phase One Property	#N/S- Inferred application of de-icing agents	On Site: PCA-9	Electrical Conductivity, SAR	Soil
				Na, Cl-	Groundwater
APEC-4	Southwestern portion of the Property	#40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications	On Site PCA-12	Metals, As, Sb, Se, CN-, Hg, OC Pesticides	Soil

Notes:
1. PHC (F1-F4) = Petroleum Hydrocarbons in the F1-F4 fraction ranges
2. VOCs = Volatile Organic Compounds
3. PAHs = Polycyclic Aromatic Hydrocarbons
1. PCBs = Polychlorinated Biphenyls

3. Site Investigation Program

The Site Investigation Program will be completed as follows:

- Public and private underground utilities and services will be cleared prior to commencement of intrusive investigation activities;
- A Health and Safety Plan will be prepared and all work will be executed safely;
- Five (5) boreholes will be advanced on the Phase Two Property, to an approximate maximum depth of 9.8 mbgs, or until sample refusal depth, or until groundwater is encountered, using a track-mounted 6M2 drill rig. The soil profile from each borehole will be logged in the field and samples will be screened for total organic vapours (TOV) with a photoionization detector (PID) and combustible gas detector (CGD). The location of the boreholes will be selected to investigate any APECs identified during the Phase One ESA,

as well as to delineate the horizontal and vertical extents of relevant parameters of concern.

- A groundwater monitoring well will be installed within one (1) of the boreholes advanced in order to facilitate the collection of groundwater samples to assess the groundwater quality below the Site and to establish the direction of groundwater flow;
- Based on field screening and visual/olfactory observations, worst-case/representative soil samples from the boreholes will be submitted for laboratory testing of relevant parameters of concern;
- The groundwater levels in the wells will be measured at least 24 hours after well development has been completed, to determine the groundwater elevation. The wells will be surveyed to a geodetic benchmark to determine groundwater flow direction;
- The groundwater wells will be purged to remove stagnant water and sampled for laboratory testing of relevant parameters of concern;
- Both soil and groundwater samples will be submitted for chemical analysis by a CALA laboratory in accordance with the Ontario MOECC standards and requirements of O.Reg. 153/04 under the Environmental Protection Act.

All field equipment is to be calibrated at the start of each field day, in accordance with DS's Standard Operating Procedures (SOPs). Clean, disposable Nitrile™ gloves will be used at each sampling interval to reduce the risk of cross contamination. All non-dedicated equipment (e.g. split spoon sampler, interface probe, etc.) will be decontaminated between each borehole. The equipment will be brushed free of debris, washed with phosphate-free detergent, and then rinsed with analyte free water.

The proposed monitoring wells will be installed using 50 mm inner diameter Schedule 40 polyvinyl chloride (PVC), equipped with 50 mm inner diameter Schedule 40 PVC with #10 slot well screens. A silica sand filter pack will be placed around the well screen and up to 0.61 metres above the top of the well screen. The well annulus will be sealed with hydrated bentonite. All wells will be protected with either a flush mount well casing, or a locked monument style casing.

The proposed analytical program is outlined below (proposed program subject to change as a result of site observations/findings). All soil and groundwater sampling will be carried out in accordance with DS's SOPs.

<u>Soils:</u>

- Eleven (11) soil samples for analysis of metals and inorganics, six (6) samples for petroleum hydrocarbons (PHCs) (F1-F4) and BTEX, four (4) samples for volatile organic compounds (VOCs), six (6) polycyclic aromatic hydrocarbons (PAHs), one (1) for Organochlorine Pesticides and Polychlorinated Biphenyls (OCPs and PCBs), and one (1) for dioxins and furans. Seven (7) samples will be submitted for QA/QC purposes.

One quality control/quality assurance (QAQC) sample will be submitted for analysis per ten (10) samples analyzed in accordance with O.Reg. 153/04.

One (1) representative composite soil sample collected from the soil cuttings generated by the proposed drilling activities will be submitted for analysis of leachate concentrations of inorganics, VOCs, benzo(a)pyrene, and PCBs in accordance with the Toxicity Characteristic Leaching Procedure as described under O.Reg. 347/90 (as amended). This analysis will be used to characterize the soil cuttings and on-site soils for off-dSite disposal purposes.

Groundwater:

- One (1) groundwater sample for analysis of metals and inorganics, and one (1) sample for PAHs. One (1) field sample will be submitted for QA/QC purposes.

One quality control/quality assurance (QAQC) sample will be submitted for analysis per ten (10) samples analyzed in accordance with O.Reg. 153/04. One laboratory supplied trip blank will be submitted as part of each sample submission event for analysis of volatile parameters (i.e. VOCs, BTEX, PHCs F1-BTEX).

Following receipt of all of the results, a report in accordance with O.Reg. 153/04 will be prepared.

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.

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.

Kirstin Olsen, M.Sc., C.E.T., LET, QP_{ESA}
Senior Project Manager – Environmental Services

Appendix B

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LOG OF BOREHOLE BH24-1

PROJECT: Williamsport Phase Two ESA
CLIENT: 1470 Williamsport Holdings Inc.
PROJECT LOCATION: 1470 Williamsport Drive, Mississauga, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4830460 E 613408

DRILLING DATA
Method: Hollow Stem Auger / Mud Rotary
Diameter: 150 mm
Date: Aug/09/2024

REF. NO.: 24-300-100
ENCL NO.: 1

ELEV / DEPTH (m)	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	BLOWS 0.3 m "N"	GROUND WATER CONDITIONS	ELEVATION	Soil Head Space Vapors PID (ppm) 10 20 30 40	Soil Head Space Vapors CGD (ppm) 10 20 30 40	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L WATER CONTENT (%) 10 20 30	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
139.8													
139.7 / 0.1	**TOPSOIL:** 106 mm												
	FILL: silty sand, trace gravel, trace organic, brown, loose, moist.		1	SS									Metals and ORPs, OCPs (DUP1, DUP7)
	At 0.8 m, trace rock fragments, brownish grey, very dense.						139						
1	At 1.5 m, cobble/boulder, trace clay.		2	SS									Metals and ORPs, PAHs (DUP2)
			3	SS			138						
2 / 137.5													
2.3	**SAND:** trace gravel, trace clay, trace silt, brown, moist, dense.		4	SS									PHCs, BTEX, pH (DUP3)
							137						
3			5	SS									VOCs
136.1													
3.7	**END OF BOREHOLE:** Notes: 1) Borehole backfilled with bentonite upon completion.												

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

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

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LOG OF BOREHOLE BH24-2

PROJECT: Williamsport Phase Two ESA
CLIENT: 1470 Williamsport Holdings Inc.
PROJECT LOCATION: 1470 Williamsport Drive, Mississauga, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4830440 E 613423

DRILLING DATA
Method: Hollow Stem Auger / Mud Rotary
Diameter: 150 mm
Date: Aug/09/2024

REF. NO.: 24-300-100
ENCL NO.: 2

ELEV / DEPTH (m)	DESCRIPTION	STRATA PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" BLOWS 0.3 m	GROUND WATER CONDITIONS	ELEVATION	Soil Head Space Vapors: PID (ppm)	Soil Head Space Vapors: CGD (ppm)	PLASTIC LIMIT / NATURAL MOISTURE CONTENT / LIQUID LIMIT; WATER CONTENT (%)	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
139.3													
139.2	**TOPSOIL:** 106 mm												
0.1	**FILL:** silty sand, trace gravel, trace organic, brown, loose, moist.		1	SS			139						Metals and ORPs, PAHs
	At 0.8 m, compact sand.												
1			2	SS			138						
137.8													
1.5	**SAND:** trace silt, brown, native, moist, compact.		3	SS									
2	At 2.3 m, trace gravel.						137						PHCs, BTEX, pH
			4	SS									
3													
			5	SS			136						VOCs
135.6													
3.7	**END OF BOREHOLE:**												

Notes:
1) Borehole backfilled with bentonite upon completion.

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GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

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

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LOG OF BOREHOLE BH24-3

PROJECT: Williamsport Phase Two ESA
CLIENT: 1470 Williamsport Holdings Inc.
PROJECT LOCATION: 1470 Williamsport Drive, Mississauga, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4830481 E 613425

DRILLING DATA
Method: Hollow Stem Auger / Mud Rotary
Diameter: 150 mm
Date: Aug/09/2024

REF. NO.: 24-300-100
ENCL NO.: 3

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	SAMPLES NUMBER	TYPE	BLOWS 0.3 m "N"	GROUND WATER CONDITIONS	ELEVATION	Soil Head Space Vapors PID (ppm) 10 20 30 40	CGD (ppm) 10 20 30 40	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L WATER CONTENT (%) 10 20 30	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
139.7													
139.6	**TOPSOIL:** 127 mm												
0.1	**FILL:** silty sand, trace gravel, trace organic, brown, loose, moist.		1	SS									PAHs, OCPs
	At 1.5 m, trace concrete fragments, trace organic.		2	SS			139						Metals and ORPs
			3	SS			138						
137.0			4	SS									PHCs, BTEX
2.7	**SILTY SAND TILL:** trace gravel, trace clay, brown, very moist.		5	SS			137						VOCs
136.0													
3.7	**END OF BOREHOLE:** Notes: 1) Borehole backfilled with bentonite upon completion.						136						

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

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

DS ENVIRO 0-50 PPM-2021 24-300-100 ENV.GPJ DS.GDT 1/8/25

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LOG OF BOREHOLE BH24-4

PROJECT: Williamsport Phase Two ESA
CLIENT: 1470 Williamsport Holdings Inc.
PROJECT LOCATION: 1470 Williamsport Drive, Mississauga, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4830539 E 613474

DRILLING DATA
Method: Hollow Stem Auger / Mud Rotary
Diameter: 150 mm
Date: Aug/09/2024

REF. NO.: 24-300-100
ENCL NO.: 4

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	SAMPLES NUMBER	TYPE	"N" BLOWS 0.3 m	GROUND WATER CONDITIONS	ELEVATION	Soil Head Space Vapors PID (ppm) 10 20 30 40	CGD (ppm) 10 20 30 40	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L WATER CONTENT (%) 10 20 30	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
138.0													
138.0	**TOPSOIL:** 106mm												
0.1	**FILL:** silty sand, trace gravel, trace organic, trace clay, brown, moist, loose.		1	SS									PCBs, pH (DUP5)
1			2	SS			137						
136.5													
1.5	**SANDY SILT TILL:** trace gravel, trace clay, brown, moist.		3	SS									pH
2 135.9							136						
2.1	**END OF BOREHOLE:**												

Notes:
1) Borehole backfilled with bentonite upon completion.

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

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

DS ENVIRO 0-50 PPM-2021 24-300-100 ENV.GPJ DS.GDT 1/8/25

DS CONSULTANTS LTD.
Geotechnical ◆ Environmental ◆ Materials ◆ Hydrogeology

LOG OF BOREHOLE MW24-5

PROJECT: Williamsport Phase Two ESA
CLIENT: 1470 Williamsport Holdings Inc.
PROJECT LOCATION: 1470 Williamsport Drive, Mississauga, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4830524 E 613491

DRILLING DATA
Method: Hollow Stem Auger / Mud Rotary
Diameter: 150 mm
Date: Aug/09/2024

REF. NO.: 24-300-100
ENCL NO.: 5

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	BLOWS "N" 0.3 m	GROUND WATER CONDITIONS	ELEVATION	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
139.2								
139.0 0.1	**TOPSOIL:** 152 mm							
	FILL: silty sand, trace gravel, trace organic, brown, moist.		1	SS			139	Metals and ORPs (DUP4)
	At 0.8m, silty clay, trace sand, trace silt, trace fragmented rock.		2	SS			138	PAHs
			3	SS				pH
136.9							137	
2.3	**SILTY SAND:** silty sand, trace clay, trace gravel, brown, moist.		4	SS				Dioxins/Furans, PAHs, PHCs, BTEX (DUP6)
			5	SS			136	
			6	SS			135	
							134	
			7	SS			133	
							132	
131.6								
7.6	**SILTY CLAY TILL:** silty clay till, trace gravel, trace sand, grey, very moist.		8	SS		W. L. 131.3 masl Aug 12, 2024 masl Aug 14, 2024		
130.1								
9.1	**SILTY SAND TILL:** silty sand, grey, wet.		9	SS			130	PHCs, VOCs
129.5								
9.7	**END OF BOREHOLE:**							

Notes:
1) Monitoring well installed upon completion.
2) Water levels (mbgs):
August 12, 2024 7.93
August 14, 2024 8.11

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

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

POCKET PEN. (Cu) (kPa)

NATURAL UNIT WT (kN/m³)

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

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

Terraprobe

ABBREVIATIONS AND TERMINOLOGY

SAMPLING METHODS

AS	auger sample
CORE	cored sample
DP	direct push
FV	field vane
GS	grab sample
SS	split spoon
ST	shelby tube
WS	wash sample

PENETRATION RESISTANCE

Standard Penetration Test (SPT) resistance ('N' values) is defined as the number of blows by a hammer weighing 63.6 kg (140 lb.) falling freely for a distance of 0.76 m (30 in.) required to advance a standard 50 mm (2 in.) diameter split spoon sampler for a distance of 0.3 m (12 in.).

Dynamic Cone Test (DCT) resistance is defined as the number of blows by a hammer weighing 63.6 kg (140 lb.) falling freely for a distance of 0.76 m (30 in.) required to advance a conical steel point of 50 mm (2 in.) diameter and with 60° sides on 'A' size drill rods for a distance of 0.3 m (12 in.)."

COHESIONLESS SOILS

Compactness	'N' value
very loose	< 4
loose	4 – 10
compact	10 – 30
dense	30 – 50
very dense	> 50

COHESIVE SOILS

Consistency	'N' value	Undrained Shear Strength (kPa)
very soft	< 2	< 12
soft	2 – 4	12 – 25
firm	4 – 8	25 – 50
stiff	8 – 15	50 – 100
very stiff	15 – 30	100 – 200
hard	> 30	> 200

COMPOSITION

Term (e.g)	% by weight
trace silt	< 10
some silt	10 – 20
silty	20 – 35
sand *and* silt	> 35

TESTS AND SYMBOLS

MH	mechanical sieve and hydrometer analysis
w, w_c	water content
w_L, LL	liquid limit
w_P, PL	plastic limit
I_P, PI	plasticity index
k	coefficient of permeability
γ	soil unit weight, bulk
G_s	specific gravity
φ'	internal friction angle
c'	effective cohesion
c_u	undrained shear strength

▽	Unstabilized water level
▼	1st water level measurement
▼	2nd water level measurement
▼	Most recent water level measurement
3.0+	Undrained shear strength from field vane (with sensitivity)
C_c	compression index
c_v	coefficient of consolidation
m_v	coefficient of compressibility
e	void ratio
PID	photoionization detector
FID	flame ionization detector

FIELD MOISTURE DESCRIPTIONS

Damp	refers to a soil sample that does not exhibit any observable pore water from field/hand inspection.
Moist	refers to a soil sample that exhibits evidence of existing pore water (e.g. sample feels cool, cohesive soil is at plastic limit) but does not have visible pore water
Wet	refers to a soil sample that has visible pore water

LOG OF BOREHOLE 1

Terraprobe

Project No. : 1-21-0802-01	Client : 1470 Williamsport Holdings Inc	Originated by : BR
Date started : January 7, 2022	Project : 1470 Williamsport Drive	Compiled by : HR
Sheet No. : 1 of 2	Location : Mississauga, Ontario	Checked by : AR

Position : E: 613408, N: 4830459 (UTM 17T) Elevation Datum : Geodetic

Rig type : Truck-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value	Elevation Scale (m)
0	140.7	**GROUND SURFACE**					
		150mm **TOPSOIL**					
		FILL, sandy silt to silty sand, trace clay, trace gravel, trace organics, trace construction debris, compact to very dense, dark brown to brown, moist		1	SS	24	
1				2	SS	50 / 75mm	140
				3	SS	20	139
2	138.4						
	2.3	**SAND**, trace silt, trace clay, very dense, brown, moist		4	SS	66	138
3				5	SS	61	
							137
4							
				6	SS	52	136
5							
							135
6		...trace gravel		7	SS	84	
							134
7							
				8	SS	50 / 150mm	133
8							
							132
9		...trace gravel		9	SS	81	
							131
10							

Penetration Test Values (Blows / 0.3m)
× Dynamic Cone
10 20 30 40
Undrained Shear Strength (kPa)
○ Unconfined + Field Vane
● Pocket Penetrometer ■ Lab Vane
40 80 120 160

Moisture / Plasticity
Plastic Limit | Natural Water Content | Liquid Limit
PL MC LL
10 20 30

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT)
GR SA SI CL

(continued next page)

LOG OF BOREHOLE 1

Terraprobe

Project No. : 1-21-0802-01	Client : 1470 Williamsport Holdings Inc	Originated by : BR
Date started : January 7, 2022	Project : 1470 Williamsport Drive	Compiled by : HR
Sheet No. : 2 of 2	Location : Mississauga, Ontario	Checked by : AR

Position : E: 613408, N: 4830459 (UTM 17T) Elevation Datum : Geodetic

Rig type : Truck-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value	Elevation Scale (m)
		(continued)					
		SAND, trace silt, trace clay, very dense, brown, moist *(continued)*					
		...wet		10	SS	61	130
11							
							129
12	128.5						
	128.4	Interred bedrock, weathered to partially unweathered shale with intermittent limestone/dolostone stringers, grey (GEORGIAN BAY FORMATION)		11	SS	50 / 125mm	
	12.3	**END OF BOREHOLE**					

Penetration Test Values (Blows / 0.3m): × Dynamic Cone; 10 20 30 40

Undrained Shear Strength (kPa): ○ Unconfined + Field Vane ● Pocket Penetrometer ■ Lab Vane; 40 80 120 160

Moisture / Plasticity: Plastic Limit (PL) Natural Water Content (MC) Liquid Limit (LL); 10 20 30

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT): GR SA SI CL

Unstabilized water level measured at 10.4 m below ground surface; borehole caved to 11.9 m below ground surface upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Jan 13, 2022	10.7	130.0
Jan 24, 2022	10.7	130.0
Feb 3, 2022	10.7	130.0
Feb 15, 2022	10.7	130.0

Terraprobe

LOG OF BOREHOLE 2

Project No. : 1-21-0802-01 | Client : 1470 Williamsport Holdings Inc | Originated by : BR

Date started : January 6, 2022 | Project : 1470 Williamsport Drive | Compiled by : HR

Sheet No. : 1 of 2 | Location : Mississauga, Ontario | Checked by : AR

Position : E: 613429, N: 4830470 (UTM 17T) | Elevation Datum : Geodetic

Rig type : Truck-mounted | Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value	Elevation Scale (m)
	139.7	**GROUND SURFACE**					
0	139.5	90mm **ASPHALT**					
	0.2	100mm **AGGREGATE**		1	SS	23	
		FILL, sandy silt to silty sand, trace clay, trace gravel, trace organics, trace construction debris, compact to very dense, dark brown to brown, moist		2	SS	50 / 150mm	139
1				3	SS	35	
2				4A	SS	46	138
	137.2			4B			
	2.5	**SAND**, trace silt, trace clay, trace gravel, dense to very dense, brown, moist		5	SS	58	137
3							
4				6	SS	57	136
5							
				7	SS	78	135
6							
				8	SS	57 / 150mm	134
7							
		...wet below		9	SS	60	133
8							
							132
9							
							131
10							
							130

Penetration Test Values (Blows / 0.3m)
× Dynamic Cone
10 20 30 40
Undrained Shear Strength (kPa)
○ Unconfined + Field Vane
● Pocket Penetrometer ■ Lab Vane
40 80 120 160

Moisture / Plasticity
Plastic Limit | Natural Water Content | Liquid Limit
PL MC LL
10 20 30

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

Lab Data and Comments
GRAIN SIZE DISTRIBUTION (%) (MIT)
GR SA SI CL
9 82 7 2

(continued next page)

LOG OF BOREHOLE 2

Project No. : 1-21-0802-01 | Client : 1470 Williamsport Holdings Inc | Originated by : BR

Date started : January 6, 2022 | Project : 1470 Williamsport Drive | Compiled by : HR

Sheet No. : 2 of 2 | Location : Mississauga, Ontario | Checked by : AR

Position : E: 613429, N: 4830470 (UTM 17T) | Elevation Datum : Geodetic

Rig type : Truck-mounted | Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value	Elevation Scale (m)
		(continued)					
11		**SAND**, trace silt, trace clay, trace gravel, dense to very dense, brown, moist *(continued)*		10	SS	77	129
12	127.5						128
	127.4 12.3	Interred bedrock, weathered to partially unweathered shale with intermittent limestone/dolostone stringers		11	SS	50 / 75mm	

Penetration Test Values (Blows / 0.3m): × Dynamic Cone 10 20 30 40

Undrained Shear Strength (kPa): ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane 40 80 120 160

Moisture / Plasticity: Plastic Limit (PL) 10 | Natural Water Content (MC) 20 | Liquid Limit (LL) 30

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

END OF BOREHOLE

Unstabilized water level measured at 9.4 m below ground surface; borehole caved to 11.9 m below ground surface upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Jan 13, 2022	9.7	130.0
Jan 24, 2022	9.7	130.0
Feb 3, 2022	9.7	130.0
Feb 15, 2022	9.7	130.0

LOG OF BOREHOLE 3D

Terraprobe

Project No. : 1-21-0802-01	Client : 1470 Williamsport Holdings Inc	Originated by : BR
Date started : January 6, 2022	Project : 1470 Williamsport Drive	Compiled by : HR
Sheet No. : 1 of 2	Location : Mississauga, Ontario	Checked by : AR

Position : E: 613437, N: 4830430 (UTM 17T) Elevation Datum : Geodetic

Rig type : Truck-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
0	139.2	**GROUND SURFACE**				
		75mm **TOPSOIL**				
		FILL, sandy silt to silty sand, trace clay, trace gravel, trace organics, trace construction debris, very loose to loose, dark brown to brown, moist		1	SS	4
1				2	SS	7
				3	SS	4
2	136.9					
	2.3	**SAND**, trace silt, trace clay, dense to very dense, brown, moist		4	SS	32
3		...trace gravel		5	SS	42
4						
		...trace gravel		6	SS	47
5						
6				7	SS	50 / 150mm
7						
				8	SS	50 / 125mm
8						
9		...wet below		9	SS	75
10						

Elevation Scale (m): 139, 138, 137, 136, 135, 134, 133, 132, 131, 130

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10, 20, 30, 40

Undrained Shear Strength (kPa) — Unconfined, Pocket Penetrometer, Field Vane, Lab Vane: 40, 80, 120, 160

Moisture / Plasticity — Plastic Limit (PL), Natural Water Content (MC), Liquid Limit (LL): 10, 20, 30

Headspace Vapour (ppm)

Instrument Details — Unstabilized Water Level

Lab Data and Comments — GRAIN SIZE DISTRIBUTION (%) (MIT) — GR SA SI CL

0 93 6 1

(continued next page)

LOG OF BOREHOLE 3D

Terraprobe

Project No. : 1-21-0802-01	Client : 1470 Williamsport Holdings Inc	Originated by : BR
Date started : January 6, 2022	Project : 1470 Williamsport Drive	Compiled by : HR
Sheet No. : 2 of 2	Location : Mississauga, Ontario	Checked by : AR

Position : E: 613437, N: 4830430 (UTM 17T) Elevation Datum : Geodetic

Rig type : Truck-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa)	Moisture / Plasticity	Headspace Vapour (ppm)	Instrument Details	Unstabilized Water Level	Lab Data and Comments
		(continued)						Dynamic Cone 10 20 30 40; Unconfined, Pocket Penetrometer, Field Vane, Lab Vane 40 80 120 160	Plastic Limit, Natural Water Content, Liquid Limit PL MC LL 10 20 30				GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL
		SAND, trace silt, trace clay, dense to very dense, brown, moist *(continued)*					129						
		...trace gravel		10	SS	90							
11							128						
12	127.0												
	126.9 12.3	**SILTY SAND**, trace gravel/rock fragments, very dense, grey, moist		11	SS	50 / 125mm	127						

END OF BOREHOLE

Unstabilized water level measured at 9.1 m below ground surface; borehole was open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Jan 13, 2022	9.4	129.8
Jan 24, 2022	9.4	129.8
Feb 3, 2022	9.4	129.8
Feb 15, 2022	9.4	129.8

LOG OF BOREHOLE 3S

Terraprobe

Project No. : 1-21-0802-01	Client : 1470 Williamsport Holdings Inc	Originated by : BR
Date started : January 6, 2022	Project : 1470 Williamsport Drive	Compiled by : HR
Sheet No. : 1 of 1	Location : Mississauga, Ontario	Checked by : AR

Position : E: 613437, N: 4830430 (UTM 17T) Elevation Datum : Geodetic

Rig type : Truck-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value
	139.2	**GROUND SURFACE**				
0		75mm **TOPSOIL**		1	SS	4
		FILL, sandy silt to silty sand, trace clay, trace gravel, trace organics, trace construction debris, very loose to loose, dark brown to brown, moist				
1				2	SS	7
				3	SS	4
2	136.9					
	2.3	**SAND**, trace silt, trace clay, trace gravel, dense to very dense, brown, moist		4	SS	32
3		...trace gravel		5	SS	42
4	134.6					
	4.6	**END OF BOREHOLE**				

Elevation Scale (m): 139, 138, 137, 136, 135

Penetration Test Values (Blows / 0.3m): Dynamic Cone; Undrained Shear Strength (kPa): Unconfined, Pocket Penetrometer, Field Vane, Lab Vane

Moisture / Plasticity: Plastic Limit, Natural Water Content, Liquid Limit (PL, MC, LL)

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Borehole was dry and open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Jan 13, 2022	dry	n/a
Jan 24, 2022	dry	n/a
Feb 3, 2022	dry	n/a
Feb 15, 2022	dry	n/a

file: 1-21-0802-01 bh logs.gpj

Alignment: From E:613411, N:4830462, to E:613444, N:4830432

Elevation (m)

142 140 138 136 134 132 130 128 126

BH 1

50 mm dia. monitoring well

'N'

24 | 50 / 75mm | 20 | 66 | 61 | 52 | 84 | 50 / 150mm | 81 | 61 | 50 / 125mm

BH 2

50 mm dia. monitoring well

'N'

23 | 50 / 150mm | 35 | 46 | 58 | 57 | 9 - 82 - 7 - 2 | 78 | 57 / 150mm | 60 | 77 | 50 / 75mm

BH 3D

50 mm dia. monitoring well

'N'

4 | 7 | 4 | 32 | 42 | 47 | 50 / 150mm | 50 / 125mm | 0 - 93 - 6 - 1 | 75 | 90 | 50 / 125mm

BH 3S

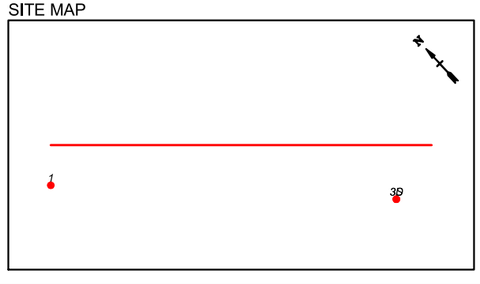
50 mm dia. monitoring well

'N'

4 | 7 | 4 | 32 | 42

Boreholes Equally Spaced

SITE MAP



LITHOLOGY GRAPHIC LEGEND

- Topsoil
- Asphalt
- Fill
- Aggregate
- Sand
- Silty Sand
- Bedrock

INTERPRETIVE LEGEND

- WL on completion of drilling
- Stabilized WL, most recent

- *FILL*
- *GRAVELS (gravel to gravelly sand)*
- *SILT TO SAND (not till)*
- *COHESIONLESS TILLS*
- *COHESIVE SOILS (clayey silt to clay, incl. tills)*
- *DISTURBED/REWORKED SOILS*

Terraprobe
11 Indell Lane, Brampton Ontario L6T 3Y3
(905) 796-2650

Title: **SUBSURFACE PROFILE**

File No.: **1-21-0802-01**

Report: ISECTION - TABLOID - ELEV

Appendix C

Your Project #: 24-300-100
Your C.O.C. #: N/A

Attention: Bindu Goel

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

Report Date: 2024/09/11
Report #: R8315569
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4O6235
Received: 2024/08/10, 08:30

Sample Matrix: Soil
Samples Received: 24

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	6	N/A	2024/08/15	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	6	2024/08/15	2024/08/16	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	4	N/A	2024/08/13		EPA 8260C m
Free (WAD) Cyanide	1	2024/08/13	2024/08/13	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	5	2024/08/14	2024/08/14	CAM SOP-00457	OMOE E3015 m
Conductivity	6	2024/08/14	2024/08/14	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	6	2024/08/17	2024/08/19	CAM SOP-00436	EPA 3060A/7199 m
Dioxins/Furans in Soil (1613B) (2)	1	2024/08/20	2024/09/10	BRL SOP-00410;BRL SOP-00407 & 405	EPA 1613B m
Dioxins/Furans in Soil (1613B) (2)	1	2024/08/20	2024/09/09	BRL SOP-00410;BRL SOP-00407 & 405	EPA 1613B m
Petroleum Hydro. CCME F1 & BTEX in Soil (3)	5	N/A	2024/08/14	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (4)	6	2024/08/14	2024/08/15	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	6	2024/08/16	2024/08/16	CAM SOP-00447	EPA 6020B m
Moisture	21	N/A	2024/08/10	CAM SOP-00445	Carter 2nd ed 70.2 m
PAH Compounds in Soil by GC/MS (SIM)	6	2024/08/13	2024/08/14	CAM SOP-00318	EPA 8270E
Polychlorinated Biphenyl in Soil	2	2024/08/12	2024/08/13	CAM SOP-00309	EPA 8082A m
pH CaCl2 EXTRACT	11	2024/08/14	2024/08/14	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	6	N/A	2024/08/15	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs	1	N/A	2024/08/12	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds in Soil	3	N/A	2024/08/12	CAM SOP-00228	EPA 8260D

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, EPA, APHA or the Quebec Ministry of Environment.

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

Your Project #: 24-300-100
Your C.O.C. #: N/A

Attention: Bindu Goel

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

Report Date: 2024/09/11
Report #: R8315569
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4O6235
Received: 2024/08/10, 08:30

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.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
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) Soils are reported on a dry weight basis unless otherwise specified.

Confirmatory runs for 2,3,7,8-TCDF are performed only if the primary result is greater than the RDL.
(3) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(4) 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.

Encryption Key

Bureau Veritas
11 Sep 2024 19:11:05

Please direct all questions regarding this Certificate of Analysis to:
Ashton Gibson, Project Manager
Email: ashton.gibson@bureauveritas.com
Phone# (905)817-5765

==========

This report has been generated and distributed using a secure automated process.
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 Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID			ZYT608	ZYT610		ZYT614		ZYT618		
Sampling Date			2024/08/09	2024/08/09		2024/08/09		2024/08/09		
COC Number			N/A	N/A		N/A		N/A		
	UNITS	Criteria	BH24-1 SS1	DUP1	QC Batch	BH24-2 SS1	QC Batch	BH24-3 SS2	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	5.0	0.31 (1)	0.32 (1)	9568697	0.43 (1)	9568697	0.36 (1)		9568697
Inorganics										
Conductivity	mS/cm	0.7	0.11	0.11	9575958	0.073	9575958	0.10	0.002	9575958
Available (CaCl2) pH	pH	-	7.90	7.87	9575290	8.01	9575290	7.91		9575290
WAD Cyanide (Free)	ug/g	0.051	<0.01	<0.01	9574762	<0.01	9572053	<0.01	0.01	9574762
Chromium (VI)	ug/g	8	<0.18	<0.18	9582926	<0.18	9582926	<0.18	0.18	9582926
Metals										
Hot Water Ext. Boron (B)	ug/g	1.5	0.086	0.090	9579186	<0.050	9579186	0.054	0.050	9579186
Acid Extractable Antimony (Sb)	ug/g	7.5	<0.20	<0.20	9580628	<0.20	9580628	<0.20	0.20	9580628
Acid Extractable Arsenic (As)	ug/g	18	1.7	1.7	9580628	1.7	9580628	<1.0	1.0	9580628
Acid Extractable Barium (Ba)	ug/g	390	22	21	9580628	14	9580628	14	0.50	9580628
Acid Extractable Beryllium (Be)	ug/g	4	0.21	0.28	9580628	<0.20	9580628	<0.20	0.20	9580628
Acid Extractable Boron (B)	ug/g	120	<5.0	<5.0	9580628	<5.0	9580628	<5.0	5.0	9580628
Acid Extractable Cadmium (Cd)	ug/g	1.2	<0.10	<0.10	9580628	<0.10	9580628	<0.10	0.10	9580628
Acid Extractable Chromium (Cr)	ug/g	160	7.4	7.5	9580628	8.8	9580628	5.6	1.0	9580628
Acid Extractable Cobalt (Co)	ug/g	22	3.4	3.1	9580628	4.7	9580628	2.5	0.10	9580628
Acid Extractable Copper (Cu)	ug/g	140	8.1	7.5	9580628	9.6	9580628	5.0	0.50	9580628
Acid Extractable Lead (Pb)	ug/g	120	6.5	7.2	9580628	8.7	9580628	3.2	1.0	9580628
Acid Extractable Molybdenum (Mo)	ug/g	6.9	<0.50	<0.50	9580628	<0.50	9580628	<0.50	0.50	9580628
Acid Extractable Nickel (Ni)	ug/g	100	6.8	6.0	9580628	7.5	9580628	4.8	0.50	9580628
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	<0.50	9580628	<0.50	9580628	<0.50	0.50	9580628
Acid Extractable Silver (Ag)	ug/g	20	<0.20	<0.20	9580628	<0.20	9580628	<0.20	0.20	9580628
Acid Extractable Thallium (Tl)	ug/g	1	0.053	<0.050	9580628	<0.050	9580628	<0.050	0.050	9580628
Acid Extractable Uranium (U)	ug/g	23	0.53	0.38	9580628	0.36	9580628	0.28	0.050	9580628
Acid Extractable Vanadium (V)	ug/g	86	17	17	9580628	25	9580628	13	5.0	9580628
Acid Extractable Zinc (Zn)	ug/g	340	24	23	9580628	26	9580628	13	5.0	9580628
Acid Extractable Mercury (Hg)	ug/g	0.27	<0.050	<0.050	9580628	<0.050	9580628	<0.050	0.050	9580628

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.

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O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID			ZYT625	ZYT626		
Sampling Date			2024/08/09	2024/08/09		
COC Number			N/A	N/A		
	UNITS	Criteria	MW24-5 SS1	DUP4	RDL	QC Batch
Calculated Parameters						
Sodium Adsorption Ratio	N/A	5.0	0.33 (1)	0.33 (1)		9568697
Inorganics						
Conductivity	mS/cm	0.7	0.10	0.11	0.002	9575958
Available (CaCl2) pH	pH	-	7.93	7.85		9575290
WAD Cyanide (Free)	ug/g	0.051	<0.01	<0.01	0.01	9574762
Chromium (VI)	ug/g	8	<0.18	<0.18	0.18	9582926
Metals						
Hot Water Ext. Boron (B)	ug/g	1.5	0.070	0.073	0.050	9579186
Acid Extractable Antimony (Sb)	ug/g	7.5	<0.20	<0.20	0.20	9580628
Acid Extractable Arsenic (As)	ug/g	18	1.5	2.0	1.0	9580628
Acid Extractable Barium (Ba)	ug/g	390	16	22	0.50	9580628
Acid Extractable Beryllium (Be)	ug/g	4	<0.20	0.21	0.20	9580628
Acid Extractable Boron (B)	ug/g	120	<5.0	<5.0	5.0	9580628
Acid Extractable Cadmium (Cd)	ug/g	1.2	<0.10	<0.10	0.10	9580628
Acid Extractable Chromium (Cr)	ug/g	160	7.1	8.4	1.0	9580628
Acid Extractable Cobalt (Co)	ug/g	22	2.8	3.6	0.10	9580628
Acid Extractable Copper (Cu)	ug/g	140	6.8	9.1	0.50	9580628
Acid Extractable Lead (Pb)	ug/g	120	9.4	13	1.0	9580628
Acid Extractable Molybdenum (Mo)	ug/g	6.9	<0.50	<0.50	0.50	9580628
Acid Extractable Nickel (Ni)	ug/g	100	5.4	7.4	0.50	9580628
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	<0.50	0.50	9580628
Acid Extractable Silver (Ag)	ug/g	20	<0.20	<0.20	0.20	9580628
Acid Extractable Thallium (Tl)	ug/g	1	<0.050	0.054	0.050	9580628
Acid Extractable Uranium (U)	ug/g	23	0.32	0.35	0.050	9580628
Acid Extractable Vanadium (V)	ug/g	86	16	19	5.0	9580628
Acid Extractable Zinc (Zn)	ug/g	340	20	24	5.0	9580628
Acid Extractable Mercury (Hg)	ug/g	0.27	<0.050	<0.050	0.050	9580628

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.

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O.REG 153 PAHS (SOIL)

Bureau Veritas ID			ZYT609	ZYT611	ZYT614			ZYT614		
Sampling Date			2024/08/09	2024/08/09	2024/08/09			2024/08/09		
COC Number			N/A	N/A	N/A			N/A		
	UNITS	Criteria	BH24-1 SS2	DUP2	BH24-2 SS1	RDL	QC Batch	BH24-2 SS1 Lab-Dup	RDL	QC Batch
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	-	<0.0071	<0.0071	<0.0071	0.0071	9568698			
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	7.9	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Acenaphthylene	ug/g	0.15	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Anthracene	ug/g	0.67	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Benzo(a)anthracene	ug/g	0.5	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Benzo(a)pyrene	ug/g	0.3	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Benzo(b/j)fluoranthene	ug/g	0.78	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Benzo(g,h,i)perylene	ug/g	6.6	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Chrysene	ug/g	7	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Fluoranthene	ug/g	0.69	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Fluorene	ug/g	62	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Indeno(1,2,3-cd)pyrene	ug/g	0.38	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
1-Methylnaphthalene	ug/g	0.99	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
2-Methylnaphthalene	ug/g	0.99	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Naphthalene	ug/g	0.6	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Phenanthrene	ug/g	6.2	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Pyrene	ug/g	78	<0.0050	<0.0050	<0.0050	0.0050	9574798	<0.0050	0.0050	9574798
Surrogate Recovery (%)										
D10-Anthracene	%	-	92	87	76		9574798	103		9574798
D14-Terphenyl (FS)	%	-	89	82	64		9574798	97		9574798
D8-Acenaphthylene	%	-	82	79	66		9574798	88		9574798

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

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O.REG 153 PAHS (SOIL)

Bureau Veritas ID			ZYT617	ZYT627	ZYT629		
Sampling Date			2024/08/09	2024/08/09	2024/08/09		
COC Number			N/A	N/A	N/A		
	UNITS	Criteria	BH24-3 SS1	MW24-5 SS2	MW24-5 SS4	RDL	QC Batch
Calculated Parameters							
Methylnaphthalene, 2-(1-)	ug/g	-	<0.0071	<0.0071	<0.0071	0.0071	9568698
Polyaromatic Hydrocarbons							
Acenaphthene	ug/g	7.9	<0.0050	<0.0050	<0.0050	0.0050	9574798
Acenaphthylene	ug/g	0.15	<0.0050	<0.0050	<0.0050	0.0050	9574798
Anthracene	ug/g	0.67	<0.0050	<0.0050	<0.0050	0.0050	9574798
Benzo(a)anthracene	ug/g	0.5	<0.0050	<0.0050	<0.0050	0.0050	9574798
Benzo(a)pyrene	ug/g	0.3	<0.0050	<0.0050	<0.0050	0.0050	9574798
Benzo(b/j)fluoranthene	ug/g	0.78	<0.0050	<0.0050	<0.0050	0.0050	9574798
Benzo(g,h,i)perylene	ug/g	6.6	<0.0050	<0.0050	<0.0050	0.0050	9574798
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	<0.0050	<0.0050	0.0050	9574798
Chrysene	ug/g	7	<0.0050	<0.0050	<0.0050	0.0050	9574798
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	<0.0050	<0.0050	0.0050	9574798
Fluoranthene	ug/g	0.69	0.0078	<0.0050	<0.0050	0.0050	9574798
Fluorene	ug/g	62	<0.0050	<0.0050	<0.0050	0.0050	9574798
Indeno(1,2,3-cd)pyrene	ug/g	0.38	<0.0050	<0.0050	<0.0050	0.0050	9574798
1-Methylnaphthalene	ug/g	0.99	<0.0050	<0.0050	<0.0050	0.0050	9574798
2-Methylnaphthalene	ug/g	0.99	<0.0050	<0.0050	<0.0050	0.0050	9574798
Naphthalene	ug/g	0.6	<0.0050	<0.0050	<0.0050	0.0050	9574798
Phenanthrene	ug/g	6.2	0.0060	<0.0050	<0.0050	0.0050	9574798
Pyrene	ug/g	78	0.0059	<0.0050	<0.0050	0.0050	9574798
Surrogate Recovery (%)							
D10-Anthracene	%	-	107	99	104		9574798
D14-Terphenyl (FS)	%	-	100	96	98		9574798
D8-Acenaphthylene	%	-	89	86	81		9574798

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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O.REG 153 PCBS (SOIL)

Bureau Veritas ID			ZYT621	ZYT624		
Sampling Date			2024/08/09	2024/08/09		
COC Number			N/A	N/A		
	UNITS	Criteria	BH24-4 SS1	DUP5	RDL	QC Batch
PCBs						
Aroclor 1242	ug/g	-	<0.010	<0.010	0.010	9571819
Aroclor 1248	ug/g	-	<0.010	<0.010	0.010	9571819
Aroclor 1254	ug/g	-	<0.010	<0.010	0.010	9571819
Aroclor 1260	ug/g	-	<0.010	<0.010	0.010	9571819
Total PCB	ug/g	0.35	<0.010	<0.010	0.010	9571819
Surrogate Recovery (%)						
Decachlorobiphenyl	%	-	96	87		9571819

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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O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

Bureau Veritas ID			ZYT612	ZYT615	ZYT619	ZYT623	ZYT629		
Sampling Date			2024/08/09	2024/08/09	2024/08/09	2024/08/09	2024/08/09		
COC Number			N/A	N/A	N/A	N/A	N/A		
	UNITS	Criteria	BH24-1 SS4	BH24-2 SS4	BH24-3 SS4	DUP3	MW24-5 SS4	RDL	QC Batch
BTEX & F1 Hydrocarbons									
Benzene	ug/g	0.21	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	9573977
Toluene	ug/g	2.3	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	9573977
Ethylbenzene	ug/g	1.1	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	9573977
o-Xylene	ug/g	-	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	9573977
p+m-Xylene	ug/g	-	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9573977
Total Xylenes	ug/g	3.1	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9573977
F1 (C6-C10)	ug/g	55	<10	<10	<10	<10	<10	10	9573977
F1 (C6-C10) - BTEX	ug/g	55	<10	<10	<10	<10	<10	10	9573977
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	98	<10	<10	<10	<10	<10	10	9576187
F3 (C16-C34 Hydrocarbons)	ug/g	300	<50	<50	<50	<50	<50	50	9576187
F4 (C34-C50 Hydrocarbons)	ug/g	2800	<50	<50	<50	<50	<50	50	9576187
Reached Baseline at C50	ug/g	-	Yes	Yes	Yes	Yes	Yes		9576187
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	-	120	120	119	115	111		9573977
4-Bromofluorobenzene	%	-	95	86	97	86	100		9573977
D10-o-Xylene	%	-	93	96	107	101	104		9573977
D4-1,2-Dichloroethane	%	-	115	118	112	106	125		9573977
o-Terphenyl	%	-	102	103	107	104	107		9576187

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

Bureau Veritas ID			ZYT630			ZYT630		
Sampling Date			2024/08/09			2024/08/09		
COC Number			N/A			N/A		
	UNITS	Criteria	MW24-5 SS9	RDL	QC Batch	MW24-5 SS9 Lab-Dup	RDL	QC Batch
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	0.05	<0.050	0.050	9568401			
Volatile Organics								
Acetone (2-Propanone)	ug/g	16	<0.49	0.49	9569568			
Benzene	ug/g	0.21	<0.0060	0.0060	9569568			
Bromodichloromethane	ug/g	1.5	<0.040	0.040	9569568			
Bromoform	ug/g	0.27	<0.040	0.040	9569568			
Bromomethane	ug/g	0.05	<0.040	0.040	9569568			
Carbon Tetrachloride	ug/g	0.05	<0.040	0.040	9569568			
Chlorobenzene	ug/g	2.4	<0.040	0.040	9569568			
Chloroform	ug/g	0.05	<0.040	0.040	9569568			
Dibromochloromethane	ug/g	2.3	<0.040	0.040	9569568			
1,2-Dichlorobenzene	ug/g	1.2	<0.040	0.040	9569568			
1,3-Dichlorobenzene	ug/g	4.8	<0.040	0.040	9569568			
1,4-Dichlorobenzene	ug/g	0.083	<0.040	0.040	9569568			
Dichlorodifluoromethane (FREON 12)	ug/g	16	<0.040	0.040	9569568			
1,1-Dichloroethane	ug/g	0.47	<0.040	0.040	9569568			
1,2-Dichloroethane	ug/g	0.05	<0.049	0.049	9569568			
1,1-Dichloroethylene	ug/g	0.05	<0.040	0.040	9569568			
cis-1,2-Dichloroethylene	ug/g	1.9	<0.040	0.040	9569568			
trans-1,2-Dichloroethylene	ug/g	0.084	<0.040	0.040	9569568			
1,2-Dichloropropane	ug/g	0.05	<0.040	0.040	9569568			
cis-1,3-Dichloropropene	ug/g	0.05	<0.030	0.030	9569568			
trans-1,3-Dichloropropene	ug/g	0.05	<0.040	0.040	9569568			
Ethylbenzene	ug/g	1.1	<0.010	0.010	9569568			
Ethylene Dibromide	ug/g	0.05	<0.040	0.040	9569568			
Hexane	ug/g	2.8	<0.040	0.040	9569568			
Methylene Chloride(Dichloromethane)	ug/g	0.1	<0.049	0.049	9569568			

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

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

Bureau Veritas ID			ZYT630			ZYT630		
Sampling Date			2024/08/09			2024/08/09		
COC Number			N/A			N/A		
	UNITS	Criteria	MW24-5 SS9	RDL	QC Batch	MW24-5 SS9 Lab-Dup	RDL	QC Batch
Methyl Ethyl Ketone (2-Butanone)	ug/g	16	<0.40	0.40	9569568			
Methyl Isobutyl Ketone	ug/g	1.7	<0.40	0.40	9569568			
Methyl t-butyl ether (MTBE)	ug/g	0.75	<0.040	0.040	9569568			
Styrene	ug/g	0.7	<0.040	0.040	9569568			
1,1,1,2-Tetrachloroethane	ug/g	0.058	<0.040	0.040	9569568			
1,1,2,2-Tetrachloroethane	ug/g	0.05	<0.040	0.040	9569568			
Tetrachloroethylene	ug/g	0.28	<0.040	0.040	9569568			
Toluene	ug/g	2.3	<0.020	0.020	9569568			
1,1,1-Trichloroethane	ug/g	0.38	<0.040	0.040	9569568			
1,1,2-Trichloroethane	ug/g	0.05	<0.040	0.040	9569568			
Trichloroethylene	ug/g	0.061	<0.010	0.010	9569568			
Trichlorofluoromethane (FREON 11)	ug/g	4	<0.040	0.040	9569568			
Vinyl Chloride	ug/g	0.02	<0.019	0.019	9569568			
p+m-Xylene	ug/g	-	<0.020	0.020	9569568			
o-Xylene	ug/g	-	<0.020	0.020	9569568			
Total Xylenes	ug/g	3.1	<0.020	0.020	9569568			
F1 (C6-C10)	ug/g	55	<10	10	9569568			
F1 (C6-C10) - BTEX	ug/g	55	<10	10	9569568			
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	98	<10	10	9576187	<10	10	9576187
F3 (C16-C34 Hydrocarbons)	ug/g	300	<50	50	9576187	<50	50	9576187
F4 (C34-C50 Hydrocarbons)	ug/g	2800	<50	50	9576187	<50	50	9576187
Reached Baseline at C50	ug/g	-	Yes		9576187	Yes		9576187
Surrogate Recovery (%)								
o-Terphenyl	%	-	105		9576187	106		9576187
4-Bromofluorobenzene	%	-	99		9569568			
D10-o-Xylene	%	-	86		9569568			
D4-1,2-Dichloroethane	%	-	102		9569568			

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

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

Bureau Veritas ID			ZYT630			ZYT630		
Sampling Date			2024/08/09			2024/08/09		
COC Number			N/A			N/A		
	UNITS	**Criteria**	**MW24-5 SS9**	**RDL**	**QC Batch**	**MW24-5 SS9 Lab-Dup**	**RDL**	**QC Batch**
D8-Toluene	%	-	95		9569568			

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

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O.REG 153 VOCS BY HS (SOIL)

Bureau Veritas ID			ZYT613	ZYT616	ZYT620		
Sampling Date			2024/08/09	2024/08/09	2024/08/09		
COC Number			N/A	N/A	N/A		
	UNITS	Criteria	BH24-1 SS5	BH24-2 SS5	BH24-3 SS5	RDL	QC Batch
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/g	0.05	<0.050	<0.050	<0.050	0.050	9568401
Volatile Organics							
Acetone (2-Propanone)	ug/g	16	<0.49	<0.49	<0.49	0.49	9569599
Benzene	ug/g	0.21	<0.0060	<0.0060	<0.0060	0.0060	9569599
Bromodichloromethane	ug/g	1.5	<0.040	<0.040	<0.040	0.040	9569599
Bromoform	ug/g	0.27	<0.040	<0.040	<0.040	0.040	9569599
Bromomethane	ug/g	0.05	<0.040	<0.040	<0.040	0.040	9569599
Carbon Tetrachloride	ug/g	0.05	<0.040	<0.040	<0.040	0.040	9569599
Chlorobenzene	ug/g	2.4	<0.040	<0.040	<0.040	0.040	9569599
Chloroform	ug/g	0.05	<0.040	<0.040	<0.040	0.040	9569599
Dibromochloromethane	ug/g	2.3	<0.040	<0.040	<0.040	0.040	9569599
1,2-Dichlorobenzene	ug/g	1.2	<0.040	<0.040	<0.040	0.040	9569599
1,3-Dichlorobenzene	ug/g	4.8	<0.040	<0.040	<0.040	0.040	9569599
1,4-Dichlorobenzene	ug/g	0.083	<0.040	<0.040	<0.040	0.040	9569599
Dichlorodifluoromethane (FREON 12)	ug/g	16	<0.040	<0.040	<0.040	0.040	9569599
1,1-Dichloroethane	ug/g	0.47	<0.040	<0.040	<0.040	0.040	9569599
1,2-Dichloroethane	ug/g	0.05	<0.049	<0.049	<0.049	0.049	9569599
1,1-Dichloroethylene	ug/g	0.05	<0.040	<0.040	<0.040	0.040	9569599
cis-1,2-Dichloroethylene	ug/g	1.9	<0.040	<0.040	<0.040	0.040	9569599
trans-1,2-Dichloroethylene	ug/g	0.084	<0.040	<0.040	<0.040	0.040	9569599
1,2-Dichloropropane	ug/g	0.05	<0.040	<0.040	<0.040	0.040	9569599
cis-1,3-Dichloropropene	ug/g	0.05	<0.030	<0.030	<0.030	0.030	9569599
trans-1,3-Dichloropropene	ug/g	0.05	<0.040	<0.040	<0.040	0.040	9569599
Ethylbenzene	ug/g	1.1	<0.010	<0.010	<0.010	0.010	9569599
Ethylene Dibromide	ug/g	0.05	<0.040	<0.040	<0.040	0.040	9569599
Hexane	ug/g	2.8	<0.040	<0.040	<0.040	0.040	9569599
Methylene Chloride(Dichloromethane)	ug/g	0.1	<0.049	<0.049	<0.049	0.049	9569599
Methyl Ethyl Ketone (2-Butanone)	ug/g	16	<0.40	<0.40	<0.40	0.40	9569599
Methyl Isobutyl Ketone	ug/g	1.7	<0.40	<0.40	<0.40	0.40	9569599
Methyl t-butyl ether (MTBE)	ug/g	0.75	<0.040	<0.040	<0.040	0.040	9569599

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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O.REG 153 VOCS BY HS (SOIL)

Bureau Veritas ID			ZYT613	ZYT616	ZYT620		
Sampling Date			2024/08/09	2024/08/09	2024/08/09		
COC Number			N/A	N/A	N/A		
	UNITS	Criteria	BH24-1 SS5	BH24-2 SS5	BH24-3 SS5	RDL	QC Batch
Styrene	ug/g	0.7	<0.040	<0.040	<0.040	0.040	9569599
1,1,1,2-Tetrachloroethane	ug/g	0.058	<0.040	<0.040	<0.040	0.040	9569599
1,1,2,2-Tetrachloroethane	ug/g	0.05	<0.040	<0.040	<0.040	0.040	9569599
Tetrachloroethylene	ug/g	0.28	<0.040	<0.040	<0.040	0.040	9569599
Toluene	ug/g	2.3	<0.020	<0.020	<0.020	0.020	9569599
1,1,1-Trichloroethane	ug/g	0.38	<0.040	<0.040	<0.040	0.040	9569599
1,1,2-Trichloroethane	ug/g	0.05	<0.040	<0.040	<0.040	0.040	9569599
Trichloroethylene	ug/g	0.061	<0.010	<0.010	<0.010	0.010	9569599
Trichlorofluoromethane (FREON 11)	ug/g	4	<0.040	<0.040	<0.040	0.040	9569599
Vinyl Chloride	ug/g	0.02	<0.019	<0.019	<0.019	0.019	9569599
p+m-Xylene	ug/g	-	<0.020	<0.020	<0.020	0.020	9569599
o-Xylene	ug/g	-	<0.020	<0.020	<0.020	0.020	9569599
Total Xylenes	ug/g	3.1	<0.020	<0.020	<0.020	0.020	9569599
Surrogate Recovery (%)							
4-Bromofluorobenzene	%	-	96	96	95		9569599
D10-o-Xylene	%	-	97	96	97		9569599
D4-1,2-Dichloroethane	%	-	108	108	109		9569599
D8-Toluene	%	-	93	93	93		9569599

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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Bureau Veritas Job #: C4O6235
Report Date: 2024/09/11

DS Consultants Limited
Client Project #: 24-300-100
Sampler Initials: DAS

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		ZYT608		ZYT609		ZYT610	ZYT610		ZYT611		
Sampling Date		2024/08/09		2024/08/09		2024/08/09	2024/08/09		2024/08/09		
COC Number		N/A		N/A		N/A	N/A		N/A		
	UNITS	BH24-1 SS1	QC Batch	BH24-1 SS2	QC Batch	DUP1	DUP1 Lab-Dup	QC Batch	DUP2	RDL	QC Batch
Inorganics											
Moisture	%	8.9	9569080	17	9569056	9.6	9.6	9569080	19	1.0	9569056

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		ZYT612		ZYT613		ZYT614		ZYT615		
Sampling Date		2024/08/09		2024/08/09		2024/08/09		2024/08/09		
COC Number		N/A		N/A		N/A		N/A		
	UNITS	BH24-1 SS4	QC Batch	BH24-1 SS5	QC Batch	BH24-2 SS1	QC Batch	BH24-2 SS4	RDL	QC Batch
Inorganics										
Moisture	%	5.0	9569056	4.0	9569080	5.9	9569056	5.4	1.0	9569056
Available (CaCl2) pH	pH	10.8	9575275					8.02		9575275

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		ZYT616		ZYT617		ZYT618		ZYT619		
Sampling Date		2024/08/09		2024/08/09		2024/08/09		2024/08/09		
COC Number		N/A		N/A		N/A		N/A		
	UNITS	BH24-2 SS5	QC Batch	BH24-3 SS1	QC Batch	BH24-3 SS2	QC Batch	BH24-3 SS4	RDL	QC Batch
Inorganics										
Moisture	%	4.1	9569080	13	9569056	7.8	9569080	15	1.0	9569056

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		ZYT620		ZYT621			ZYT622		ZYT623		
Sampling Date		2024/08/09		2024/08/09			2024/08/09		2024/08/09		
COC Number		N/A		N/A			N/A		N/A		
	UNITS	BH24-3 SS5	QC Batch	BH24-4 SS1	RDL	QC Batch	BH24-4 SS3	QC Batch	DUP3	RDL	QC Batch
Inorganics											
Moisture	%	9.6	9569080	8.6	1.0	9569056			3.3	1.0	9569056
Available (CaCl2) pH	pH			7.74		9575290	7.45	9575290			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		ZYT623	ZYT624		ZYT625	ZYT626		ZYT627		
Sampling Date		2024/08/09	2024/08/09		2024/08/09	2024/08/09		2024/08/09		
COC Number		N/A	N/A		N/A	N/A		N/A		
	UNITS	DUP3 Lab-Dup	DUP5	QC Batch	MW24-5 SS1	DUP4	QC Batch	MW24-5 SS2	RDL	QC Batch
Inorganics										
Moisture	%	3.4	7.5	9569056	8.3	7.6	9569080	12	1.0	9569056

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		ZYT628	ZYT628		ZYT629	ZYT630		
Sampling Date		2024/08/09	2024/08/09		2024/08/09	2024/08/09		
COC Number		N/A	N/A		N/A	N/A		
	UNITS	MW24-5 SS3	MW24-5 SS3 Lab-Dup	QC Batch	MW24-5 SS4	MW24-5 SS9	RDL	QC Batch
Inorganics								
Moisture	%				15	20	1.0	9569056
Available (CaCl2) pH	pH	7.74	7.74	9575290				

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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DIOXINS AND FURANS BY HRMS (SOIL)

Bureau Veritas ID		ZYT629						
Sampling Date		2024/08/09						
COC Number		N/A			TOXIC EQUIVALENCY		# of	
	UNITS	MW24-5 SS4	EDL	RDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch
Dioxins & Furans								
2,3,7,8-Tetra CDD *	pg/g	<0.253 (1)	0.253	1.00	1.00	0.253	0	9587136
1,2,3,7,8-Penta CDD *	pg/g	0.233	0.136	5.00	1.00	0.233	1	9587136
1,2,3,4,7,8-Hexa CDD *	pg/g	<0.193 (1)	0.193	5.00	0.100	0.0193	0	9587136
1,2,3,6,7,8-Hexa CDD *	pg/g	0.634	0.143	5.00	0.100	0.0634	1	9587136
1,2,3,7,8,9-Hexa CDD *	pg/g	0.837	0.147	5.00	0.100	0.0837	1	9587136
1,2,3,4,6,7,8-Hepta CDD *	pg/g	1.51	0.124	5.00	0.0100	0.0151	1	9587136
Octa CDD *	pg/g	7.92	0.140	10.0	0.000300	0.00238	1	9587136
Total Tetra CDD *	pg/g	<0.253	0.253	1.00			0	9587136
Total Penta CDD *	pg/g	0.233	0.136	5.00			1	9587136
Total Hexa CDD *	pg/g	1.96	0.150	5.00			4	9587136
Total Hepta CDD *	pg/g	2.57	0.124	5.00			2	9587136
2,3,7,8-Tetra CDF **	pg/g	0.191	0.113	1.00	0.100	0.0191	1	9587136
1,2,3,7,8-Penta CDF **	pg/g	0.390	0.138	5.00	0.0300	0.0117	1	9587136
2,3,4,7,8-Penta CDF **	pg/g	0.347	0.127	5.00	0.300	0.104	1	9587136
1,2,3,4,7,8-Hexa CDF **	pg/g	0.418	0.123	5.00	0.100	0.0418	1	9587136
1,2,3,6,7,8-Hexa CDF **	pg/g	<0.343 (1)	0.343	5.00	0.100	0.0343	0	9587136
2,3,4,6,7,8-Hexa CDF **	pg/g	0.822	0.117	5.00	0.100	0.0822	1	9587136
1,2,3,7,8,9-Hexa CDF **	pg/g	0.296	0.140	5.00	0.100	0.0296	1	9587136
1,2,3,4,6,7,8-Hepta CDF **	pg/g	1.48	0.128	5.00	0.0100	0.0148	1	9587136
1,2,3,4,7,8,9-Hepta CDF **	pg/g	0.469	0.142	5.00	0.0100	0.00469	1	9587136
Octa CDF **	pg/g	1.08	0.137	10.0	0.000300	0.000324	1	9587136
Total Tetra CDF **	pg/g	0.191	0.113	1.00			1	9587136
Total Penta CDF **	pg/g	0.737	0.132	5.00			2	9587136
Total Hexa CDF **	pg/g	2.44	0.124	5.00			5	9587136

EDL = Estimated Detection Limit

RDL = Reportable Detection Limit

TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.

WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

QC Batch = Quality Control Batch

* CDD = Chloro Dibenzo-p-Dioxin

** CDF = Chloro Dibenzo-p-Furan

(1) EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

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DIOXINS AND FURANS BY HRMS (SOIL)

Bureau Veritas ID		ZYT629						
Sampling Date		2024/08/09						
COC Number		N/A			**TOXIC EQUIVALENCY**		# of	
	UNITS	**MW24-5 SS4**	**EDL**	**RDL**	**TEF (2005 WHO)**	**TEQ(DL)**	**Isomers**	**QC Batch**
Total Hepta CDF **	pg/g	2.96	0.135	5.00			3	9587136
TOTAL TOXIC EQUIVALENCY	pg/g					1.01		
Surrogate Recovery (%)								
37CL4 2378 Tetra CDD *	%	64						9587136
C13-1234678 HeptaCDD *	%	73						9587136
C13-1234678 HeptaCDF **	%	69						9587136
C13-123478 HexaCDD *	%	75						9587136
C13-123478 HexaCDF **	%	67						9587136
C13-1234789 HeptaCDF **	%	74						9587136
C13-123678 HexaCDD *	%	85						9587136
C13-123678 HexaCDF **	%	70						9587136
C13-12378 PentaCDD *	%	69						9587136
C13-12378 PentaCDF **	%	60						9587136
C13-123789 HexaCDF **	%	72						9587136
C13-234678 HexaCDF **	%	71						9587136
C13-23478 PentaCDF **	%	61						9587136
C13-2378 TetraCDD *	%	67						9587136
C13-2378 TetraCDF **	%	67						9587136
C13-OCDD *	%	76						9587136

EDL = Estimated Detection Limit

RDL = Reportable Detection Limit

TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.

WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

QC Batch = Quality Control Batch

** CDF = Chloro Dibenzo-p-Furan

* CDD = Chloro Dibenzo-p-Dioxin

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DIOXINS AND FURANS BY HRMS (SOIL)

Bureau Veritas ID		ZYT631						
Sampling Date		2024/08/09						
COC Number		N/A			TOXIC EQUIVALENCY		# of	
	UNITS	DUP6	EDL	RDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch
Dioxins & Furans								
2,3,7,8-Tetra CDD *	pg/g	<0.134	0.134	1.00	1.00	0.134	0	9587136
1,2,3,7,8-Penta CDD *	pg/g	<0.139	0.139	5.00	1.00	0.139	0	9587136
1,2,3,4,7,8-Hexa CDD *	pg/g	<0.160	0.160	5.00	0.100	0.0160	0	9587136
1,2,3,6,7,8-Hexa CDD *	pg/g	<0.183 (1)	0.183	5.00	0.100	0.0183	0	9587136
1,2,3,7,8,9-Hexa CDD *	pg/g	<0.157 (1)	0.157	5.00	0.100	0.0157	0	9587136
1,2,3,4,6,7,8-Hepta CDD *	pg/g	1.54	0.124	5.00	0.0100	0.0154	1	9587136
Octa CDD *	pg/g	9.07	0.151	10.0	0.000300	0.00272	1	9587136
Total Tetra CDD *	pg/g	<0.134	0.134	1.00			0	9587136
Total Penta CDD *	pg/g	<0.139	0.139	5.00			0	9587136
Total Hexa CDD *	pg/g	0.804	0.160	5.00			2	9587136
Total Hepta CDD *	pg/g	2.98	0.124	5.00			2	9587136
2,3,7,8-Tetra CDF **	pg/g	<0.141	0.141	1.00	0.100	0.0141	0	9587136
1,2,3,7,8-Penta CDF **	pg/g	<0.129	0.129	5.00	0.0300	0.00387	0	9587136
2,3,4,7,8-Penta CDF **	pg/g	<0.116	0.116	5.00	0.300	0.0348	0	9587136
1,2,3,4,7,8-Hexa CDF **	pg/g	<0.128	0.128	5.00	0.100	0.0128	0	9587136
1,2,3,6,7,8-Hexa CDF **	pg/g	<0.125	0.125	5.00	0.100	0.0125	0	9587136
2,3,4,6,7,8-Hexa CDF **	pg/g	<0.122	0.122	5.00	0.100	0.0122	0	9587136
1,2,3,7,8,9-Hexa CDF **	pg/g	<0.161	0.161	5.00	0.100	0.0161	0	9587136
1,2,3,4,6,7,8-Hepta CDF **	pg/g	0.975	0.142	5.00	0.0100	0.00975	1	9587136
1,2,3,4,7,8,9-Hepta CDF **	pg/g	<0.181	0.181	5.00	0.0100	0.00181	0	9587136
Octa CDF **	pg/g	0.629	0.129	10.0	0.000300	0.000189	1	9587136
Total Tetra CDF **	pg/g	<0.141	0.141	1.00			0	9587136
Total Penta CDF **	pg/g	0.558	0.122	5.00			1	9587136
Total Hexa CDF **	pg/g	1.28	0.133	5.00			2	9587136

EDL = Estimated Detection Limit

RDL = Reportable Detection Limit

TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.

WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

QC Batch = Quality Control Batch

* CDD = Chloro Dibenzo-p-Dioxin

** CDF = Chloro Dibenzo-p-Furan

(1) EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

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DIOXINS AND FURANS BY HRMS (SOIL)

Bureau Veritas ID		ZYT631						
Sampling Date		2024/08/09						
COC Number		N/A			**TOXIC EQUIVALENCY**		# of	
	UNITS	**DUP6**	**EDL**	**RDL**	**TEF (2005 WHO)**	**TEQ(DL)**	**Isomers**	**QC Batch**
Total Hepta CDF **	pg/g	2.21	0.159	5.00			2	9587136
TOTAL TOXIC EQUIVALENCY	pg/g					0.459		
Surrogate Recovery (%)								
37CL4 2378 Tetra CDD *	%	84						9587136
C13-1234678 HeptaCDD *	%	87						9587136
C13-1234678 HeptaCDF **	%	83						9587136
C13-123478 HexaCDD *	%	98						9587136
C13-123478 HexaCDF **	%	91						9587136
C13-1234789 HeptaCDF **	%	77						9587136
C13-123678 HexaCDD *	%	96						9587136
C13-123678 HexaCDF **	%	93						9587136
C13-12378 PentaCDD *	%	106						9587136
C13-12378 PentaCDF **	%	103						9587136
C13-123789 HexaCDF **	%	88						9587136
C13-234678 HexaCDF **	%	96						9587136
C13-23478 PentaCDF **	%	107						9587136
C13-2378 TetraCDD *	%	74						9587136
C13-2378 TetraCDF **	%	85						9587136
C13-OCDD *	%	71						9587136

EDL = Estimated Detection Limit

RDL = Reportable Detection Limit

TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.

WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

QC Batch = Quality Control Batch

** CDF = Chloro Dibenzo-p-Furan

* CDD = Chloro Dibenzo-p-Dioxin

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TEST SUMMARY

Bureau Veritas ID: ZYT608 **Collected:** 2024/08/09
Sample ID: BH24-1 SS1 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	9579186	2024/08/15	2024/08/16	Medhat Nasr
Free (WAD) Cyanide	TECH	9574762	2024/08/14	2024/08/14	Prgya Panchal
Conductivity	AT	9575958	2024/08/14	2024/08/14	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9582926	2024/08/17	2024/08/19	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	9580628	2024/08/16	2024/08/16	Jaswinder Kaur
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran
Sodium Adsorption Ratio (SAR)	CALC/MET	9568697	N/A	2024/08/15	Automated Statchk

Bureau Veritas ID: ZYT609 **Collected:** 2024/08/09
Sample ID: BH24-1 SS2 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9568698	N/A	2024/08/15	Automated Statchk
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9574798	2024/08/13	2024/08/14	Joan Jin

Bureau Veritas ID: ZYT610 **Collected:** 2024/08/09
Sample ID: DUP1 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	9579186	2024/08/15	2024/08/16	Medhat Nasr
Free (WAD) Cyanide	TECH	9574762	2024/08/14	2024/08/14	Prgya Panchal
Conductivity	AT	9575958	2024/08/14	2024/08/14	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9582926	2024/08/17	2024/08/19	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	9580628	2024/08/16	2024/08/16	Jaswinder Kaur
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran
Sodium Adsorption Ratio (SAR)	CALC/MET	9568697	N/A	2024/08/15	Automated Statchk

Bureau Veritas ID: ZYT610 Dup **Collected:** 2024/08/09
Sample ID: DUP1 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan

Bureau Veritas ID: ZYT611 **Collected:** 2024/08/09
Sample ID: DUP2 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9568698	N/A	2024/08/15	Automated Statchk
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon

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TEST SUMMARY

Bureau Veritas ID: ZYT611 **Collected:** 2024/08/09
Sample ID: DUP2 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9574798	2024/08/13	2024/08/14	Joan Jin

Bureau Veritas ID: ZYT612 **Collected:** 2024/08/09
Sample ID: BH24-1 SS4 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	9573977	N/A	2024/08/14	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9576187	2024/08/14	2024/08/15	Mohammed Abdul Nafay Shoeb
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
pH CaCl2 EXTRACT	AT	9575275	2024/08/14	2024/08/14	Kien Tran

Bureau Veritas ID: ZYT613 **Collected:** 2024/08/09
Sample ID: BH24-1 SS5 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9568401	N/A	2024/08/13	Automated Statchk
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
Volatile Organic Compounds in Soil	GC/MS	9569599	N/A	2024/08/12	Gabriella Morrone

Bureau Veritas ID: ZYT614 **Collected:** 2024/08/09
Sample ID: BH24-2 SS1 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9568698	N/A	2024/08/15	Automated Statchk
Hot Water Extractable Boron	ICP	9579186	2024/08/15	2024/08/16	Medhat Nasr
Free (WAD) Cyanide	TECH	9572053	2024/08/13	2024/08/13	Prgya Panchal
Conductivity	AT	9575958	2024/08/14	2024/08/14	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9582926	2024/08/17	2024/08/19	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	9580628	2024/08/16	2024/08/16	Jaswinder Kaur
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9574798	2024/08/13	2024/08/14	Joan Jin
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran
Sodium Adsorption Ratio (SAR)	CALC/MET	9568697	N/A	2024/08/15	Automated Statchk

Bureau Veritas ID: ZYT614 Dup **Collected:** 2024/08/09
Sample ID: BH24-2 SS1 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9574798	2024/08/13	2024/08/14	Joan Jin

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TEST SUMMARY

Bureau Veritas ID: ZYT615
Sample ID: BH24-2 SS4
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	9573977	N/A	2024/08/14	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9576187	2024/08/14	2024/08/15	Mohammed Abdul Nafay Shoeb
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
pH CaCl2 EXTRACT	AT	9575275	2024/08/14	2024/08/14	Kien Tran

Bureau Veritas ID: ZYT616
Sample ID: BH24-2 SS5
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9568401	N/A	2024/08/13	Automated Statchk
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
Volatile Organic Compounds in Soil	GC/MS	9569599	N/A	2024/08/12	Gabriella Morrone

Bureau Veritas ID: ZYT617
Sample ID: BH24-3 SS1
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9568698	N/A	2024/08/15	Automated Statchk
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9574798	2024/08/13	2024/08/14	Joan Jin

Bureau Veritas ID: ZYT618
Sample ID: BH24-3 SS2
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	9579186	2024/08/15	2024/08/16	Medhat Nasr
Free (WAD) Cyanide	TECH	9574762	2024/08/14	2024/08/14	Prgya Panchal
Conductivity	AT	9575958	2024/08/14	2024/08/14	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9582926	2024/08/17	2024/08/19	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	9580628	2024/08/16	2024/08/16	Jaswinder Kaur
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran
Sodium Adsorption Ratio (SAR)	CALC/MET	9568697	N/A	2024/08/15	Automated Statchk

Bureau Veritas ID: ZYT619
Sample ID: BH24-3 SS4
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	9573977	N/A	2024/08/14	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9576187	2024/08/14	2024/08/15	Mohammed Abdul Nafay Shoeb
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon

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TEST SUMMARY

Bureau Veritas ID: ZYT620 **Collected:** 2024/08/09
Sample ID: BH24-3 SS5 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9568401	N/A	2024/08/13	Automated Statchk
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
Volatile Organic Compounds in Soil	GC/MS	9569599	N/A	2024/08/12	Gabriella Morrone

Bureau Veritas ID: ZYT621 **Collected:** 2024/08/09
Sample ID: BH24-4 SS1 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
Polychlorinated Biphenyl in Soil	GC/ECD	9571819	2024/08/12	2024/08/13	Svitlana Shaula
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran

Bureau Veritas ID: ZYT622 **Collected:** 2024/08/09
Sample ID: BH24-4 SS3 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran

Bureau Veritas ID: ZYT623 **Collected:** 2024/08/09
Sample ID: DUP3 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	9573977	N/A	2024/08/14	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9576187	2024/08/14	2024/08/15	Mohammed Abdul Nafay Shoeb
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon

Bureau Veritas ID: ZYT623 Dup **Collected:** 2024/08/09
Sample ID: DUP3 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon

Bureau Veritas ID: ZYT624 **Collected:** 2024/08/09
Sample ID: DUP5 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
Polychlorinated Biphenyl in Soil	GC/ECD	9571819	2024/08/12	2024/08/13	Svitlana Shaula

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TEST SUMMARY

Bureau Veritas ID: ZYT625 **Collected:** 2024/08/09
Sample ID: MW24-5 SS1 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	9579186	2024/08/15	2024/08/16	Medhat Nasr
Free (WAD) Cyanide	TECH	9574762	2024/08/14	2024/08/14	Prgya Panchal
Conductivity	AT	9575958	2024/08/14	2024/08/14	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9582926	2024/08/17	2024/08/19	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	9580628	2024/08/16	2024/08/16	Jaswinder Kaur
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran
Sodium Adsorption Ratio (SAR)	CALC/MET	9568697	N/A	2024/08/15	Automated Statchk

Bureau Veritas ID: ZYT626 **Collected:** 2024/08/09
Sample ID: DUP4 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	9579186	2024/08/15	2024/08/16	Medhat Nasr
Free (WAD) Cyanide	TECH	9574762	2024/08/14	2024/08/14	Prgya Panchal
Conductivity	AT	9575958	2024/08/14	2024/08/14	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9582926	2024/08/17	2024/08/19	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	9580628	2024/08/16	2024/08/16	Jaswinder Kaur
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran
Sodium Adsorption Ratio (SAR)	CALC/MET	9568697	N/A	2024/08/15	Automated Statchk

Bureau Veritas ID: ZYT627 **Collected:** 2024/08/09
Sample ID: MW24-5 SS2 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9568698	N/A	2024/08/15	Automated Statchk
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9574798	2024/08/13	2024/08/14	Joan Jin

Bureau Veritas ID: ZYT628 **Collected:** 2024/08/09
Sample ID: MW24-5 SS3 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran

Bureau Veritas ID: ZYT628 Dup **Collected:** 2024/08/09
Sample ID: MW24-5 SS3 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran

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TEST SUMMARY

Bureau Veritas ID: ZYT629
Sample ID: MW24-5 SS4
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9568698	N/A	2024/08/15	Automated Statchk
Dioxins/Furans in Soil (1613B)	HRMS/MS	9587136	2024/08/20	2024/09/10	Yan Qin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	9573977	N/A	2024/08/14	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9576187	2024/08/14	2024/08/15	Mohammed Abdul Nafay Shoeb
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9574798	2024/08/13	2024/08/14	Joan Jin

Bureau Veritas ID: ZYT630
Sample ID: MW24-5 SS9
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9568401	N/A	2024/08/13	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9576187	2024/08/14	2024/08/15	Mohammed Abdul Nafay Shoeb
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9569568	N/A	2024/08/12	Xueming Jiang

Bureau Veritas ID: ZYT630 Dup
Sample ID: MW24-5 SS9
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9576187	2024/08/14	2024/08/15	Mohammed Abdul Nafay Shoeb

Bureau Veritas ID: ZYT631
Sample ID: DUP6
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dioxins/Furans in Soil (1613B)	HRMS/MS	9587136	2024/08/20	2024/09/09	Yan Qin

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GENERAL COMMENTS

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

Package 1	6.3°C

Sample ZYT630 [MW24-5 SS9] : VOC/F1 Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9569568	4-Bromofluorobenzene	2024/08/12	99	60 - 140	100	60 - 140	97	%		
9569568	D10-o-Xylene	2024/08/12	105	60 - 130	93	60 - 130	84	%		
9569568	D4-1,2-Dichloroethane	2024/08/12	105	60 - 140	103	60 - 140	104	%		
9569568	D8-Toluene	2024/08/12	102	60 - 140	102	60 - 140	94	%		
9569599	4-Bromofluorobenzene	2024/08/12	100	60 - 140	100	60 - 140	97	%		
9569599	D10-o-Xylene	2024/08/12	107	60 - 130	90	60 - 130	96	%		
9569599	D4-1,2-Dichloroethane	2024/08/12	103	60 - 140	107	60 - 140	105	%		
9569599	D8-Toluene	2024/08/12	103	60 - 140	101	60 - 140	94	%		
9571819	Decachlorobiphenyl	2024/08/13	108	60 - 130	108	60 - 130	105	%		
9573977	1,4-Difluorobenzene	2024/08/14	111	60 - 140	114	60 - 140	99	%		
9573977	4-Bromofluorobenzene	2024/08/14	91	60 - 140	92	60 - 140	96	%		
9573977	D10-o-Xylene	2024/08/14	121	60 - 140	103	60 - 140	97	%		
9573977	D4-1,2-Dichloroethane	2024/08/14	101	60 - 140	112	60 - 140	101	%		
9574798	D10-Anthracene	2024/08/14	89	50 - 130	103	50 - 130	108	%		
9574798	D14-Terphenyl (FS)	2024/08/14	84	50 - 130	96	50 - 130	100	%		
9574798	D8-Acenaphthylene	2024/08/14	84	50 - 130	95	50 - 130	89	%		
9576187	o-Terphenyl	2024/08/14	105	60 - 140	106	60 - 140	109	%		
9587136	37CL4 2378 Tetra CDD	2024/09/08	80	35 - 197	69	35 - 197	60	%		
9587136	C13-1234678 HeptaCDD	2024/09/08	63	23 - 140	73	23 - 140	88	%		
9587136	C13-1234678 HeptaCDF	2024/09/08	70	28 - 143	77	28 - 143	86	%		
9587136	C13-123478 HexaCDD	2024/09/08	76	32 - 141	91	32 - 141	104	%		
9587136	C13-123478 HexaCDF	2024/09/08	88	26 - 152	91	26 - 152	89	%		
9587136	C13-1234789 HeptaCDF	2024/09/08	56	26 - 138	68	26 - 138	87	%		
9587136	C13-123678 HexaCDD	2024/09/08	100	28 - 130	96	28 - 130	103	%		
9587136	C13-123678 HexaCDF	2024/09/08	102	26 - 123	98	26 - 123	101	%		
9587136	C13-12378 PentaCDD	2024/09/08	72	25 - 181	73	25 - 181	87	%		
9587136	C13-12378 PentaCDF	2024/09/08	75	24 - 185	69	24 - 185	70	%		
9587136	C13-123789 HexaCDF	2024/09/08	79	29 - 147	87	29 - 147	101	%		
9587136	C13-234678 HexaCDF	2024/09/08	85	28 - 136	100	28 - 136	99	%		
9587136	C13-23478 PentaCDF	2024/09/08	70	21 - 178	73	21 - 178	81	%		
9587136	C13-2378 TetraCDD	2024/09/08	86	25 - 164	71	25 - 164	59	%		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9587136	C13-2378 TetraCDF	2024/09/08	90	24 - 169	71	24 - 169	74	%		
9587136	C13-OCDD	2024/09/08	43	17 - 157	52	17 - 157	83	%		
9569056	Moisture	2024/08/10							3.0	20
9569080	Moisture	2024/08/10							0	20
9569568	1,1,1,2-Tetrachloroethane	2024/08/12	122	60 - 140	107	60 - 130	<0.040	ug/g	NC	50
9569568	1,1,1-Trichloroethane	2024/08/12	111	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9569568	1,1,2,2-Tetrachloroethane	2024/08/12	106	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
9569568	1,1,2-Trichloroethane	2024/08/12	113	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9569568	1,1-Dichloroethane	2024/08/12	108	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
9569568	1,1-Dichloroethylene	2024/08/12	110	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9569568	1,2-Dichlorobenzene	2024/08/12	110	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9569568	1,2-Dichloroethane	2024/08/12	113	60 - 140	99	60 - 130	<0.049	ug/g	NC	50
9569568	1,2-Dichloropropane	2024/08/12	110	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
9569568	1,3-Dichlorobenzene	2024/08/12	111	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9569568	1,4-Dichlorobenzene	2024/08/12	110	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9569568	Acetone (2-Propanone)	2024/08/12	108	60 - 140	96	60 - 140	<0.49	ug/g	NC	50
9569568	Benzene	2024/08/12	109	60 - 140	97	60 - 130	<0.0060	ug/g	NC	50
9569568	Bromodichloromethane	2024/08/12	110	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
9569568	Bromoform	2024/08/12	111	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
9569568	Bromomethane	2024/08/12	95	60 - 140	83	60 - 140	<0.040	ug/g	NC	50
9569568	Carbon Tetrachloride	2024/08/12	122	60 - 140	108	60 - 130	<0.040	ug/g	NC	50
9569568	Chlorobenzene	2024/08/12	100	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
9569568	Chloroform	2024/08/12	114	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9569568	cis-1,2-Dichloroethylene	2024/08/12	115	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
9569568	cis-1,3-Dichloropropene	2024/08/12	99	60 - 140	87	60 - 130	<0.030	ug/g	NC	50
9569568	Dibromochloromethane	2024/08/12	116	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
9569568	Dichlorodifluoromethane (FREON 12)	2024/08/12	73	60 - 140	69	60 - 140	<0.040	ug/g	NC	50
9569568	Ethylbenzene	2024/08/12	98	60 - 140	89	60 - 130	<0.010	ug/g	NC	50
9569568	Ethylene Dibromide	2024/08/12	110	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9569568	F1 (C6-C10) - BTEX	2024/08/12					<10	ug/g	NC	30
9569568	F1 (C6-C10)	2024/08/12	91	60 - 140	101	80 - 120	<10	ug/g	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9569568	Hexane	2024/08/12	111	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
9569568	Methyl Ethyl Ketone (2-Butanone)	2024/08/12	111	60 - 140	100	60 - 140	<0.40	ug/g	NC	50
9569568	Methyl Isobutyl Ketone	2024/08/12	99	60 - 140	90	60 - 130	<0.40	ug/g	NC	50
9569568	Methyl t-butyl ether (MTBE)	2024/08/12	102	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
9569568	Methylene Chloride(Dichloromethane)	2024/08/12	118	60 - 140	102	60 - 130	<0.049	ug/g	NC	50
9569568	o-Xylene	2024/08/12	105	60 - 140	95	60 - 130	<0.020	ug/g	NC	50
9569568	p+m-Xylene	2024/08/12	97	60 - 140	88	60 - 130	<0.020	ug/g	NC	50
9569568	Styrene	2024/08/12	99	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
9569568	Tetrachloroethylene	2024/08/12	112	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9569568	Toluene	2024/08/12	106	60 - 140	95	60 - 130	<0.020	ug/g	NC	50
9569568	Total Xylenes	2024/08/12					<0.020	ug/g	NC	50
9569568	trans-1,2-Dichloroethylene	2024/08/12	120	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
9569568	trans-1,3-Dichloropropene	2024/08/12	109	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9569568	Trichloroethylene	2024/08/12	113	60 - 140	100	60 - 130	<0.010	ug/g	NC	50
9569568	Trichlorofluoromethane (FREON 11)	2024/08/12	111	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9569568	Vinyl Chloride	2024/08/12	102	60 - 140	91	60 - 130	<0.019	ug/g	NC	50
9569599	1,1,1,2-Tetrachloroethane	2024/08/12	127	60 - 140	123	60 - 130	<0.040	ug/g	NC	50
9569599	1,1,1-Trichloroethane	2024/08/12	113	60 - 140	107	60 - 130	<0.040	ug/g	NC	50
9569599	1,1,2,2-Tetrachloroethane	2024/08/12	100	60 - 140	107	60 - 130	<0.040	ug/g	NC	50
9569599	1,1,2-Trichloroethane	2024/08/12	115	60 - 140	115	60 - 130	<0.040	ug/g	NC	50
9569599	1,1-Dichloroethane	2024/08/12	113	60 - 140	108	60 - 130	<0.040	ug/g	NC	50
9569599	1,1-Dichloroethylene	2024/08/12	122	60 - 140	112	60 - 130	<0.040	ug/g	NC	50
9569599	1,2-Dichlorobenzene	2024/08/12	117	60 - 140	110	60 - 130	<0.040	ug/g	NC	50
9569599	1,2-Dichloroethane	2024/08/12	117	60 - 140	118	60 - 130	<0.049	ug/g	NC	50
9569599	1,2-Dichloropropane	2024/08/12	115	60 - 140	114	60 - 130	<0.040	ug/g	NC	50
9569599	1,3-Dichlorobenzene	2024/08/12	118	60 - 140	110	60 - 130	<0.040	ug/g	NC	50
9569599	1,4-Dichlorobenzene	2024/08/12	119	60 - 140	111	60 - 130	<0.040	ug/g	NC	50
9569599	Acetone (2-Propanone)	2024/08/12	120	60 - 140	127	60 - 140	<0.49	ug/g	NC	50
9569599	Benzene	2024/08/12	114	60 - 140	108	60 - 130	<0.0060	ug/g	NC	50
9569599	Bromodichloromethane	2024/08/12	108	60 - 140	111	60 - 130	<0.040	ug/g	NC	50
9569599	Bromoform	2024/08/12	109	60 - 140	120	60 - 130	<0.040	ug/g	NC	50

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9569599	Bromomethane	2024/08/12	99	60 - 140	92	60 - 140	<0.040	ug/g	NC	50
9569599	Carbon Tetrachloride	2024/08/12	123	60 - 140	115	60 - 130	<0.040	ug/g	NC	50
9569599	Chlorobenzene	2024/08/12	107	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
9569599	Chloroform	2024/08/12	114	60 - 140	110	60 - 130	<0.040	ug/g	NC	50
9569599	cis-1,2-Dichloroethylene	2024/08/12	118	60 - 140	115	60 - 130	<0.040	ug/g	NC	50
9569599	cis-1,3-Dichloropropene	2024/08/12	105	60 - 140	109	60 - 130	<0.030	ug/g	NC	50
9569599	Dibromochloromethane	2024/08/12	114	60 - 140	120	60 - 130	<0.040	ug/g	NC	50
9569599	Dichlorodifluoromethane (FREON 12)	2024/08/12	86	60 - 140	81	60 - 140	<0.040	ug/g	NC	50
9569599	Ethylbenzene	2024/08/12	118	60 - 140	109	60 - 130	<0.010	ug/g	NC	50
9569599	Ethylene Dibromide	2024/08/12	110	60 - 140	114	60 - 130	<0.040	ug/g	NC	50
9569599	Hexane	2024/08/12	135	60 - 140	123	60 - 130	<0.040	ug/g	NC	50
9569599	Methyl Ethyl Ketone (2-Butanone)	2024/08/12	113	60 - 140	126	60 - 140	<0.40	ug/g	NC	50
9569599	Methyl Isobutyl Ketone	2024/08/12	108	60 - 140	124	60 - 130	<0.40	ug/g	NC	50
9569599	Methyl t-butyl ether (MTBE)	2024/08/12	109	60 - 140	111	60 - 130	<0.040	ug/g	NC	50
9569599	Methylene Chloride(Dichloromethane)	2024/08/12	111	60 - 140	108	60 - 130	<0.049	ug/g	NC	50
9569599	o-Xylene	2024/08/12	124	60 - 140	116	60 - 130	<0.020	ug/g	NC	50
9569599	p+m-Xylene	2024/08/12	115	60 - 140	107	60 - 130	<0.020	ug/g	NC	50
9569599	Styrene	2024/08/12	120	60 - 140	116	60 - 130	<0.040	ug/g	NC	50
9569599	Tetrachloroethylene	2024/08/12	117	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
9569599	Toluene	2024/08/12	114	60 - 140	106	60 - 130	<0.020	ug/g	NC	50
9569599	Total Xylenes	2024/08/12					<0.020	ug/g	NC	50
9569599	trans-1,2-Dichloroethylene	2024/08/12	122	60 - 140	114	60 - 130	<0.040	ug/g	NC	50
9569599	trans-1,3-Dichloropropene	2024/08/12	116	60 - 140	120	60 - 130	<0.040	ug/g	NC	50
9569599	Trichloroethylene	2024/08/12	120	60 - 140	113	60 - 130	<0.010	ug/g	NC	50
9569599	Trichlorofluoromethane (FREON 11)	2024/08/12	117	60 - 140	106	60 - 130	<0.040	ug/g	NC	50
9569599	Vinyl Chloride	2024/08/12	110	60 - 140	103	60 - 130	<0.019	ug/g	NC	50
9571819	Aroclor 1242	2024/08/13					<0.010	ug/g	NC	50
9571819	Aroclor 1248	2024/08/13					<0.010	ug/g	NC	50
9571819	Aroclor 1254	2024/08/13					<0.010	ug/g	NC	50
9571819	Aroclor 1260	2024/08/13	122	30 - 130	123	30 - 130	<0.010	ug/g	NC	50
9571819	Total PCB	2024/08/13	122	30 - 130	123	30 - 130	<0.010	ug/g	NC	50

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9572053	WAD Cyanide (Free)	2024/08/13	98	75 - 125	101	80 - 120	<0.01	ug/g	NC	35
9573977	Benzene	2024/08/14	106	50 - 140	95	50 - 140	<0.020	ug/g	NC	50
9573977	Ethylbenzene	2024/08/14	114	50 - 140	93	50 - 140	<0.020	ug/g	NC	50
9573977	F1 (C6-C10) - BTEX	2024/08/14					<10	ug/g	NC	30
9573977	F1 (C6-C10)	2024/08/14	108	60 - 140	87	80 - 120	<10	ug/g	NC	30
9573977	o-Xylene	2024/08/14	106	50 - 140	86	50 - 140	<0.020	ug/g	6.9	50
9573977	p+m-Xylene	2024/08/14	110	50 - 140	90	50 - 140	<0.040	ug/g	NC	50
9573977	Toluene	2024/08/14	93	50 - 140	77	50 - 140	<0.020	ug/g	3.4	50
9573977	Total Xylenes	2024/08/14					<0.040	ug/g	NC	50
9574762	WAD Cyanide (Free)	2024/08/14	99	75 - 125	100	80 - 120	<0.01	ug/g	NC	35
9574798	1-Methylnaphthalene	2024/08/14	87	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
9574798	2-Methylnaphthalene	2024/08/14	84	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
9574798	Acenaphthene	2024/08/14	85	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40
9574798	Acenaphthylene	2024/08/14	82	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
9574798	Anthracene	2024/08/14	85	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
9574798	Benzo(a)anthracene	2024/08/14	89	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
9574798	Benzo(a)pyrene	2024/08/14	88	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
9574798	Benzo(b/j)fluoranthene	2024/08/14	86	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40
9574798	Benzo(g,h,i)perylene	2024/08/14	88	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
9574798	Benzo(k)fluoranthene	2024/08/14	92	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
9574798	Chrysene	2024/08/14	87	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
9574798	Dibenzo(a,h)anthracene	2024/08/14	94	50 - 130	104	50 - 130	<0.0050	ug/g	NC	40
9574798	Fluoranthene	2024/08/14	87	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
9574798	Fluorene	2024/08/14	87	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
9574798	Indeno(1,2,3-cd)pyrene	2024/08/14	88	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40
9574798	Naphthalene	2024/08/14	78	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
9574798	Phenanthrene	2024/08/14	85	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
9574798	Pyrene	2024/08/14	85	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
9575275	Available (CaCl2) pH	2024/08/14			100	97 - 103			1.5	N/A
9575290	Available (CaCl2) pH	2024/08/14			100	97 - 103			0.031	N/A
9575958	Conductivity	2024/08/14			105	90 - 110	<0.002	mS/cm	2.2	10

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9576187	F2 (C10-C16 Hydrocarbons)	2024/08/15	106	60 - 140	107	80 - 120	<10	ug/g	NC	30
9576187	F3 (C16-C34 Hydrocarbons)	2024/08/15	103	60 - 140	104	80 - 120	<50	ug/g	NC	30
9576187	F4 (C34-C50 Hydrocarbons)	2024/08/15	88	60 - 140	86	80 - 120	<50	ug/g	NC	30
9579186	Hot Water Ext. Boron (B)	2024/08/16	106	75 - 125	111	75 - 125	<0.050	ug/g	0.45	40
9580628	Acid Extractable Antimony (Sb)	2024/08/16	113	75 - 125	116	80 - 120	<0.20	ug/g	NC	30
9580628	Acid Extractable Arsenic (As)	2024/08/16	97	75 - 125	99	80 - 120	<1.0	ug/g	NC	30
9580628	Acid Extractable Barium (Ba)	2024/08/16	92	75 - 125	102	80 - 120	<0.50	ug/g	8.5	30
9580628	Acid Extractable Beryllium (Be)	2024/08/16	96	75 - 125	97	80 - 120	<0.20	ug/g	NC	30
9580628	Acid Extractable Boron (B)	2024/08/16	94	75 - 125	95	80 - 120	<5.0	ug/g	NC	30
9580628	Acid Extractable Cadmium (Cd)	2024/08/16	97	75 - 125	98	80 - 120	<0.10	ug/g	NC	30
9580628	Acid Extractable Chromium (Cr)	2024/08/16	97	75 - 125	99	80 - 120	<1.0	ug/g	7.6	30
9580628	Acid Extractable Cobalt (Co)	2024/08/16	100	75 - 125	103	80 - 120	<0.10	ug/g	1.6	30
9580628	Acid Extractable Copper (Cu)	2024/08/16	105	75 - 125	101	80 - 120	<0.50	ug/g	2.6	30
9580628	Acid Extractable Lead (Pb)	2024/08/16	96	75 - 125	100	80 - 120	<1.0	ug/g	1.5	30
9580628	Acid Extractable Mercury (Hg)	2024/08/16	94	75 - 125	100	80 - 120	<0.050	ug/g	NC	30
9580628	Acid Extractable Molybdenum (Mo)	2024/08/16	99	75 - 125	99	80 - 120	<0.50	ug/g	NC	30
9580628	Acid Extractable Nickel (Ni)	2024/08/16	102	75 - 125	104	80 - 120	<0.50	ug/g	5.5	30
9580628	Acid Extractable Selenium (Se)	2024/08/16	100	75 - 125	101	80 - 120	<0.50	ug/g	NC	30
9580628	Acid Extractable Silver (Ag)	2024/08/16	98	75 - 125	100	80 - 120	<0.20	ug/g	NC	30
9580628	Acid Extractable Thallium (Tl)	2024/08/16	96	75 - 125	98	80 - 120	<0.050	ug/g	NC	30
9580628	Acid Extractable Uranium (U)	2024/08/16	100	75 - 125	102	80 - 120	<0.050	ug/g	7.7	30
9580628	Acid Extractable Vanadium (V)	2024/08/16	94	75 - 125	104	80 - 120	<5.0	ug/g	1.9	30
9580628	Acid Extractable Zinc (Zn)	2024/08/16	NC	75 - 125	102	80 - 120	<5.0	ug/g	16	30
9582926	Chromium (VI)	2024/08/19	92	70 - 130	94	80 - 120	<0.18	ug/g	NC	35
9587136	1,2,3,4,6,7,8-Hepta CDD	2024/09/08	139	70 - 140	112	70 - 140	0.666, EDL=0.122	pg/g	4.9	25
9587136	1,2,3,4,6,7,8-Hepta CDF	2024/09/08	106	82 - 122	117	82 - 122	0.436, EDL=0.109	pg/g	11	25
9587136	1,2,3,4,7,8,9-Hepta CDF	2024/09/08	102	78 - 138	111	78 - 138	0.186, EDL=0.129	pg/g	NC (4)	25

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9587136	1,2,3,4,7,8-Hexa CDD	2024/09/08	99	70 - 164	108	70 - 164	<0.155, EDL=0.155	pg/g	NC	25
9587136	1,2,3,4,7,8-Hexa CDF	2024/09/08	105	72 - 134	110	72 - 134	<0.158, EDL=0.158	pg/g	NC	25
9587136	1,2,3,6,7,8-Hexa CDD	2024/09/08	100	76 - 134	111	76 - 134	<0.157, EDL=0.157	pg/g	NC	25
9587136	1,2,3,6,7,8-Hexa CDF	2024/09/08	102	84 - 130	110	84 - 130	<0.139, EDL=0.139	pg/g	NC	25
9587136	1,2,3,7,8,9-Hexa CDD	2024/09/08	100	64 - 162	109	64 - 162	<0.151, EDL=0.151	pg/g	NC	25
9587136	1,2,3,7,8,9-Hexa CDF	2024/09/08	98	78 - 130	109	78 - 130	<0.169, EDL=0.169	pg/g	NC	25
9587136	1,2,3,7,8-Penta CDD	2024/09/08	98	25 - 181	104	25 - 181	<0.155, EDL=0.155	pg/g	NC	25
9587136	1,2,3,7,8-Penta CDF	2024/09/08	106	80 - 134	109	80 - 134	<0.141, EDL=0.141	pg/g	NC	25
9587136	2,3,4,6,7,8-Hexa CDF	2024/09/08	108	70 - 156	107	70 - 156	<0.142, EDL=0.142	pg/g	NC	25
9587136	2,3,4,7,8-Penta CDF	2024/09/08	101	68 - 160	107	68 - 160	<0.113, EDL=0.113	pg/g	NC	25
9587136	2,3,7,8-Tetra CDD	2024/09/08	102	67 - 158	112	67 - 158	<0.126, EDL=0.126	pg/g	NC	25
9587136	2,3,7,8-Tetra CDF	2024/09/08	200 (1)	75 - 158	110	75 - 158	<0.114, EDL=0.114	pg/g	NC (3)	25
9587136	Octa CDD	2024/09/08	110	78 - 144	113	78 - 144	2.48, EDL=0.150	pg/g	8.7	25
9587136	Octa CDF	2024/09/08	92	63 - 170	102	63 - 170	<0.783, EDL=0.783 (2)	pg/g	NC	25
9587136	Total Hepta CDD	2024/09/08					0.666, EDL=0.122	pg/g	2.7	25
9587136	Total Hepta CDF	2024/09/08					1.11, EDL=0.118	pg/g	3.6	25
9587136	Total Hexa CDD	2024/09/08					<0.154, EDL=0.154	pg/g	4.8	25

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			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9587136	Total Hexa CDF	2024/09/08					0.188, EDL=0.151	pg/g	14	25
9587136	Total Penta CDD	2024/09/08					<0.155, EDL=0.155	pg/g	NC	25
9587136	Total Penta CDF	2024/09/08					<0.126, EDL=0.126	pg/g	2.6	25
9587136	Total Tetra CDD	2024/09/08					<0.126, EDL=0.126	pg/g	NC	25
9587136	Total Tetra CDF	2024/09/08					<0.114, EDL=0.114	pg/g	NC	25

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) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) RT>2 seconds - PCDD/DF analysis-Peak maxima of monitored ions exceeds 2 seconds

(3) RT > 3 seconds - PCDD/DF analysis - Peak detected exceeds expected retention time (from internal standard) by greater than 3 seconds.RT>2 seconds - PCDD/DF analysis-Peak maxima of monitored ions exceeds 2 seconds

(4) EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

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VALIDATION SIGNATURE PAGE

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

Angel Guerrero, Supervisor, Ultra Trace Analysis, HRMS and SVOC

Cristina Carriere, Senior 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 Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266

CHAIN OF CUSTODY RECORD

ENV COC - 00014v5

NONT-2024-08-2165

Invoice Information	Invoice to (requires report) ☐	Report Information (if differs from invoice)		Project Information	
Company:	DS Consultants	Company:		Quotation #:	
Contact Name:	Binta Goel	Contact Name:	Kirstin Olsen	P.O. #/ AFE#:	
Street Address:	6221 Highway 7	Street Address:		Project #:	24-300-100
City:	Vaughan Prov: ON Postal Code:	City:	Prov: Postal Code:	Site #:	
Phone:		Phone:		Site Location:	
Email:	accounting@dsconsultants.ca	Email:	kolsen@dsconsultants.ca	Site Location Province:	
Copies:		Copies:	edina@dsconsultants.ca	Sampled By:	Dina Al-Shadah

Regulatory Criteria

REG 153: ☐ Table 1 ☑ Table 2 ☐ Table 3 ☐ Table ____ | ☑ Res/Park ☐ Ind/Comm ☐ Agri/other | ☐ Med/Fine ☐ Coarse ☐ For RSC

OTHER: ☐ CCME ☐ Reg 558* *min 3 day TAT ☐ MISA ☐ PWQO | ☐ Reg 406, Table: ____ ☐ Sanitary Sewer Bylaw ☐ Storm Sewer Bylaw Municipality ____ ☐ Other: ____

Include Criteria on Certificate of Analysis (check if yes): ☑

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

	Sample Identification (Please print or Type)	Date Sampled YYYY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX/ F1	5 F2 - F4	6 VOCs	7 Reg 153 metals and inorganics	8 Reg 153 ICPMS metals	9 Reg 153 metals (Hg, Cr VI, ICPMS metals, HWS - B)	10 PAHs	11 pH	12	13	14	15	16	17	18	19	20 # OF CONTAINERS SUBMITTED	21 HOLD - DO NOT ANALYZE	22
1	BH24-1 SS1	2024	08	09	AM		Soil							✓			✓										1	
2	BH24-1 SS2																✓										1	
3	DUP1													✓			✓										1	
4	DUP2																✓										1	
5	BH24-1 SS4										✓	✓						✓									4	
6	BH24-1 SS5												✓														3	
7	BH24-2 SS1													✓			✓										2	
8	BH24-2 SS4										✓	✓						✓									4	
9	BH24-2 SS5												✓														3	
10	BH24-3 SS1																✓										1	
11	BH24-3 SS2													✓													1	
12	BH24-3 SS4										✓	✓															3	

Regular Turnaround Time (TAT)

☑ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply

☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YYYY MM DD

Comments

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present	✓		8	7	4	
Seal Intact	✓					
Cooling media present						

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal Intact						
Cooling media present						

LAB USE ONLY	Yes	No	°C	1	2	3	Temperature reading by:
Seal present	✓						
Seal Intact	✓						
Cooling media present							

	Relinquished by: (Signature/ Print)	Date YYYY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YYYY	MM	DD	Time HH	MM	Special Instructions
1	Dina Al-Shadah Dina	2024	08	09	9:45	pm	1 SL SUCAN SALVANI	2024	08	10	08	30	
2							2						

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Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266

CHAIN OF CUSTODY RECORD

ENV COC - 00014v5

Invoice Information	Invoice to (requires report) ☐	Report Information (if differs from Invoice)		Project Information	
Company:	DS Consultants	Company:		Quotation #:	LAB USE ONLY - PLACE STICKER HERE
Contact Name:	Binda Goel	Contact Name:	Kristin Olsen	P.O. #/ AFE#:	
Street Address:	22 Highway 7	Street Address:		Project #:	
City:	Vaughan Prov: ON Postal Code:	City:	Prov: Postal Code:	Site #:	24-300-1030
Phone:		Phone:		Site Location:	Rush Confirmation #:
Email:	accounting@dsconsultants.ca	Email:	kolsen@dsconsultants.ca adinea@dsconsultants.ca	Site Location Province:	
Copies:		Copies:		Sampled By:	Dina Al-Shalash

Regulatory Criteria

REG 153: ☐ Table 1 ☑ Table 2 ☐ Table 3 ☐ Table ____ | ☐ Res/Park ☐ Ind/Comm ☐ Agri/other | ☐ Med/Fine ☐ Coarse ☐ For RSC

OTHER: ☐ CCME ☐ Reg 558* ☐ *min 3 day TAT ☐ MISA ☐ PWQO | ☐ Reg 406, Table: ____ ☐ Sanitary Sewer Bylaw ☐ Storm Sewer Bylaw Municipality ____ ☐ Other: ____

Include Criteria on Certificate of Analysis (check if yes): ☑

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

Regular Turnaround Time (TAT): ☑ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply: ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YYYY MM DD

	Sample Identification (Please print or Type)	Date Sampled YYYY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX/ F1	5 F2 - F4	6 VOCs	7 Reg 153 metals and Inorganics	8 Reg 153 ICPMS metals	9 Reg 153 metals (Hg, Cr VI, ICPMS metals, HWS - B)	10 ABCBs	11 PAHs	12 PAHs	13 Dioxins & Furans	14	15	16	17	18	19	20	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE	Comments
1	BH24-3 SS5	2024	08	09	PM		Soil							■														3	
2	BH24-4 SS1																✓	✓										2	
3	BH24-4 SS3																	✓										1	
4	DUP3										✓	✓																3	
5	DUP5																✓											1	
6	MW24-5 SS1													✓														1	
7	DUP4													✓														1	
8	MW24-5 SS2																		✓									1	
9	MW24-5 SS3																	✓										1	
10	MW24-5 SS4										✓	✓							✓	✓								3	
11	MW24-5 SS9										✓	✓	✓															3	
12	DUP6										■									✓								1	

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LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal intact						
Cooling media present						

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal intact						
Cooling media present						

LAB USE ONLY	Yes	No	°C	1	2	3	Temperature reading by:
Seal present							
Seal intact							
Cooling media present							

	Relinquished by: (Signature/ Print)	Date YYYY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YYYY	MM	DD	Time HH	MM	Special Instructions
1	Dina Al-Shalash	2024	08	09	9:45	PM	SEE PAGE 1						
2													

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.

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Your Project #: 24-300-100
Your C.O.C. #: N/A

Attention: Kirstin Olsen

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

Report Date: 2024/10/11
Report #: R8358953
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4O6235
Received: 2024/08/10, 08:30

Sample Matrix: Soil
Samples Received: 25

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	6	N/A	2024/08/15	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	1	2024/10/09	2024/10/10	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	6	2024/08/15	2024/08/16	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	4	N/A	2024/08/13		EPA 8260C m
Free (WAD) Cyanide	1	2024/10/09	2024/10/10	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	1	2024/08/13	2024/08/13	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	5	2024/08/14	2024/08/14	CAM SOP-00457	OMOE E3015 m
Conductivity	1	2024/10/10	2024/10/10	CAM SOP-00414	OMOE E3530 v1 m
Conductivity	6	2024/08/14	2024/08/14	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	1	2024/10/09	2024/10/09	CAM SOP-00436	EPA 3060A/7199 m
Hexavalent Chromium in Soil by IC (1)	6	2024/08/17	2024/08/19	CAM SOP-00436	EPA 3060A/7199 m
Dioxins/Furans in Soil (1613B) (2)	1	2024/08/20	2024/09/10	BRL SOP-00410;BRL SOP-00407 & 405	EPA 1613B m
Dioxins/Furans in Soil (1613B) (2)	1	2024/08/20	2024/09/09	BRL SOP-00410;BRL SOP-00407 & 405	EPA 1613B m
Petroleum Hydro. CCME F1 & BTEX in Soil (3)	5	N/A	2024/08/14	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (4)	6	2024/08/14	2024/08/15	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	1	2024/10/09	2024/10/10	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS	6	2024/08/16	2024/08/16	CAM SOP-00447	EPA 6020B m
Moisture	1	N/A	2024/10/08	CAM SOP-00445	Carter 2nd ed 70.2 m
Moisture	21	N/A	2024/08/10	CAM SOP-00445	Carter 2nd ed 70.2 m
OC Pesticides (Selected) & PCB (5)	1	2024/10/08	2024/10/10	CAM SOP-00307	EPA 8081B/ 8082A
OC Pesticides (Selected) & PCB (5)	1	2024/10/08	2024/10/08	CAM SOP-00307	EPA 8081B/ 8082A
OC Pesticides (Selected) & PCB (5)	1	2024/10/08	2024/10/09	CAM SOP-00307	EPA 8081B/ 8082A
OC Pesticides Summed Parameters	1	N/A	2024/10/10	CAM SOP-00307	EPA 8081B/ 8082A
OC Pesticides Summed Parameters	1	N/A	2024/10/08	CAM SOP-00307	EPA 8081B/ 8082A
OC Pesticides Summed Parameters	1	N/A	2024/10/09	CAM SOP-00307	EPA 8081B/ 8082A
PAH Compounds in Soil by GC/MS (SIM)	6	2024/08/13	2024/08/14	CAM SOP-00318	EPA 8270E
Polychlorinated Biphenyl in Soil	2	2024/08/12	2024/08/13	CAM SOP-00309	EPA 8082A m
pH CaCl2 EXTRACT	1	2024/10/09	2024/10/09	CAM SOP-00413	EPA 9045 D m
pH CaCl2 EXTRACT	11	2024/08/14	2024/08/14	CAM SOP-00413	EPA 9045 D m

Your Project #: 24-300-100
Your C.O.C. #: N/A

Attention: Kirstin Olsen

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

Report Date: 2024/10/11
Report #: R8358953
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4O6235
Received: 2024/08/10, 08:30

Sample Matrix: Soil
Samples Received: 25

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sodium Adsorption Ratio (SAR)	1	N/A	2024/10/11	CAM SOP-00102	EPA 6010C
Sodium Adsorption Ratio (SAR)	6	N/A	2024/08/15	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs	1	N/A	2024/08/12	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds in Soil	3	N/A	2024/08/12	CAM SOP-00228	EPA 8260D

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, EPA, APHA or the Quebec Ministry of Environment.

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 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.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
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) Soils are reported on a dry weight basis unless otherwise specified.

Confirmatory runs for 2,3,7,8-TCDF are performed only if the primary result is greater than the RDL.
(3) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(4) 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”.

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Your Project #: 24-300-100
Your C.O.C. #: N/A

Attention: Kirstin Olsen

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

Report Date: 2024/10/11
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CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4O6235

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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.
(5) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key

Ashton Gibson
Project Manager
11 Oct 2024 19:15:33

Please direct all questions regarding this Certificate of Analysis to:
Ashton Gibson, Project Manager
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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 Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID			ZYT608		ZYT609		ZYT610			
Sampling Date			2024/08/09		2024/08/09		2024/08/09			
COC Number			N/A		N/A		N/A			
	UNITS	Criteria	BH24-1 SS1	QC Batch	BH24-1 SS2	QC Batch	DUP1	RDL	MDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	5.0	0.31 (1)	9568697	0.33	9687213	0.32 (1)			9568697
Inorganics										
Conductivity	mS/cm	0.7	0.11	9575958	**7.9**	9693432	0.11	0.002	0.0005	9575958
Available (CaCl2) pH	pH	-	7.90	9575290	12.5	9690624	7.87			9575290
WAD Cyanide (Free)	ug/g	0.051	<0.01	9574762	0.05	9690412	<0.01	0.01	0.0019	9574762
Chromium (VI)	ug/g	8	<0.18	9582926	<0.18	9690668	<0.18	0.18	0.050	9582926
Metals										
Hot Water Ext. Boron (B)	ug/g	1.5	0.086	9579186	0.34	9691843	0.090	0.050	0.030	9579186
Acid Extractable Antimony (Sb)	ug/g	7.5	<0.20	9580628	<0.20	9691645	<0.20	0.20	0.10	9580628
Acid Extractable Arsenic (As)	ug/g	18	1.7	9580628	1.8	9691645	1.7	1.0	0.10	9580628
Acid Extractable Barium (Ba)	ug/g	390	22	9580628	32	9691645	21	0.50	0.30	9580628
Acid Extractable Beryllium (Be)	ug/g	4	0.21	9580628	0.42	9691645	0.28	0.20	0.020	9580628
Acid Extractable Boron (B)	ug/g	120	<5.0	9580628	7.3	9691645	<5.0	5.0	1.0	9580628
Acid Extractable Cadmium (Cd)	ug/g	1.2	<0.10	9580628	<0.10	9691645	<0.10	0.10	0.030	9580628
Acid Extractable Chromium (Cr)	ug/g	160	7.4	9580628	9.8	9691645	7.5	1.0	0.20	9580628
Acid Extractable Cobalt (Co)	ug/g	22	3.4	9580628	3.8	9691645	3.1	0.10	0.020	9580628
Acid Extractable Copper (Cu)	ug/g	140	8.1	9580628	12	9691645	7.5	0.50	0.20	9580628
Acid Extractable Lead (Pb)	ug/g	120	6.5	9580628	5.9	9691645	7.2	1.0	0.10	9580628
Acid Extractable Molybdenum (Mo)	ug/g	6.9	<0.50	9580628	<0.50	9691645	<0.50	0.50	0.10	9580628
Acid Extractable Nickel (Ni)	ug/g	100	6.8	9580628	8.4	9691645	6.0	0.50	0.20	9580628
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	9580628	<0.50	9691645	<0.50	0.50	0.10	9580628
Acid Extractable Silver (Ag)	ug/g	20	<0.20	9580628	<0.20	9691645	<0.20	0.20	0.040	9580628
Acid Extractable Thallium (Tl)	ug/g	1	0.053	9580628	0.057	9691645	<0.050	0.050	0.010	9580628
Acid Extractable Uranium (U)	ug/g	23	0.53	9580628	0.64	9691645	0.38	0.050	0.030	9580628
Acid Extractable Vanadium (V)	ug/g	86	17	9580628	17	9691645	17	5.0	0.50	9580628
Acid Extractable Zinc (Zn)	ug/g	340	24	9580628	27	9691645	23	5.0	0.50	9580628
Acid Extractable Mercury (Hg)	ug/g	0.27	<0.050	9580628	<0.050	9691645	<0.050	0.050	0.030	9580628

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.

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O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID			ZYT614		ZYT618	ZYT625	ZYT626			
Sampling Date			2024/08/09		2024/08/09	2024/08/09	2024/08/09			
COC Number			N/A		N/A	N/A	N/A			
	UNITS	Criteria	BH24-2 SS1	QC Batch	BH24-3 SS2	MW24-5 SS1	DUP4	RDL	MDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	5.0	0.43 (1)	9568697	0.36 (1)	0.33 (1)	0.33 (1)			9568697
Inorganics										
Conductivity	mS/cm	0.7	0.073	9575958	0.10	0.10	0.11	0.002	0.0005	9575958
Available (CaCl2) pH	pH	-	8.01	9575290	7.91	7.93	7.85			9575290
WAD Cyanide (Free)	ug/g	0.051	<0.01	9572053	<0.01	<0.01	<0.01	0.01	0.0019	9574762
Chromium (VI)	ug/g	8	<0.18	9582926	<0.18	<0.18	<0.18	0.18	0.050	9582926
Metals										
Hot Water Ext. Boron (B)	ug/g	1.5	<0.050	9579186	0.054	0.070	0.073	0.050	0.030	9579186
Acid Extractable Antimony (Sb)	ug/g	7.5	<0.20	9580628	<0.20	<0.20	<0.20	0.20	0.10	9580628
Acid Extractable Arsenic (As)	ug/g	18	1.7	9580628	<1.0	1.5	2.0	1.0	0.10	9580628
Acid Extractable Barium (Ba)	ug/g	390	14	9580628	14	16	22	0.50	0.30	9580628
Acid Extractable Beryllium (Be)	ug/g	4	<0.20	9580628	<0.20	<0.20	0.21	0.20	0.020	9580628
Acid Extractable Boron (B)	ug/g	120	<5.0	9580628	<5.0	<5.0	<5.0	5.0	1.0	9580628
Acid Extractable Cadmium (Cd)	ug/g	1.2	<0.10	9580628	<0.10	<0.10	<0.10	0.10	0.030	9580628
Acid Extractable Chromium (Cr)	ug/g	160	8.8	9580628	5.6	7.1	8.4	1.0	0.20	9580628
Acid Extractable Cobalt (Co)	ug/g	22	4.7	9580628	2.5	2.8	3.6	0.10	0.020	9580628
Acid Extractable Copper (Cu)	ug/g	140	9.6	9580628	5.0	6.8	9.1	0.50	0.20	9580628
Acid Extractable Lead (Pb)	ug/g	120	8.7	9580628	3.2	9.4	13	1.0	0.10	9580628
Acid Extractable Molybdenum (Mo)	ug/g	6.9	<0.50	9580628	<0.50	<0.50	<0.50	0.50	0.10	9580628
Acid Extractable Nickel (Ni)	ug/g	100	7.5	9580628	4.8	5.4	7.4	0.50	0.20	9580628
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	9580628	<0.50	<0.50	<0.50	0.50	0.10	9580628
Acid Extractable Silver (Ag)	ug/g	20	<0.20	9580628	<0.20	<0.20	<0.20	0.20	0.040	9580628
Acid Extractable Thallium (Tl)	ug/g	1	<0.050	9580628	<0.050	<0.050	0.054	0.050	0.010	9580628
Acid Extractable Uranium (U)	ug/g	23	0.36	9580628	0.28	0.32	0.35	0.050	0.030	9580628
Acid Extractable Vanadium (V)	ug/g	86	25	9580628	13	16	19	5.0	0.50	9580628
Acid Extractable Zinc (Zn)	ug/g	340	26	9580628	13	20	24	5.0	0.50	9580628
Acid Extractable Mercury (Hg)	ug/g	0.27	<0.050	9580628	<0.050	<0.050	<0.050	0.050	0.030	9580628

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.

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O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID			AFBK01	ZYT608		ZYT617			
Sampling Date			2024/08/09	2024/08/09		2024/08/09			
COC Number			N/A	N/A		N/A			
	UNITS	Criteria	DUP 7	BH24-1 SS1	QC Batch	BH24-3 SS1	RDL	MDL	QC Batch
Calculated Parameters									
Chlordane (Total)	ug/g	0.05	<0.0020	<0.0020	9685873	<0.0020	0.0020	N/A	9681597
o,p-DDD + p,p-DDD	ug/g	3.3	<0.0020	<0.0020	9685873	<0.0020	0.0020	N/A	9681597
o,p-DDE + p,p-DDE	ug/g	0.26	0.0089	0.0093	9685873	0.022	0.0020	N/A	9681597
o,p-DDT + p,p-DDT	ug/g	1.4	0.0026	0.0023	9685873	0.0095	0.0020	N/A	9681597
Total Endosulfan	ug/g	0.05	<0.0020	<0.0020	9685873	<0.0020	0.0020	N/A	9681597
Total PCB	ug/g	0.35	<0.015	<0.015	9685873	<0.015	0.015	N/A	9681597
Pesticides & Herbicides									
Aldrin	ug/g	0.05	<0.0020	<0.0020	9687663	<0.0020	0.0020	0.00040	9690075
a-Chlordane	ug/g	0.05	<0.0020	<0.0020	9687663	<0.0020	0.0020	0.00040	9690075
g-Chlordane	ug/g	0.05	<0.0020	<0.0020	9687663	<0.0020	0.0020	0.00040	9690075
o,p-DDD	ug/g	3.3	<0.0020	<0.0020	9687663	<0.0020	0.0020	0.00040	9690075
p,p-DDD	ug/g	3.3	<0.0020	<0.0020	9687663	<0.0020	0.0020	0.00040	9690075
o,p-DDE	ug/g	0.26	<0.0020	<0.0020	9687663	<0.0020	0.0020	0.00040	9690075
p,p-DDE	ug/g	0.26	0.0089	0.0093	9687663	0.022	0.0020	0.00040	9690075
o,p-DDT	ug/g	1.4	<0.0020	<0.0020	9687663	0.0028	0.0020	0.00040	9690075
p,p-DDT	ug/g	1.4	0.0026	0.0023	9687663	0.0068	0.0020	0.00040	9690075
Dieldrin	ug/g	0.05	<0.0020	<0.0020	9687663	<0.0020	0.0020	0.00040	9690075
Lindane	ug/g	0.056	<0.0020	<0.0020	9687663	<0.0020	0.0020	0.00040	9690075
Endosulfan I (alpha)	ug/g	0.04	<0.0020	<0.0020	9687663	<0.0020	0.0020	0.00040	9690075
Endosulfan II (beta)	ug/g	0.04	<0.0020	<0.0020	9687663	<0.0020	0.0020	0.00040	9690075
Endrin	ug/g	0.04	<0.0020	<0.0020	9687663	<0.0020	0.0020	0.00040	9690075
Heptachlor	ug/g	0.15	<0.0020	<0.0020	9687663	<0.0020	0.0020	0.00040	9690075
Heptachlor epoxide	ug/g	0.05	<0.0020	<0.0020	9687663	<0.0020	0.0020	0.00040	9690075
Hexachlorobenzene	ug/g	0.52	<0.0020	<0.0020	9687663	<0.0020	0.0020	0.00040	9690075
Hexachlorobutadiene	ug/g	0.012	<0.0020	<0.0020	9687663	<0.0020	0.0020	N/A	9690075
Hexachloroethane	ug/g	0.089	<0.0020	<0.0020	9687663	<0.0020	0.0020	N/A	9690075
Methoxychlor	ug/g	0.13	<0.0050	<0.0050	9687663	<0.0050	0.0050	0.0016	9690075
Aroclor 1242	ug/g	-	<0.015	<0.015	9687663	<0.015	0.015	0.0030	9690075
Aroclor 1248	ug/g	-	<0.015	<0.015	9687663	<0.015	0.015	0.0030	9690075

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
N/A = Not Applicable

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O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID			AFBK01	ZYT608		ZYT617			
Sampling Date			2024/08/09	2024/08/09		2024/08/09			
COC Number			N/A	N/A		N/A			
	UNITS	Criteria	DUP 7	BH24-1 SS1	QC Batch	BH24-3 SS1	RDL	MDL	QC Batch
Aroclor 1254	ug/g	-	<0.015	<0.015	9687663	<0.015	0.015	0.0030	9690075
Aroclor 1260	ug/g	-	<0.015	<0.015	9687663	<0.015	0.015	0.0030	9690075
Surrogate Recovery (%)									
2,4,5,6-Tetrachloro-m-xylene	%	-	74	58	9687663	82			9690075
Decachlorobiphenyl	%	-	83	70	9687663	79			9690075

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

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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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O.REG 153 PAHS (SOIL)

Bureau Veritas ID			ZYT609	ZYT611	ZYT614			
Sampling Date			2024/08/09	2024/08/09	2024/08/09			
COC Number			N/A	N/A	N/A			
	UNITS	Criteria	BH24-1 SS2	DUP2	BH24-2 SS1	RDL	MDL	QC Batch
Calculated Parameters								
Methylnaphthalene, 2-(1-)	ug/g	-	<0.0071	<0.0071	<0.0071	0.0071	N/A	9568698
Polyaromatic Hydrocarbons								
Acenaphthene	ug/g	7.9	<0.0050	<0.0050	<0.0050	0.0050	0.0020	9574798
Acenaphthylene	ug/g	0.15	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9574798
Anthracene	ug/g	0.67	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9574798
Benzo(a)anthracene	ug/g	0.5	<0.0050	<0.0050	<0.0050	0.0050	0.0020	9574798
Benzo(a)pyrene	ug/g	0.3	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9574798
Benzo(b/j)fluoranthene	ug/g	0.78	<0.0050	<0.0050	<0.0050	0.0050	0.0020	9574798
Benzo(g,h,i)perylene	ug/g	6.6	<0.0050	<0.0050	<0.0050	0.0050	0.0040	9574798
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	<0.0050	<0.0050	0.0050	0.0020	9574798
Chrysene	ug/g	7	<0.0050	<0.0050	<0.0050	0.0050	0.0020	9574798
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	<0.0050	<0.0050	0.0050	0.0040	9574798
Fluoranthene	ug/g	0.69	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9574798
Fluorene	ug/g	62	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9574798
Indeno(1,2,3-cd)pyrene	ug/g	0.38	<0.0050	<0.0050	<0.0050	0.0050	0.0040	9574798
1-Methylnaphthalene	ug/g	0.99	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9574798
2-Methylnaphthalene	ug/g	0.99	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9574798
Naphthalene	ug/g	0.6	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9574798
Phenanthrene	ug/g	6.2	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9574798
Pyrene	ug/g	78	<0.0050	<0.0050	<0.0050	0.0050	0.0010	9574798
Surrogate Recovery (%)								
D10-Anthracene	%	-	92	87	76			9574798
D14-Terphenyl (FS)	%	-	89	82	64			9574798
D8-Acenaphthylene	%	-	82	79	66			9574798

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

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O.REG 153 PAHS (SOIL)

Bureau Veritas ID			ZYT614				ZYT617	ZYT627			
Sampling Date			2024/08/09				2024/08/09	2024/08/09			
COC Number			N/A				N/A	N/A			
	UNITS	Criteria	BH24-2 SS1 Lab-Dup	RDL	MDL	QC Batch	BH24-3 SS1	MW24-5 SS2	RDL	MDL	QC Batch
Calculated Parameters											
Methylnaphthalene, 2-(1-)	ug/g	-					<0.0071	<0.0071	0.0071	N/A	9568698
Polyaromatic Hydrocarbons											
Acenaphthene	ug/g	7.9	<0.0050	0.0050	0.0020	9574798	<0.0050	<0.0050	0.0050	0.0020	9574798
Acenaphthylene	ug/g	0.15	<0.0050	0.0050	0.0010	9574798	<0.0050	<0.0050	0.0050	0.0010	9574798
Anthracene	ug/g	0.67	<0.0050	0.0050	0.0010	9574798	<0.0050	<0.0050	0.0050	0.0010	9574798
Benzo(a)anthracene	ug/g	0.5	<0.0050	0.0050	0.0020	9574798	<0.0050	<0.0050	0.0050	0.0020	9574798
Benzo(a)pyrene	ug/g	0.3	<0.0050	0.0050	0.0010	9574798	<0.0050	<0.0050	0.0050	0.0010	9574798
Benzo(b/j)fluoranthene	ug/g	0.78	<0.0050	0.0050	0.0020	9574798	<0.0050	<0.0050	0.0050	0.0020	9574798
Benzo(g,h,i)perylene	ug/g	6.6	<0.0050	0.0050	0.0040	9574798	<0.0050	<0.0050	0.0050	0.0040	9574798
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	0.0050	0.0020	9574798	<0.0050	<0.0050	0.0050	0.0020	9574798
Chrysene	ug/g	7	<0.0050	0.0050	0.0020	9574798	<0.0050	<0.0050	0.0050	0.0020	9574798
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	0.0050	0.0040	9574798	<0.0050	<0.0050	0.0050	0.0040	9574798
Fluoranthene	ug/g	0.69	<0.0050	0.0050	0.0010	9574798	0.0078	<0.0050	0.0050	0.0010	9574798
Fluorene	ug/g	62	<0.0050	0.0050	0.0010	9574798	<0.0050	<0.0050	0.0050	0.0010	9574798
Indeno(1,2,3-cd)pyrene	ug/g	0.38	<0.0050	0.0050	0.0040	9574798	<0.0050	<0.0050	0.0050	0.0040	9574798
1-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	0.0010	9574798	<0.0050	<0.0050	0.0050	0.0010	9574798
2-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	0.0010	9574798	<0.0050	<0.0050	0.0050	0.0010	9574798
Naphthalene	ug/g	0.6	<0.0050	0.0050	0.0010	9574798	<0.0050	<0.0050	0.0050	0.0010	9574798
Phenanthrene	ug/g	6.2	<0.0050	0.0050	0.0010	9574798	0.0060	<0.0050	0.0050	0.0010	9574798
Pyrene	ug/g	78	<0.0050	0.0050	0.0010	9574798	0.0059	<0.0050	0.0050	0.0010	9574798
Surrogate Recovery (%)											
D10-Anthracene	%	-	103			9574798	107	99			9574798
D14-Terphenyl (FS)	%	-	97			9574798	100	96			9574798
D8-Acenaphthylene	%	-	88			9574798	89	86			9574798

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
N/A = Not Applicable

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O.REG 153 PAHS (SOIL)

Bureau Veritas ID			ZYT629			
Sampling Date			2024/08/09			
COC Number			N/A			
	UNITS	Criteria	MW24-5 SS4	RDL	MDL	QC Batch
Calculated Parameters						
Methylnaphthalene, 2-(1-)	ug/g	-	<0.0071	0.0071	N/A	9568698
Polyaromatic Hydrocarbons						
Acenaphthene	ug/g	7.9	<0.0050	0.0050	0.0020	9574798
Acenaphthylene	ug/g	0.15	<0.0050	0.0050	0.0010	9574798
Anthracene	ug/g	0.67	<0.0050	0.0050	0.0010	9574798
Benzo(a)anthracene	ug/g	0.5	<0.0050	0.0050	0.0020	9574798
Benzo(a)pyrene	ug/g	0.3	<0.0050	0.0050	0.0010	9574798
Benzo(b/j)fluoranthene	ug/g	0.78	<0.0050	0.0050	0.0020	9574798
Benzo(g,h,i)perylene	ug/g	6.6	<0.0050	0.0050	0.0040	9574798
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	0.0050	0.0020	9574798
Chrysene	ug/g	7	<0.0050	0.0050	0.0020	9574798
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	0.0050	0.0040	9574798
Fluoranthene	ug/g	0.69	<0.0050	0.0050	0.0010	9574798
Fluorene	ug/g	62	<0.0050	0.0050	0.0010	9574798
Indeno(1,2,3-cd)pyrene	ug/g	0.38	<0.0050	0.0050	0.0040	9574798
1-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	0.0010	9574798
2-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	0.0010	9574798
Naphthalene	ug/g	0.6	<0.0050	0.0050	0.0010	9574798
Phenanthrene	ug/g	6.2	<0.0050	0.0050	0.0010	9574798
Pyrene	ug/g	78	<0.0050	0.0050	0.0010	9574798
Surrogate Recovery (%)						
D10-Anthracene	%	-	104			9574798
D14-Terphenyl (FS)	%	-	98			9574798
D8-Acenaphthylene	%	-	81			9574798

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
N/A = Not Applicable

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O.REG 153 PCBS (SOIL)

Bureau Veritas ID			ZYT621	ZYT624			
Sampling Date			2024/08/09	2024/08/09			
COC Number			N/A	N/A			
	UNITS	Criteria	BH24-4 SS1	DUP5	RDL	MDL	QC Batch
PCBs							
Aroclor 1242	ug/g	-	<0.010	<0.010	0.010	0.0070	9571819
Aroclor 1248	ug/g	-	<0.010	<0.010	0.010	0.0070	9571819
Aroclor 1254	ug/g	-	<0.010	<0.010	0.010	0.0070	9571819
Aroclor 1260	ug/g	-	<0.010	<0.010	0.010	0.0070	9571819
Total PCB	ug/g	0.35	<0.010	<0.010	0.010	0.0070	9571819
Surrogate Recovery (%)							
Decachlorobiphenyl	%	-	96	87			9571819

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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O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

Bureau Veritas ID			ZYT612	ZYT615	ZYT619	ZYT623	ZYT629			
Sampling Date			2024/08/09	2024/08/09	2024/08/09	2024/08/09	2024/08/09			
COC Number			N/A	N/A	N/A	N/A	N/A			
	UNITS	Criteria	BH24-1 SS4	BH24-2 SS4	BH24-3 SS4	DUP3	MW24-5 SS4	RDL	MDL	QC Batch
BTEX & F1 Hydrocarbons										
Benzene	ug/g	0.21	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	0.020	9573977
Toluene	ug/g	2.3	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	0.020	9573977
Ethylbenzene	ug/g	1.1	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	0.020	9573977
o-Xylene	ug/g	-	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	0.020	9573977
p+m-Xylene	ug/g	-	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9573977
Total Xylenes	ug/g	3.1	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	0.040	9573977
F1 (C6-C10)	ug/g	55	<10	<10	<10	<10	<10	10	5.0	9573977
F1 (C6-C10) - BTEX	ug/g	55	<10	<10	<10	<10	<10	10	5.0	9573977
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	98	<10	<10	<10	<10	<10	10	7.1	9576187
F3 (C16-C34 Hydrocarbons)	ug/g	300	<50	<50	<50	<50	<50	50	5.0	9576187
F4 (C34-C50 Hydrocarbons)	ug/g	2800	<50	<50	<50	<50	<50	50	10	9576187
Reached Baseline at C50	ug/g	-	Yes	Yes	Yes	Yes	Yes			9576187
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	-	120	120	119	115	111			9573977
4-Bromofluorobenzene	%	-	95	86	97	86	100			9573977
D10-o-Xylene	%	-	93	96	107	101	104			9573977
D4-1,2-Dichloroethane	%	-	115	118	112	106	125			9573977
o-Terphenyl	%	-	102	103	107	104	107			9576187

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

Bureau Veritas ID			ZYT630				ZYT630			
Sampling Date			2024/08/09				2024/08/09			
COC Number			N/A				N/A			
	UNITS	Criteria	MW24-5 SS9	RDL	MDL	QC Batch	MW24-5 SS9 Lab-Dup	RDL	MDL	QC Batch
Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/g	0.05	<0.050	0.050	0.010	9568401				
Volatile Organics										
Acetone (2-Propanone)	ug/g	16	<0.49	0.49	0.49	9569568				
Benzene	ug/g	0.21	<0.0060	0.0060	0.0060	9569568				
Bromodichloromethane	ug/g	1.5	<0.040	0.040	0.040	9569568				
Bromoform	ug/g	0.27	<0.040	0.040	0.040	9569568				
Bromomethane	ug/g	0.05	<0.040	0.040	0.040	9569568				
Carbon Tetrachloride	ug/g	0.05	<0.040	0.040	0.040	9569568				
Chlorobenzene	ug/g	2.4	<0.040	0.040	0.040	9569568				
Chloroform	ug/g	0.05	<0.040	0.040	0.040	9569568				
Dibromochloromethane	ug/g	2.3	<0.040	0.040	0.040	9569568				
1,2-Dichlorobenzene	ug/g	1.2	<0.040	0.040	0.040	9569568				
1,3-Dichlorobenzene	ug/g	4.8	<0.040	0.040	0.040	9569568				
1,4-Dichlorobenzene	ug/g	0.083	<0.040	0.040	0.040	9569568				
Dichlorodifluoromethane (FREON 12)	ug/g	16	<0.040	0.040	0.040	9569568				
1,1-Dichloroethane	ug/g	0.47	<0.040	0.040	0.040	9569568				
1,2-Dichloroethane	ug/g	0.05	<0.049	0.049	0.049	9569568				
1,1-Dichloroethylene	ug/g	0.05	<0.040	0.040	0.040	9569568				
cis-1,2-Dichloroethylene	ug/g	1.9	<0.040	0.040	0.040	9569568				
trans-1,2-Dichloroethylene	ug/g	0.084	<0.040	0.040	0.040	9569568				
1,2-Dichloropropane	ug/g	0.05	<0.040	0.040	0.040	9569568				
cis-1,3-Dichloropropene	ug/g	0.05	<0.030	0.030	0.030	9569568				
trans-1,3-Dichloropropene	ug/g	0.05	<0.040	0.040	0.040	9569568				
Ethylbenzene	ug/g	1.1	<0.010	0.010	0.010	9569568				
Ethylene Dibromide	ug/g	0.05	<0.040	0.040	0.040	9569568				
Hexane	ug/g	2.8	<0.040	0.040	0.040	9569568				
Methylene Chloride(Dichloromethane)	ug/g	0.1	<0.049	0.049	0.049	9569568				

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

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

Bureau Veritas ID			ZYT630				ZYT630			
Sampling Date			2024/08/09				2024/08/09			
COC Number			N/A				N/A			
	UNITS	Criteria	MW24-5 SS9	RDL	MDL	QC Batch	MW24-5 SS9 Lab-Dup	RDL	MDL	QC Batch
Methyl Ethyl Ketone (2-Butanone)	ug/g	16	<0.40	0.40	0.40	9569568				
Methyl Isobutyl Ketone	ug/g	1.7	<0.40	0.40	0.40	9569568				
Methyl t-butyl ether (MTBE)	ug/g	0.75	<0.040	0.040	0.040	9569568				
Styrene	ug/g	0.7	<0.040	0.040	0.040	9569568				
1,1,1,2-Tetrachloroethane	ug/g	0.058	<0.040	0.040	0.040	9569568				
1,1,2,2-Tetrachloroethane	ug/g	0.05	<0.040	0.040	0.040	9569568				
Tetrachloroethylene	ug/g	0.28	<0.040	0.040	0.040	9569568				
Toluene	ug/g	2.3	<0.020	0.020	0.020	9569568				
1,1,1-Trichloroethane	ug/g	0.38	<0.040	0.040	0.040	9569568				
1,1,2-Trichloroethane	ug/g	0.05	<0.040	0.040	0.040	9569568				
Trichloroethylene	ug/g	0.061	<0.010	0.010	0.010	9569568				
Trichlorofluoromethane (FREON 11)	ug/g	4	<0.040	0.040	0.040	9569568				
Vinyl Chloride	ug/g	0.02	<0.019	0.019	0.019	9569568				
p+m-Xylene	ug/g	-	<0.020	0.020	0.020	9569568				
o-Xylene	ug/g	-	<0.020	0.020	0.020	9569568				
Total Xylenes	ug/g	3.1	<0.020	0.020	0.020	9569568				
F1 (C6-C10)	ug/g	55	<10	10	2.0	9569568				
F1 (C6-C10) - BTEX	ug/g	55	<10	10	2.0	9569568				
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	98	<10	10	7.1	9576187	<10	10	7.1	9576187
F3 (C16-C34 Hydrocarbons)	ug/g	300	<50	50	5.0	9576187	<50	50	5.0	9576187
F4 (C34-C50 Hydrocarbons)	ug/g	2800	<50	50	10	9576187	<50	50	10	9576187
Reached Baseline at C50	ug/g	-	Yes			9576187	Yes			9576187
Surrogate Recovery (%)										
o-Terphenyl	%	-	105			9576187	106			9576187
4-Bromofluorobenzene	%	-	99			9569568				
D10-o-Xylene	%	-	86			9569568				
D4-1,2-Dichloroethane	%	-	102			9569568				

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

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

Bureau Veritas ID			ZYT630				ZYT630			
Sampling Date			2024/08/09				2024/08/09			
COC Number			N/A				N/A			
	UNITS	Criteria	MW24-5 SS9	RDL	MDL	QC Batch	MW24-5 SS9 Lab-Dup	RDL	MDL	QC Batch
D8-Toluene	%	-	95			9569568				

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

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O.REG 153 VOCS BY HS (SOIL)

Bureau Veritas ID			ZYT613	ZYT616	ZYT620			
Sampling Date			2024/08/09	2024/08/09	2024/08/09			
COC Number			N/A	N/A	N/A			
	UNITS	Criteria	BH24-1 SS5	BH24-2 SS5	BH24-3 SS5	RDL	MDL	QC Batch
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	0.05	<0.050	<0.050	<0.050	0.050	0.010	9568401
Volatile Organics								
Acetone (2-Propanone)	ug/g	16	<0.49	<0.49	<0.49	0.49	0.49	9569599
Benzene	ug/g	0.21	<0.0060	<0.0060	<0.0060	0.0060	0.0060	9569599
Bromodichloromethane	ug/g	1.5	<0.040	<0.040	<0.040	0.040	0.040	9569599
Bromoform	ug/g	0.27	<0.040	<0.040	<0.040	0.040	0.040	9569599
Bromomethane	ug/g	0.05	<0.040	<0.040	<0.040	0.040	0.040	9569599
Carbon Tetrachloride	ug/g	0.05	<0.040	<0.040	<0.040	0.040	0.040	9569599
Chlorobenzene	ug/g	2.4	<0.040	<0.040	<0.040	0.040	0.040	9569599
Chloroform	ug/g	0.05	<0.040	<0.040	<0.040	0.040	0.040	9569599
Dibromochloromethane	ug/g	2.3	<0.040	<0.040	<0.040	0.040	0.040	9569599
1,2-Dichlorobenzene	ug/g	1.2	<0.040	<0.040	<0.040	0.040	0.040	9569599
1,3-Dichlorobenzene	ug/g	4.8	<0.040	<0.040	<0.040	0.040	0.040	9569599
1,4-Dichlorobenzene	ug/g	0.083	<0.040	<0.040	<0.040	0.040	0.040	9569599
Dichlorodifluoromethane (FREON 12)	ug/g	16	<0.040	<0.040	<0.040	0.040	0.050	9569599
1,1-Dichloroethane	ug/g	0.47	<0.040	<0.040	<0.040	0.040	0.040	9569599
1,2-Dichloroethane	ug/g	0.05	<0.049	<0.049	<0.049	0.049	0.040	9569599
1,1-Dichloroethylene	ug/g	0.05	<0.040	<0.040	<0.040	0.040	0.040	9569599
cis-1,2-Dichloroethylene	ug/g	1.9	<0.040	<0.040	<0.040	0.040	0.040	9569599
trans-1,2-Dichloroethylene	ug/g	0.084	<0.040	<0.040	<0.040	0.040	0.040	9569599
1,2-Dichloropropane	ug/g	0.05	<0.040	<0.040	<0.040	0.040	0.040	9569599
cis-1,3-Dichloropropene	ug/g	0.05	<0.030	<0.030	<0.030	0.030	0.030	9569599
trans-1,3-Dichloropropene	ug/g	0.05	<0.040	<0.040	<0.040	0.040	0.040	9569599
Ethylbenzene	ug/g	1.1	<0.010	<0.010	<0.010	0.010	0.010	9569599
Ethylene Dibromide	ug/g	0.05	<0.040	<0.040	<0.040	0.040	0.040	9569599
Hexane	ug/g	2.8	<0.040	<0.040	<0.040	0.040	0.040	9569599
Methylene Chloride(Dichloromethane)	ug/g	0.1	<0.049	<0.049	<0.049	0.049	0.049	9569599
Methyl Ethyl Ketone (2-Butanone)	ug/g	16	<0.40	<0.40	<0.40	0.40	0.40	9569599
Methyl Isobutyl Ketone	ug/g	1.7	<0.40	<0.40	<0.40	0.40	0.40	9569599
Methyl t-butyl ether (MTBE)	ug/g	0.75	<0.040	<0.040	<0.040	0.040	0.040	9569599

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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O.REG 153 VOCS BY HS (SOIL)

Bureau Veritas ID			ZYT613	ZYT616	ZYT620			
Sampling Date			2024/08/09	2024/08/09	2024/08/09			
COC Number			N/A	N/A	N/A			
	UNITS	Criteria	BH24-1 SS5	BH24-2 SS5	BH24-3 SS5	RDL	MDL	QC Batch
Styrene	ug/g	0.7	<0.040	<0.040	<0.040	0.040	0.040	9569599
1,1,1,2-Tetrachloroethane	ug/g	0.058	<0.040	<0.040	<0.040	0.040	0.040	9569599
1,1,2,2-Tetrachloroethane	ug/g	0.05	<0.040	<0.040	<0.040	0.040	0.040	9569599
Tetrachloroethylene	ug/g	0.28	<0.040	<0.040	<0.040	0.040	0.040	9569599
Toluene	ug/g	2.3	<0.020	<0.020	<0.020	0.020	0.020	9569599
1,1,1-Trichloroethane	ug/g	0.38	<0.040	<0.040	<0.040	0.040	0.040	9569599
1,1,2-Trichloroethane	ug/g	0.05	<0.040	<0.040	<0.040	0.040	0.040	9569599
Trichloroethylene	ug/g	0.061	<0.010	<0.010	<0.010	0.010	0.010	9569599
Trichlorofluoromethane (FREON 11)	ug/g	4	<0.040	<0.040	<0.040	0.040	0.040	9569599
Vinyl Chloride	ug/g	0.02	<0.019	<0.019	<0.019	0.019	0.019	9569599
p+m-Xylene	ug/g	-	<0.020	<0.020	<0.020	0.020	0.020	9569599
o-Xylene	ug/g	-	<0.020	<0.020	<0.020	0.020	0.020	9569599
Total Xylenes	ug/g	3.1	<0.020	<0.020	<0.020	0.020	0.020	9569599
Surrogate Recovery (%)								
4-Bromofluorobenzene	%	-	96	96	95			9569599
D10-o-Xylene	%	-	97	96	97			9569599
D4-1,2-Dichloroethane	%	-	108	108	109			9569599
D8-Toluene	%	-	93	93	93			9569599

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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RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		AFBK01		ZYT608		ZYT609		ZYT610			
Sampling Date		2024/08/09		2024/08/09		2024/08/09		2024/08/09			
COC Number		N/A		N/A		N/A		N/A			
	UNITS	DUP 7	QC Batch	BH24-1 SS1	QC Batch	BH24-1 SS2	QC Batch	DUP1	RDL	MDL	QC Batch
Inorganics											
Moisture	%	7.4	9687851	8.9	9569080	17	9569056	9.6	1.0	0.50	9569080

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		ZYT610		ZYT611		ZYT612		ZYT613			
Sampling Date		2024/08/09		2024/08/09		2024/08/09		2024/08/09			
COC Number		N/A		N/A		N/A		N/A			
	UNITS	DUP1 Lab-Dup	QC Batch	DUP2	QC Batch	BH24-1 SS4	QC Batch	BH24-1 SS5	RDL	MDL	QC Batch
Inorganics											
Moisture	%	9.6	9569080	19	9569056	5.0	9569056	4.0	1.0	0.50	9569080
Available (CaCl2) pH	pH					10.8	9575275				

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		ZYT614		ZYT615		ZYT616		ZYT617			
Sampling Date		2024/08/09		2024/08/09		2024/08/09		2024/08/09			
COC Number		N/A		N/A		N/A		N/A			
	UNITS	BH24-2 SS1	QC Batch	BH24-2 SS4	QC Batch	BH24-2 SS5	QC Batch	BH24-3 SS1	RDL	MDL	QC Batch
Inorganics											
Moisture	%	5.9	9569056	5.4	9569056	4.1	9569080	13	1.0	0.50	9569056
Available (CaCl2) pH	pH			8.02	9575275						

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		ZYT618		ZYT619		ZYT620		ZYT621			
Sampling Date		2024/08/09		2024/08/09		2024/08/09		2024/08/09			
COC Number		N/A		N/A		N/A		N/A			
	UNITS	BH24-3 SS2	QC Batch	BH24-3 SS4	QC Batch	BH24-3 SS5	QC Batch	BH24-4 SS1	RDL	MDL	QC Batch
Inorganics											
Moisture	%	7.8	9569080	15	9569056	9.6	9569080	8.6	1.0	0.50	9569056
Available (CaCl2) pH	pH							7.74			9575290

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		ZYT622			ZYT623	ZYT623	ZYT624			
Sampling Date		2024/08/09			2024/08/09	2024/08/09	2024/08/09			
COC Number		N/A			N/A	N/A	N/A			
	UNITS	BH24-4 SS3	MDL	QC Batch	DUP3	DUP3 Lab-Dup	DUP5	RDL	MDL	QC Batch
Inorganics										
Moisture	%				3.3	3.4	7.5	1.0	0.50	9569056
Available (CaCl2) pH	pH	7.45		9575290						

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		ZYT625	ZYT626		ZYT627				ZYT628		
Sampling Date		2024/08/09	2024/08/09		2024/08/09				2024/08/09		
COC Number		N/A	N/A		N/A				N/A		
	UNITS	MW24-5 SS1	DUP4	QC Batch	MW24-5 SS2	RDL	MDL	QC Batch	MW24-5 SS3	MDL	QC Batch
Inorganics											
Moisture	%	8.3	7.6	9569080	12	1.0	0.50	9569056			
Available (CaCl2) pH	pH								7.74		9575290

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		ZYT628			ZYT629	ZYT630			
Sampling Date		2024/08/09			2024/08/09	2024/08/09			
COC Number		N/A			N/A	N/A			
	UNITS	**MW24-5 SS3 Lab-Dup**	**MDL**	**QC Batch**	**MW24-5 SS4**	**MW24-5 SS9**	**RDL**	**MDL**	**QC Batch**
Inorganics									
Moisture	%				15	20	1.0	0.50	9569056
Available (CaCl2) pH	pH	7.74		9575290					

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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DIOXINS AND FURANS BY HRMS (SOIL)

Bureau Veritas ID		ZYT629							
Sampling Date		2024/08/09							
COC Number		N/A				TOXIC EQUIVALENCY		# of	
	UNITS	MW24-5 SS4	EDL	RDL	MDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch
Dioxins & Furans									
2,3,7,8-Tetra CDD *	pg/g	<0.253 (1)	0.253	1.00	0.227	1.00	0.253	0	9587136
1,2,3,7,8-Penta CDD *	pg/g	0.233	0.136	5.00	0.258	1.00	0.233	1	9587136
1,2,3,4,7,8-Hexa CDD *	pg/g	<0.193 (1)	0.193	5.00	0.204	0.100	0.0193	0	9587136
1,2,3,6,7,8-Hexa CDD *	pg/g	0.634	0.143	5.00	0.173	0.100	0.0634	1	9587136
1,2,3,7,8,9-Hexa CDD *	pg/g	0.837	0.147	5.00	0.179	0.100	0.0837	1	9587136
1,2,3,4,6,7,8-Hepta CDD *	pg/g	1.51	0.124	5.00	0.743	0.0100	0.0151	1	9587136
Octa CDD *	pg/g	7.92	0.140	10.0	0.800	0.000300	0.00238	1	9587136
Total Tetra CDD *	pg/g	<0.253	0.253	1.00	0.400			0	9587136
Total Penta CDD *	pg/g	0.233	0.136	5.00	0.400			1	9587136
Total Hexa CDD *	pg/g	1.96	0.150	5.00	0.400			4	9587136
Total Hepta CDD *	pg/g	2.57	0.124	5.00	0.400			2	9587136
2,3,7,8-Tetra CDF **	pg/g	0.191	0.113	1.00	0.181	0.100	0.0191	1	9587136
1,2,3,7,8-Penta CDF **	pg/g	0.390	0.138	5.00	0.242	0.0300	0.0117	1	9587136
2,3,4,7,8-Penta CDF **	pg/g	0.347	0.127	5.00	0.211	0.300	0.104	1	9587136
1,2,3,4,7,8-Hexa CDF **	pg/g	0.418	0.123	5.00	0.228	0.100	0.0418	1	9587136
1,2,3,6,7,8-Hexa CDF **	pg/g	<0.343 (1)	0.343	5.00	0.203	0.100	0.0343	0	9587136
2,3,4,6,7,8-Hexa CDF **	pg/g	0.822	0.117	5.00	0.177	0.100	0.0822	1	9587136
1,2,3,7,8,9-Hexa CDF **	pg/g	0.296	0.140	5.00	0.185	0.100	0.0296	1	9587136
1,2,3,4,6,7,8-Hepta CDF **	pg/g	1.48	0.128	5.00	0.185	0.0100	0.0148	1	9587136
1,2,3,4,7,8,9-Hepta CDF **	pg/g	0.469	0.142	5.00	0.194	0.0100	0.00469	1	9587136
Octa CDF **	pg/g	1.08	0.137	10.0	0.919	0.000300	0.000324	1	9587136
Total Tetra CDF **	pg/g	0.191	0.113	1.00	0.400			1	9587136
Total Penta CDF **	pg/g	0.737	0.132	5.00	0.400			2	9587136
Total Hexa CDF **	pg/g	2.44	0.124	5.00	0.400			5	9587136
Total Hepta CDF **	pg/g	2.96	0.135	5.00	0.400			3	9587136

EDL = Estimated Detection Limit

RDL = Reportable Detection Limit

TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.

WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

QC Batch = Quality Control Batch

* CDD = Chloro Dibenzo-p-Dioxin

** CDF = Chloro Dibenzo-p-Furan

(1) EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

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DIOXINS AND FURANS BY HRMS (SOIL)

Bureau Veritas ID		ZYT629							
Sampling Date		2024/08/09							
COC Number		N/A				**TOXIC EQUIVALENCY**		# of	
	UNITS	**MW24-5 SS4**	**EDL**	**RDL**	**MDL**	**TEF (2005 WHO)**	**TEQ(DL)**	**Isomers**	**QC Batch**
TOTAL TOXIC EQUIVALENCY	pg/g						1.01		
Surrogate Recovery (%)									
37CL4 2378 Tetra CDD *	%	64							9587136
C13-1234678 HeptaCDD *	%	73							9587136
C13-1234678 HeptaCDF **	%	69							9587136
C13-123478 HexaCDD *	%	75							9587136
C13-123478 HexaCDF **	%	67							9587136
C13-1234789 HeptaCDF **	%	74							9587136
C13-123678 HexaCDD *	%	85							9587136
C13-123678 HexaCDF **	%	70							9587136
C13-12378 PentaCDD *	%	69							9587136
C13-12378 PentaCDF **	%	60							9587136
C13-123789 HexaCDF **	%	72							9587136
C13-234678 HexaCDF **	%	71							9587136
C13-23478 PentaCDF **	%	61							9587136
C13-2378 TetraCDD *	%	67							9587136
C13-2378 TetraCDF **	%	67							9587136
C13-OCDD *	%	76							9587136

EDL = Estimated Detection Limit
RDL = Reportable Detection Limit
TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.
WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds
QC Batch = Quality Control Batch
* CDD = Chloro Dibenzo-p-Dioxin
** CDF = Chloro Dibenzo-p-Furan

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DIOXINS AND FURANS BY HRMS (SOIL)

Bureau Veritas ID		ZYT631							
Sampling Date		2024/08/09							
COC Number		N/A				TOXIC EQUIVALENCY		# of	
	UNITS	DUP6	EDL	RDL	MDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch
Dioxins & Furans									
2,3,7,8-Tetra CDD *	pg/g	<0.134	0.134	1.00	0.227	1.00	0.134	0	9587136
1,2,3,7,8-Penta CDD *	pg/g	<0.139	0.139	5.00	0.258	1.00	0.139	0	9587136
1,2,3,4,7,8-Hexa CDD *	pg/g	<0.160	0.160	5.00	0.204	0.100	0.0160	0	9587136
1,2,3,6,7,8-Hexa CDD *	pg/g	<0.183 (1)	0.183	5.00	0.173	0.100	0.0183	0	9587136
1,2,3,7,8,9-Hexa CDD *	pg/g	<0.157 (1)	0.157	5.00	0.179	0.100	0.0157	0	9587136
1,2,3,4,6,7,8-Hepta CDD *	pg/g	1.54	0.124	5.00	0.743	0.0100	0.0154	1	9587136
Octa CDD *	pg/g	9.07	0.151	10.0	0.800	0.000300	0.00272	1	9587136
Total Tetra CDD *	pg/g	<0.134	0.134	1.00	0.400			0	9587136
Total Penta CDD *	pg/g	<0.139	0.139	5.00	0.400			0	9587136
Total Hexa CDD *	pg/g	0.804	0.160	5.00	0.400			2	9587136
Total Hepta CDD *	pg/g	2.98	0.124	5.00	0.400			2	9587136
2,3,7,8-Tetra CDF **	pg/g	<0.141	0.141	1.00	0.181	0.100	0.0141	0	9587136
1,2,3,7,8-Penta CDF **	pg/g	<0.129	0.129	5.00	0.242	0.0300	0.00387	0	9587136
2,3,4,7,8-Penta CDF **	pg/g	<0.116	0.116	5.00	0.211	0.300	0.0348	0	9587136
1,2,3,4,7,8-Hexa CDF **	pg/g	<0.128	0.128	5.00	0.228	0.100	0.0128	0	9587136
1,2,3,6,7,8-Hexa CDF **	pg/g	<0.125	0.125	5.00	0.203	0.100	0.0125	0	9587136
2,3,4,6,7,8-Hexa CDF **	pg/g	<0.122	0.122	5.00	0.177	0.100	0.0122	0	9587136
1,2,3,7,8,9-Hexa CDF **	pg/g	<0.161	0.161	5.00	0.185	0.100	0.0161	0	9587136
1,2,3,4,6,7,8-Hepta CDF **	pg/g	0.975	0.142	5.00	0.185	0.0100	0.00975	1	9587136
1,2,3,4,7,8,9-Hepta CDF **	pg/g	<0.181	0.181	5.00	0.194	0.0100	0.00181	0	9587136
Octa CDF **	pg/g	0.629	0.129	10.0	0.919	0.000300	0.000189	1	9587136
Total Tetra CDF **	pg/g	<0.141	0.141	1.00	0.400			0	9587136
Total Penta CDF **	pg/g	0.558	0.122	5.00	0.400			1	9587136
Total Hexa CDF **	pg/g	1.28	0.133	5.00	0.400			2	9587136

EDL = Estimated Detection Limit

RDL = Reportable Detection Limit

TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.

WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

QC Batch = Quality Control Batch

* CDD = Chloro Dibenzo-p-Dioxin

** CDF = Chloro Dibenzo-p-Furan

(1) EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

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DIOXINS AND FURANS BY HRMS (SOIL)

Bureau Veritas ID		ZYT631							
Sampling Date		2024/08/09							
COC Number		N/A				TOXIC EQUIVALENCY		# of	
	UNITS	DUP6	EDL	RDL	MDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch
Total Hepta CDF **	pg/g	2.21	0.159	5.00	0.400			2	9587136
TOTAL TOXIC EQUIVALENCY	pg/g						0.459		
Surrogate Recovery (%)									
37CL4 2378 Tetra CDD *	%	84							9587136
C13-1234678 HeptaCDD *	%	87							9587136
C13-1234678 HeptaCDF **	%	83							9587136
C13-123478 HexaCDD *	%	98							9587136
C13-123478 HexaCDF **	%	91							9587136
C13-1234789 HeptaCDF **	%	77							9587136
C13-123678 HexaCDD *	%	96							9587136
C13-123678 HexaCDF **	%	93							9587136
C13-12378 PentaCDD *	%	106							9587136
C13-12378 PentaCDF **	%	103							9587136
C13-123789 HexaCDF **	%	88							9587136
C13-234678 HexaCDF **	%	96							9587136
C13-23478 PentaCDF **	%	107							9587136
C13-2378 TetraCDD *	%	74							9587136
C13-2378 TetraCDF **	%	85							9587136
C13-OCDD *	%	71							9587136

EDL = Estimated Detection Limit

RDL = Reportable Detection Limit

TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.

WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

QC Batch = Quality Control Batch

** CDF = Chloro Dibenzo-p-Furan

* CDD = Chloro Dibenzo-p-Dioxin

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TEST SUMMARY

Bureau Veritas ID: AFBK01 **Collected:** 2024/08/09
Sample ID: DUP 7 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9687851	N/A	2024/10/08	Joe Thomas
OC Pesticides (Selected) & PCB	GC/ECD	9687663	2024/10/08	2024/10/08	Akruti Patel
OC Pesticides Summed Parameters	CALC	9685873	N/A	2024/10/09	Automated Statchk

Bureau Veritas ID: ZYT608 **Collected:** 2024/08/09
Sample ID: BH24-1 SS1 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	9579186	2024/08/15	2024/08/16	Medhat Nasr
Free (WAD) Cyanide	TECH	9574762	2024/08/14	2024/08/14	Prgya Panchal
Conductivity	AT	9575958	2024/08/14	2024/08/14	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9582926	2024/08/17	2024/08/19	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	9580628	2024/08/16	2024/08/16	Jaswinder Kaur
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
OC Pesticides (Selected) & PCB	GC/ECD	9687663	2024/10/08	2024/10/09	Akruti Patel
OC Pesticides Summed Parameters	CALC	9685873	N/A	2024/10/10	Automated Statchk
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran
Sodium Adsorption Ratio (SAR)	CALC/MET	9568697	N/A	2024/08/15	Automated Statchk

Bureau Veritas ID: ZYT609 **Collected:** 2024/08/09
Sample ID: BH24-1 SS2 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9568698	N/A	2024/08/15	Automated Statchk
Hot Water Extractable Boron	ICP	9691843	2024/10/09	2024/10/10	Medhat Nasr
Free (WAD) Cyanide	TECH	9690412	2024/10/09	2024/10/10	Prgya Panchal
Conductivity	AT	9693432	2024/10/10	2024/10/10	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9690668	2024/10/09	2024/10/09	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	9691645	2024/10/09	2024/10/10	Viviana Canzonieri
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9574798	2024/08/13	2024/08/14	Joan Jin
pH CaCl2 EXTRACT	AT	9690624	2024/10/09	2024/10/09	Kien Tran
Sodium Adsorption Ratio (SAR)	CALC/MET	9687213	N/A	2024/10/11	Automated Statchk

Bureau Veritas ID: ZYT610 **Collected:** 2024/08/09
Sample ID: DUP1 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	9579186	2024/08/15	2024/08/16	Medhat Nasr
Free (WAD) Cyanide	TECH	9574762	2024/08/14	2024/08/14	Prgya Panchal
Conductivity	AT	9575958	2024/08/14	2024/08/14	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9582926	2024/08/17	2024/08/19	Violeta Porcila

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TEST SUMMARY

Bureau Veritas ID: ZYT610 **Collected:** 2024/08/09
Sample ID: DUP1 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	9580628	2024/08/16	2024/08/16	Jaswinder Kaur
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran
Sodium Adsorption Ratio (SAR)	CALC/MET	9568697	N/A	2024/08/15	Automated Statchk

Bureau Veritas ID: ZYT610 Dup **Collected:** 2024/08/09
Sample ID: DUP1 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan

Bureau Veritas ID: ZYT611 **Collected:** 2024/08/09
Sample ID: DUP2 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9568698	N/A	2024/08/15	Automated Statchk
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9574798	2024/08/13	2024/08/14	Joan Jin

Bureau Veritas ID: ZYT612 **Collected:** 2024/08/09
Sample ID: BH24-1 SS4 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	9573977	N/A	2024/08/14	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9576187	2024/08/14	2024/08/15	Mohammed Abdul Nafay Shoeb
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
pH CaCl2 EXTRACT	AT	9575275	2024/08/14	2024/08/14	Kien Tran

Bureau Veritas ID: ZYT613 **Collected:** 2024/08/09
Sample ID: BH24-1 SS5 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9568401	N/A	2024/08/13	Automated Statchk
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
Volatile Organic Compounds in Soil	GC/MS	9569599	N/A	2024/08/12	Gabriella Morrone

Bureau Veritas ID: ZYT614 **Collected:** 2024/08/09
Sample ID: BH24-2 SS1 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9568698	N/A	2024/08/15	Automated Statchk

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TEST SUMMARY

Bureau Veritas ID: ZYT614
Sample ID: BH24-2 SS1
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	9579186	2024/08/15	2024/08/16	Medhat Nasr
Free (WAD) Cyanide	TECH	9572053	2024/08/13	2024/08/13	Prgya Panchal
Conductivity	AT	9575958	2024/08/14	2024/08/14	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9582926	2024/08/17	2024/08/19	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	9580628	2024/08/16	2024/08/16	Jaswinder Kaur
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9574798	2024/08/13	2024/08/14	Joan Jin
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran
Sodium Adsorption Ratio (SAR)	CALC/MET	9568697	N/A	2024/08/15	Automated Statchk

Bureau Veritas ID: ZYT614 Dup
Sample ID: BH24-2 SS1
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9574798	2024/08/13	2024/08/14	Joan Jin

Bureau Veritas ID: ZYT615
Sample ID: BH24-2 SS4
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	9573977	N/A	2024/08/14	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9576187	2024/08/14	2024/08/15	Mohammed Abdul Nafay Shoeb
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
pH CaCl2 EXTRACT	AT	9575275	2024/08/14	2024/08/14	Kien Tran

Bureau Veritas ID: ZYT616
Sample ID: BH24-2 SS5
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9568401	N/A	2024/08/13	Automated Statchk
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
Volatile Organic Compounds in Soil	GC/MS	9569599	N/A	2024/08/12	Gabriella Morrone

Bureau Veritas ID: ZYT617
Sample ID: BH24-3 SS1
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9568698	N/A	2024/08/15	Automated Statchk
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
OC Pesticides (Selected) & PCB	GC/ECD	9690075	2024/10/08	2024/10/10	Li Peng
OC Pesticides Summed Parameters	CALC	9681597	N/A	2024/10/08	Automated Statchk
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9574798	2024/08/13	2024/08/14	Joan Jin

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TEST SUMMARY

Bureau Veritas ID: ZYT618 **Collected:** 2024/08/09
Sample ID: BH24-3 SS2 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	9579186	2024/08/15	2024/08/16	Medhat Nasr
Free (WAD) Cyanide	TECH	9574762	2024/08/14	2024/08/14	Prgya Panchal
Conductivity	AT	9575958	2024/08/14	2024/08/14	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9582926	2024/08/17	2024/08/19	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	9580628	2024/08/16	2024/08/16	Jaswinder Kaur
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran
Sodium Adsorption Ratio (SAR)	CALC/MET	9568697	N/A	2024/08/15	Automated Statchk

Bureau Veritas ID: ZYT619 **Collected:** 2024/08/09
Sample ID: BH24-3 SS4 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	9573977	N/A	2024/08/14	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9576187	2024/08/14	2024/08/15	Mohammed Abdul Nafay Shoeb
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon

Bureau Veritas ID: ZYT620 **Collected:** 2024/08/09
Sample ID: BH24-3 SS5 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9568401	N/A	2024/08/13	Automated Statchk
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
Volatile Organic Compounds in Soil	GC/MS	9569599	N/A	2024/08/12	Gabriella Morrone

Bureau Veritas ID: ZYT621 **Collected:** 2024/08/09
Sample ID: BH24-4 SS1 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
Polychlorinated Biphenyl in Soil	GC/ECD	9571819	2024/08/12	2024/08/13	Svitlana Shaula
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran

Bureau Veritas ID: ZYT622 **Collected:** 2024/08/09
Sample ID: BH24-4 SS3 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran

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TEST SUMMARY

Bureau Veritas ID: ZYT623 **Collected:** 2024/08/09
Sample ID: DUP3 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	9573977	N/A	2024/08/14	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9576187	2024/08/14	2024/08/15	Mohammed Abdul Nafay Shoeb
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon

Bureau Veritas ID: ZYT623 Dup **Collected:** 2024/08/09
Sample ID: DUP3 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon

Bureau Veritas ID: ZYT624 **Collected:** 2024/08/09
Sample ID: DUP5 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
Polychlorinated Biphenyl in Soil	GC/ECD	9571819	2024/08/12	2024/08/13	Svitlana Shaula

Bureau Veritas ID: ZYT625 **Collected:** 2024/08/09
Sample ID: MW24-5 SS1 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	9579186	2024/08/15	2024/08/16	Medhat Nasr
Free (WAD) Cyanide	TECH	9574762	2024/08/14	2024/08/14	Prgya Panchal
Conductivity	AT	9575958	2024/08/14	2024/08/14	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9582926	2024/08/17	2024/08/19	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	9580628	2024/08/16	2024/08/16	Jaswinder Kaur
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran
Sodium Adsorption Ratio (SAR)	CALC/MET	9568697	N/A	2024/08/15	Automated Statchk

Bureau Veritas ID: ZYT626 **Collected:** 2024/08/09
Sample ID: DUP4 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	9579186	2024/08/15	2024/08/16	Medhat Nasr
Free (WAD) Cyanide	TECH	9574762	2024/08/14	2024/08/14	Prgya Panchal
Conductivity	AT	9575958	2024/08/14	2024/08/14	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	9582926	2024/08/17	2024/08/19	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	9580628	2024/08/16	2024/08/16	Jaswinder Kaur
Moisture	BAL	9569080	N/A	2024/08/10	Muhammad Chhaidan
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran
Sodium Adsorption Ratio (SAR)	CALC/MET	9568697	N/A	2024/08/15	Automated Statchk

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TEST SUMMARY

Bureau Veritas ID: ZYT627 **Collected:** 2024/08/09
Sample ID: MW24-5 SS2 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9568698	N/A	2024/08/15	Automated Statchk
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9574798	2024/08/13	2024/08/14	Joan Jin

Bureau Veritas ID: ZYT628 **Collected:** 2024/08/09
Sample ID: MW24-5 SS3 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran

Bureau Veritas ID: ZYT628 Dup **Collected:** 2024/08/09
Sample ID: MW24-5 SS3 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	9575290	2024/08/14	2024/08/14	Kien Tran

Bureau Veritas ID: ZYT629 **Collected:** 2024/08/09
Sample ID: MW24-5 SS4 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9568698	N/A	2024/08/15	Automated Statchk
Dioxins/Furans in Soil (1613B)	HRMS/MS	9587136	2024/08/20	2024/09/10	Yan Qin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	9573977	N/A	2024/08/14	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9576187	2024/08/14	2024/08/15	Mohammed Abdul Nafay Shoeb
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9574798	2024/08/13	2024/08/14	Joan Jin

Bureau Veritas ID: ZYT630 **Collected:** 2024/08/09
Sample ID: MW24-5 SS9 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9568401	N/A	2024/08/13	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9576187	2024/08/14	2024/08/15	Mohammed Abdul Nafay Shoeb
Moisture	BAL	9569056	N/A	2024/08/10	Jeremy Apoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9569568	N/A	2024/08/12	Xueming Jiang

Bureau Veritas ID: ZYT630 Dup **Collected:** 2024/08/09
Sample ID: MW24-5 SS9 **Shipped:**
Matrix: Soil **Received:** 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9576187	2024/08/14	2024/08/15	Mohammed Abdul Nafay Shoeb

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Bureau Veritas Job #: C4O6235
Report Date: 2024/10/11

DS Consultants Limited
Client Project #: 24-300-100
Sampler Initials: DAS

TEST SUMMARY

Bureau Veritas ID: ZYT631
Sample ID: DUP6
Matrix: Soil

Collected: 2024/08/09
Shipped:
Received: 2024/08/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dioxins/Furans in Soil (1613B)	HRMS/MS	9587136	2024/08/20	2024/09/09	Yan Qin

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GENERAL COMMENTS

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

Package 1	6.3°C

Revised Report (2024/10/11): OC Pesticides analysis added to sample BH24-3 SS1 per client Kirstin Olsen's request.

Sample ZYT630 [MW24-5 SS9] : VOC/F1 Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

O.REG 153 OC PESTICIDES (SOIL)

OC Pesticides (Selected) & PCB: OC Pesticide Analysis : Matrix spike exceeds acceptance limits, probable matrix interference.
OC Pesticides (Selected) & PCB: Matrix spike exceeds acceptance limits, probable matrix interference.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9569568	4-Bromofluorobenzene	2024/08/12	99	60 - 140	100	60 - 140	97	%		
9569568	D10-o-Xylene	2024/08/12	105	60 - 130	93	60 - 130	84	%		
9569568	D4-1,2-Dichloroethane	2024/08/12	105	60 - 140	103	60 - 140	104	%		
9569568	D8-Toluene	2024/08/12	102	60 - 140	102	60 - 140	94	%		
9569599	4-Bromofluorobenzene	2024/08/12	100	60 - 140	100	60 - 140	97	%		
9569599	D10-o-Xylene	2024/08/12	107	60 - 130	90	60 - 130	96	%		
9569599	D4-1,2-Dichloroethane	2024/08/12	103	60 - 140	107	60 - 140	105	%		
9569599	D8-Toluene	2024/08/12	103	60 - 140	101	60 - 140	94	%		
9571819	Decachlorobiphenyl	2024/08/13	108	60 - 130	108	60 - 130	105	%		
9573977	1,4-Difluorobenzene	2024/08/14	111	60 - 140	114	60 - 140	99	%		
9573977	4-Bromofluorobenzene	2024/08/14	91	60 - 140	92	60 - 140	96	%		
9573977	D10-o-Xylene	2024/08/14	121	60 - 140	103	60 - 140	97	%		
9573977	D4-1,2-Dichloroethane	2024/08/14	101	60 - 140	112	60 - 140	101	%		
9574798	D10-Anthracene	2024/08/14	89	50 - 130	103	50 - 130	108	%		
9574798	D14-Terphenyl (FS)	2024/08/14	84	50 - 130	96	50 - 130	100	%		
9574798	D8-Acenaphthylene	2024/08/14	84	50 - 130	95	50 - 130	89	%		
9576187	o-Terphenyl	2024/08/14	105	60 - 140	106	60 - 140	109	%		
9587136	37CL4 2378 Tetra CDD	2024/09/08	80	35 - 197	69	35 - 197	60	%		
9587136	C13-1234678 HeptaCDD	2024/09/08	63	23 - 140	73	23 - 140	88	%		
9587136	C13-1234678 HeptaCDF	2024/09/08	70	28 - 143	77	28 - 143	86	%		
9587136	C13-123478 HexaCDD	2024/09/08	76	32 - 141	91	32 - 141	104	%		
9587136	C13-123478 HexaCDF	2024/09/08	88	26 - 152	91	26 - 152	89	%		
9587136	C13-1234789 HeptaCDF	2024/09/08	56	26 - 138	68	26 - 138	87	%		
9587136	C13-123678 HexaCDD	2024/09/08	100	28 - 130	96	28 - 130	103	%		
9587136	C13-123678 HexaCDF	2024/09/08	102	26 - 123	98	26 - 123	101	%		
9587136	C13-12378 PentaCDD	2024/09/08	72	25 - 181	73	25 - 181	87	%		
9587136	C13-12378 PentaCDF	2024/09/08	75	24 - 185	69	24 - 185	70	%		
9587136	C13-123789 HexaCDF	2024/09/08	79	29 - 147	87	29 - 147	101	%		
9587136	C13-234678 HexaCDF	2024/09/08	85	28 - 136	100	28 - 136	99	%		
9587136	C13-23478 PentaCDF	2024/09/08	70	21 - 178	73	21 - 178	81	%		
9587136	C13-2378 TetraCDD	2024/09/08	86	25 - 164	71	25 - 164	59	%		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9587136	C13-2378 TetraCDF	2024/09/08	90	24 - 169	71	24 - 169	74	%		
9587136	C13-OCDD	2024/09/08	43	17 - 157	52	17 - 157	83	%		
9687663	2,4,5,6-Tetrachloro-m-xylene	2024/10/08	118	50 - 130	80	50 - 130	70	%		
9687663	Decachlorobiphenyl	2024/10/08	119	50 - 130	91	50 - 130	69	%		
9690075	2,4,5,6-Tetrachloro-m-xylene	2024/10/10	82	50 - 130	68	50 - 130	82	%		
9690075	Decachlorobiphenyl	2024/10/10	68	50 - 130	87	50 - 130	80	%		
9569056	Moisture	2024/08/10							3.0	20
9569080	Moisture	2024/08/10							0	20
9569568	1,1,1,2-Tetrachloroethane	2024/08/12	122	60 - 140	107	60 - 130	<0.040	ug/g	NC	50
9569568	1,1,1-Trichloroethane	2024/08/12	111	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9569568	1,1,2,2-Tetrachloroethane	2024/08/12	106	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
9569568	1,1,2-Trichloroethane	2024/08/12	113	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9569568	1,1-Dichloroethane	2024/08/12	108	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
9569568	1,1-Dichloroethylene	2024/08/12	110	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9569568	1,2-Dichlorobenzene	2024/08/12	110	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9569568	1,2-Dichloroethane	2024/08/12	113	60 - 140	99	60 - 130	<0.049	ug/g	NC	50
9569568	1,2-Dichloropropane	2024/08/12	110	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
9569568	1,3-Dichlorobenzene	2024/08/12	111	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9569568	1,4-Dichlorobenzene	2024/08/12	110	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9569568	Acetone (2-Propanone)	2024/08/12	108	60 - 140	96	60 - 140	<0.49	ug/g	NC	50
9569568	Benzene	2024/08/12	109	60 - 140	97	60 - 130	<0.0060	ug/g	NC	50
9569568	Bromodichloromethane	2024/08/12	110	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
9569568	Bromoform	2024/08/12	111	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
9569568	Bromomethane	2024/08/12	95	60 - 140	83	60 - 140	<0.040	ug/g	NC	50
9569568	Carbon Tetrachloride	2024/08/12	122	60 - 140	108	60 - 130	<0.040	ug/g	NC	50
9569568	Chlorobenzene	2024/08/12	100	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
9569568	Chloroform	2024/08/12	114	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9569568	cis-1,2-Dichloroethylene	2024/08/12	115	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
9569568	cis-1,3-Dichloropropene	2024/08/12	99	60 - 140	87	60 - 130	<0.030	ug/g	NC	50
9569568	Dibromochloromethane	2024/08/12	116	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
9569568	Dichlorodifluoromethane (FREON 12)	2024/08/12	73	60 - 140	69	60 - 140	<0.040	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9569568	Ethylbenzene	2024/08/12	98	60 - 140	89	60 - 130	<0.010	ug/g	NC	50
9569568	Ethylene Dibromide	2024/08/12	110	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9569568	F1 (C6-C10) - BTEX	2024/08/12					<10	ug/g	NC	30
9569568	F1 (C6-C10)	2024/08/12	91	60 - 140	101	80 - 120	<10	ug/g	NC	30
9569568	Hexane	2024/08/12	111	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
9569568	Methyl Ethyl Ketone (2-Butanone)	2024/08/12	111	60 - 140	100	60 - 140	<0.40	ug/g	NC	50
9569568	Methyl Isobutyl Ketone	2024/08/12	99	60 - 140	90	60 - 130	<0.40	ug/g	NC	50
9569568	Methyl t-butyl ether (MTBE)	2024/08/12	102	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
9569568	Methylene Chloride(Dichloromethane)	2024/08/12	118	60 - 140	102	60 - 130	<0.049	ug/g	NC	50
9569568	o-Xylene	2024/08/12	105	60 - 140	95	60 - 130	<0.020	ug/g	NC	50
9569568	p+m-Xylene	2024/08/12	97	60 - 140	88	60 - 130	<0.020	ug/g	NC	50
9569568	Styrene	2024/08/12	99	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
9569568	Tetrachloroethylene	2024/08/12	112	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9569568	Toluene	2024/08/12	106	60 - 140	95	60 - 130	<0.020	ug/g	NC	50
9569568	Total Xylenes	2024/08/12					<0.020	ug/g	NC	50
9569568	trans-1,2-Dichloroethylene	2024/08/12	120	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
9569568	trans-1,3-Dichloropropene	2024/08/12	109	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9569568	Trichloroethylene	2024/08/12	113	60 - 140	100	60 - 130	<0.010	ug/g	NC	50
9569568	Trichlorofluoromethane (FREON 11)	2024/08/12	111	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9569568	Vinyl Chloride	2024/08/12	102	60 - 140	91	60 - 130	<0.019	ug/g	NC	50
9569599	1,1,1,2-Tetrachloroethane	2024/08/12	127	60 - 140	123	60 - 130	<0.040	ug/g	NC	50
9569599	1,1,1-Trichloroethane	2024/08/12	113	60 - 140	107	60 - 130	<0.040	ug/g	NC	50
9569599	1,1,2,2-Tetrachloroethane	2024/08/12	100	60 - 140	107	60 - 130	<0.040	ug/g	NC	50
9569599	1,1,2-Trichloroethane	2024/08/12	115	60 - 140	115	60 - 130	<0.040	ug/g	NC	50
9569599	1,1-Dichloroethane	2024/08/12	113	60 - 140	108	60 - 130	<0.040	ug/g	NC	50
9569599	1,1-Dichloroethylene	2024/08/12	122	60 - 140	112	60 - 130	<0.040	ug/g	NC	50
9569599	1,2-Dichlorobenzene	2024/08/12	117	60 - 140	110	60 - 130	<0.040	ug/g	NC	50
9569599	1,2-Dichloroethane	2024/08/12	117	60 - 140	118	60 - 130	<0.049	ug/g	NC	50
9569599	1,2-Dichloropropane	2024/08/12	115	60 - 140	114	60 - 130	<0.040	ug/g	NC	50
9569599	1,3-Dichlorobenzene	2024/08/12	118	60 - 140	110	60 - 130	<0.040	ug/g	NC	50
9569599	1,4-Dichlorobenzene	2024/08/12	119	60 - 140	111	60 - 130	<0.040	ug/g	NC	50

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9569599	Acetone (2-Propanone)	2024/08/12	120	60 - 140	127	60 - 140	<0.49	ug/g	NC	50
9569599	Benzene	2024/08/12	114	60 - 140	108	60 - 130	<0.0060	ug/g	NC	50
9569599	Bromodichloromethane	2024/08/12	108	60 - 140	111	60 - 130	<0.040	ug/g	NC	50
9569599	Bromoform	2024/08/12	109	60 - 140	120	60 - 130	<0.040	ug/g	NC	50
9569599	Bromomethane	2024/08/12	99	60 - 140	92	60 - 140	<0.040	ug/g	NC	50
9569599	Carbon Tetrachloride	2024/08/12	123	60 - 140	115	60 - 130	<0.040	ug/g	NC	50
9569599	Chlorobenzene	2024/08/12	107	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
9569599	Chloroform	2024/08/12	114	60 - 140	110	60 - 130	<0.040	ug/g	NC	50
9569599	cis-1,2-Dichloroethylene	2024/08/12	118	60 - 140	115	60 - 130	<0.040	ug/g	NC	50
9569599	cis-1,3-Dichloropropene	2024/08/12	105	60 - 140	109	60 - 130	<0.030	ug/g	NC	50
9569599	Dibromochloromethane	2024/08/12	114	60 - 140	120	60 - 130	<0.040	ug/g	NC	50
9569599	Dichlorodifluoromethane (FREON 12)	2024/08/12	86	60 - 140	81	60 - 140	<0.040	ug/g	NC	50
9569599	Ethylbenzene	2024/08/12	118	60 - 140	109	60 - 130	<0.010	ug/g	NC	50
9569599	Ethylene Dibromide	2024/08/12	110	60 - 140	114	60 - 130	<0.040	ug/g	NC	50
9569599	Hexane	2024/08/12	135	60 - 140	123	60 - 130	<0.040	ug/g	NC	50
9569599	Methyl Ethyl Ketone (2-Butanone)	2024/08/12	113	60 - 140	126	60 - 140	<0.40	ug/g	NC	50
9569599	Methyl Isobutyl Ketone	2024/08/12	108	60 - 140	124	60 - 130	<0.40	ug/g	NC	50
9569599	Methyl t-butyl ether (MTBE)	2024/08/12	109	60 - 140	111	60 - 130	<0.040	ug/g	NC	50
9569599	Methylene Chloride(Dichloromethane)	2024/08/12	111	60 - 140	108	60 - 130	<0.049	ug/g	NC	50
9569599	o-Xylene	2024/08/12	124	60 - 140	116	60 - 130	<0.020	ug/g	NC	50
9569599	p+m-Xylene	2024/08/12	115	60 - 140	107	60 - 130	<0.020	ug/g	NC	50
9569599	Styrene	2024/08/12	120	60 - 140	116	60 - 130	<0.040	ug/g	NC	50
9569599	Tetrachloroethylene	2024/08/12	117	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
9569599	Toluene	2024/08/12	114	60 - 140	106	60 - 130	<0.020	ug/g	NC	50
9569599	Total Xylenes	2024/08/12					<0.020	ug/g	NC	50
9569599	trans-1,2-Dichloroethylene	2024/08/12	122	60 - 140	114	60 - 130	<0.040	ug/g	NC	50
9569599	trans-1,3-Dichloropropene	2024/08/12	116	60 - 140	120	60 - 130	<0.040	ug/g	NC	50
9569599	Trichloroethylene	2024/08/12	120	60 - 140	113	60 - 130	<0.010	ug/g	NC	50
9569599	Trichlorofluoromethane (FREON 11)	2024/08/12	117	60 - 140	106	60 - 130	<0.040	ug/g	NC	50
9569599	Vinyl Chloride	2024/08/12	110	60 - 140	103	60 - 130	<0.019	ug/g	NC	50
9571819	Aroclor 1242	2024/08/13					<0.010	ug/g	NC	50

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9571819	Aroclor 1248	2024/08/13					<0.010	ug/g	NC	50
9571819	Aroclor 1254	2024/08/13					<0.010	ug/g	NC	50
9571819	Aroclor 1260	2024/08/13	122	30 - 130	123	30 - 130	<0.010	ug/g	NC	50
9571819	Total PCB	2024/08/13	122	30 - 130	123	30 - 130	<0.010	ug/g	NC	50
9572053	WAD Cyanide (Free)	2024/08/13	98	75 - 125	101	80 - 120	<0.01	ug/g	NC	35
9573977	Benzene	2024/08/14	106	50 - 140	95	50 - 140	<0.020	ug/g	NC	50
9573977	Ethylbenzene	2024/08/14	114	50 - 140	93	50 - 140	<0.020	ug/g	NC	50
9573977	F1 (C6-C10) - BTEX	2024/08/14					<10	ug/g	NC	30
9573977	F1 (C6-C10)	2024/08/14	108	60 - 140	87	80 - 120	<10	ug/g	NC	30
9573977	o-Xylene	2024/08/14	106	50 - 140	86	50 - 140	<0.020	ug/g	6.9	50
9573977	p+m-Xylene	2024/08/14	110	50 - 140	90	50 - 140	<0.040	ug/g	NC	50
9573977	Toluene	2024/08/14	93	50 - 140	77	50 - 140	<0.020	ug/g	3.4	50
9573977	Total Xylenes	2024/08/14					<0.040	ug/g	NC	50
9574762	WAD Cyanide (Free)	2024/08/14	99	75 - 125	100	80 - 120	<0.01	ug/g	NC	35
9574798	1-Methylnaphthalene	2024/08/14	87	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
9574798	2-Methylnaphthalene	2024/08/14	84	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
9574798	Acenaphthene	2024/08/14	85	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40
9574798	Acenaphthylene	2024/08/14	82	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
9574798	Anthracene	2024/08/14	85	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
9574798	Benzo(a)anthracene	2024/08/14	89	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
9574798	Benzo(a)pyrene	2024/08/14	88	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
9574798	Benzo(b/j)fluoranthene	2024/08/14	86	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40
9574798	Benzo(g,h,i)perylene	2024/08/14	88	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
9574798	Benzo(k)fluoranthene	2024/08/14	92	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
9574798	Chrysene	2024/08/14	87	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
9574798	Dibenzo(a,h)anthracene	2024/08/14	94	50 - 130	104	50 - 130	<0.0050	ug/g	NC	40
9574798	Fluoranthene	2024/08/14	87	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
9574798	Fluorene	2024/08/14	87	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
9574798	Indeno(1,2,3-cd)pyrene	2024/08/14	88	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40
9574798	Naphthalene	2024/08/14	78	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
9574798	Phenanthrene	2024/08/14	85	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9574798	Pyrene	2024/08/14	85	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
9575275	Available (CaCl2) pH	2024/08/14			100	97 - 103			1.5	N/A
9575290	Available (CaCl2) pH	2024/08/14			100	97 - 103			0.031	N/A
9575958	Conductivity	2024/08/14			105	90 - 110	<0.002	mS/cm	2.2	10
9576187	F2 (C10-C16 Hydrocarbons)	2024/08/15	106	60 - 140	107	80 - 120	<10	ug/g	NC	30
9576187	F3 (C16-C34 Hydrocarbons)	2024/08/15	103	60 - 140	104	80 - 120	<50	ug/g	NC	30
9576187	F4 (C34-C50 Hydrocarbons)	2024/08/15	88	60 - 140	86	80 - 120	<50	ug/g	NC	30
9579186	Hot Water Ext. Boron (B)	2024/08/16	106	75 - 125	111	75 - 125	<0.050	ug/g	0.45	40
9580628	Acid Extractable Antimony (Sb)	2024/08/16	113	75 - 125	116	80 - 120	<0.20	ug/g	NC	30
9580628	Acid Extractable Arsenic (As)	2024/08/16	97	75 - 125	99	80 - 120	<1.0	ug/g	NC	30
9580628	Acid Extractable Barium (Ba)	2024/08/16	92	75 - 125	102	80 - 120	<0.50	ug/g	8.5	30
9580628	Acid Extractable Beryllium (Be)	2024/08/16	96	75 - 125	97	80 - 120	<0.20	ug/g	NC	30
9580628	Acid Extractable Boron (B)	2024/08/16	94	75 - 125	95	80 - 120	<5.0	ug/g	NC	30
9580628	Acid Extractable Cadmium (Cd)	2024/08/16	97	75 - 125	98	80 - 120	<0.10	ug/g	NC	30
9580628	Acid Extractable Chromium (Cr)	2024/08/16	97	75 - 125	99	80 - 120	<1.0	ug/g	7.6	30
9580628	Acid Extractable Cobalt (Co)	2024/08/16	100	75 - 125	103	80 - 120	<0.10	ug/g	1.6	30
9580628	Acid Extractable Copper (Cu)	2024/08/16	105	75 - 125	101	80 - 120	<0.50	ug/g	2.6	30
9580628	Acid Extractable Lead (Pb)	2024/08/16	96	75 - 125	100	80 - 120	<1.0	ug/g	1.5	30
9580628	Acid Extractable Mercury (Hg)	2024/08/16	94	75 - 125	100	80 - 120	<0.050	ug/g	NC	30
9580628	Acid Extractable Molybdenum (Mo)	2024/08/16	99	75 - 125	99	80 - 120	<0.50	ug/g	NC	30
9580628	Acid Extractable Nickel (Ni)	2024/08/16	102	75 - 125	104	80 - 120	<0.50	ug/g	5.5	30
9580628	Acid Extractable Selenium (Se)	2024/08/16	100	75 - 125	101	80 - 120	<0.50	ug/g	NC	30
9580628	Acid Extractable Silver (Ag)	2024/08/16	98	75 - 125	100	80 - 120	<0.20	ug/g	NC	30
9580628	Acid Extractable Thallium (Tl)	2024/08/16	96	75 - 125	98	80 - 120	<0.050	ug/g	NC	30
9580628	Acid Extractable Uranium (U)	2024/08/16	100	75 - 125	102	80 - 120	<0.050	ug/g	7.7	30
9580628	Acid Extractable Vanadium (V)	2024/08/16	94	75 - 125	104	80 - 120	<5.0	ug/g	1.9	30
9580628	Acid Extractable Zinc (Zn)	2024/08/16	NC	75 - 125	102	80 - 120	<5.0	ug/g	16	30
9582926	Chromium (VI)	2024/08/19	92	70 - 130	94	80 - 120	<0.18	ug/g	NC	35
9587136	1,2,3,4,6,7,8-Hepta CDD	2024/09/08	139	70 - 140	112	70 - 140	0.666, EDL=0.122	pg/g	4.9	25

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9587136	1,2,3,4,6,7,8-Hepta CDF	2024/09/08	106	82 - 122	117	82 - 122	0.436, EDL=0.109	pg/g	11	25
9587136	1,2,3,4,7,8,9-Hepta CDF	2024/09/08	102	78 - 138	111	78 - 138	0.186, EDL=0.129	pg/g	NC (4)	25
9587136	1,2,3,4,7,8-Hexa CDD	2024/09/08	99	70 - 164	108	70 - 164	<0.155, EDL=0.155	pg/g	NC	25
9587136	1,2,3,4,7,8-Hexa CDF	2024/09/08	105	72 - 134	110	72 - 134	<0.158, EDL=0.158	pg/g	NC	25
9587136	1,2,3,6,7,8-Hexa CDD	2024/09/08	100	76 - 134	111	76 - 134	<0.157, EDL=0.157	pg/g	NC	25
9587136	1,2,3,6,7,8-Hexa CDF	2024/09/08	102	84 - 130	110	84 - 130	<0.139, EDL=0.139	pg/g	NC	25
9587136	1,2,3,7,8,9-Hexa CDD	2024/09/08	100	64 - 162	109	64 - 162	<0.151, EDL=0.151	pg/g	NC	25
9587136	1,2,3,7,8,9-Hexa CDF	2024/09/08	98	78 - 130	109	78 - 130	<0.169, EDL=0.169	pg/g	NC	25
9587136	1,2,3,7,8-Penta CDD	2024/09/08	98	25 - 181	104	25 - 181	<0.155, EDL=0.155	pg/g	NC	25
9587136	1,2,3,7,8-Penta CDF	2024/09/08	106	80 - 134	109	80 - 134	<0.141, EDL=0.141	pg/g	NC	25
9587136	2,3,4,6,7,8-Hexa CDF	2024/09/08	108	70 - 156	107	70 - 156	<0.142, EDL=0.142	pg/g	NC	25
9587136	2,3,4,7,8-Penta CDF	2024/09/08	101	68 - 160	107	68 - 160	<0.113, EDL=0.113	pg/g	NC	25
9587136	2,3,7,8-Tetra CDD	2024/09/08	102	67 - 158	112	67 - 158	<0.126, EDL=0.126	pg/g	NC	25
9587136	2,3,7,8-Tetra CDF	2024/09/08	200 (1)	75 - 158	110	75 - 158	<0.114, EDL=0.114	pg/g	NC (3)	25
9587136	Octa CDD	2024/09/08	110	78 - 144	113	78 - 144	2.48, EDL=0.150	pg/g	8.7	25
9587136	Octa CDF	2024/09/08	92	63 - 170	102	63 - 170	<0.783, EDL=0.783 (2)	pg/g	NC	25
9587136	Total Hepta CDD	2024/09/08					0.666, EDL=0.122	pg/g	2.7	25

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9587136	Total Hepta CDF	2024/09/08					1.11, EDL=0.118	pg/g	3.6	25
9587136	Total Hexa CDD	2024/09/08					<0.154, EDL=0.154	pg/g	4.8	25
9587136	Total Hexa CDF	2024/09/08					0.188, EDL=0.151	pg/g	14	25
9587136	Total Penta CDD	2024/09/08					<0.155, EDL=0.155	pg/g	NC	25
9587136	Total Penta CDF	2024/09/08					<0.126, EDL=0.126	pg/g	2.6	25
9587136	Total Tetra CDD	2024/09/08					<0.126, EDL=0.126	pg/g	NC	25
9587136	Total Tetra CDF	2024/09/08					<0.114, EDL=0.114	pg/g	NC	25
9687663	a-Chlordane	2024/10/09	167 (1)	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
9687663	Aldrin	2024/10/09	144 (1)	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40
9687663	Aroclor 1242	2024/10/09					<0.015	ug/g	NC	40
9687663	Aroclor 1248	2024/10/09					<0.015	ug/g	NC	40
9687663	Aroclor 1254	2024/10/09					<0.015	ug/g	NC	40
9687663	Aroclor 1260	2024/10/09					<0.015	ug/g	NC	40
9687663	Dieldrin	2024/10/09	133 (1)	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40
9687663	Endosulfan I (alpha)	2024/10/09	151 (1)	50 - 130	67	50 - 130	<0.0020	ug/g	NC	40
9687663	Endosulfan II (beta)	2024/10/09	89	50 - 130	74	50 - 130	<0.0020	ug/g	NC	40
9687663	Endrin	2024/10/09	140 (1)	50 - 130	89	50 - 130	<0.0020	ug/g	NC	40
9687663	g-Chlordane	2024/10/09	185 (1)	50 - 130	82	50 - 130	<0.0020	ug/g	NC	40
9687663	Heptachlor epoxide	2024/10/09	148 (1)	50 - 130	81	50 - 130	<0.0020	ug/g	NC	40
9687663	Heptachlor	2024/10/09	146 (1)	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
9687663	Hexachlorobenzene	2024/10/09	127	50 - 130	73	50 - 130	<0.0020	ug/g	NC	40
9687663	Hexachlorobutadiene	2024/10/09	85	50 - 130	89	50 - 130	<0.0020	ug/g	NC	40
9687663	Hexachloroethane	2024/10/09	196 (1)	50 - 130	71	50 - 130	<0.0020	ug/g	NC	40
9687663	Lindane	2024/10/09	132 (1)	50 - 130	80	50 - 130	<0.0020	ug/g	NC	40
9687663	Methoxychlor	2024/10/09	176 (1)	50 - 130	129	50 - 130	<0.0050	ug/g	NC	40
9687663	o,p-DDD	2024/10/09	142 (1)	50 - 130	95	50 - 130	<0.0020	ug/g	NC	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9687663	o,p-DDE	2024/10/09	157 (1)	50 - 130	95	50 - 130	<0.0020	ug/g	NC	40
9687663	o,p-DDT	2024/10/09	162 (1)	50 - 130	113	50 - 130	<0.0020	ug/g	NC	40
9687663	p,p-DDD	2024/10/09	118	50 - 130	100	50 - 130	<0.0020	ug/g	NC	40
9687663	p,p-DDE	2024/10/09	195 (1)	50 - 130	80	50 - 130	<0.0020	ug/g	NC	40
9687663	p,p-DDT	2024/10/09	220 (1)	50 - 130	111	50 - 130	<0.0020	ug/g	NC	40
9687851	Moisture	2024/10/08							3.6	20
9690075	a-Chlordane	2024/10/10	90	50 - 130	84	50 - 130	<0.0020	ug/g	NC	40
9690075	Aldrin	2024/10/10	92	50 - 130	73	50 - 130	<0.0020	ug/g	NC	40
9690075	Aroclor 1242	2024/10/10					<0.015	ug/g	NC	40
9690075	Aroclor 1248	2024/10/10					<0.015	ug/g	NC	40
9690075	Aroclor 1254	2024/10/10					<0.015	ug/g	NC	40
9690075	Aroclor 1260	2024/10/10					<0.015	ug/g	NC	40
9690075	Dieldrin	2024/10/10	194 (1)	50 - 130	100	50 - 130	<0.0020	ug/g	32	40
9690075	Endosulfan I (alpha)	2024/10/10	106	50 - 130	87	50 - 130	<0.0020	ug/g	NC	40
9690075	Endosulfan II (beta)	2024/10/10	105	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40
9690075	Endrin	2024/10/10	112	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40
9690075	g-Chlordane	2024/10/10	113	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40
9690075	Heptachlor epoxide	2024/10/10	140 (1)	50 - 130	89	50 - 130	<0.0020	ug/g	NC	40
9690075	Heptachlor	2024/10/10	93	50 - 130	72	50 - 130	<0.0020	ug/g	NC	40
9690075	Hexachlorobenzene	2024/10/10	88	50 - 130	64	50 - 130	<0.0020	ug/g	NC	40
9690075	Hexachlorobutadiene	2024/10/10	197 (1)	50 - 130	78	50 - 130	<0.0020	ug/g	NC	40
9690075	Hexachloroethane	2024/10/10	46 (1)	50 - 130	63	50 - 130	<0.0020	ug/g	NC	40
9690075	Lindane	2024/10/10	94	50 - 130	81	50 - 130	<0.0020	ug/g	NC	40
9690075	Methoxychlor	2024/10/10	122	50 - 130	126	50 - 130	<0.0050	ug/g	NC	40
9690075	o,p-DDD	2024/10/10	99	50 - 130	104	50 - 130	<0.0020	ug/g	NC	40
9690075	o,p-DDE	2024/10/10	100	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40
9690075	o,p-DDT	2024/10/10	80	50 - 130	97	50 - 130	<0.0020	ug/g	NC	40
9690075	p,p-DDD	2024/10/10	115	50 - 130	108	50 - 130	<0.0020	ug/g	NC	40
9690075	p,p-DDE	2024/10/10	101	50 - 130	86	50 - 130	<0.0020	ug/g	1.5	40
9690075	p,p-DDT	2024/10/10	68	50 - 130	106	50 - 130	<0.0020	ug/g	NC	40
9690412	WAD Cyanide (Free)	2024/10/09	106	75 - 125	117	80 - 120	<0.01	ug/g	NC	35

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9690624	Available (CaCl2) pH	2024/10/09			101	97 - 103			0.14	N/A
9690668	Chromium (VI)	2024/10/09	86	70 - 130	90	80 - 120	<0.18	ug/g	NC	35
9691645	Acid Extractable Antimony (Sb)	2024/10/10	96	75 - 125	102	80 - 120	<0.20	ug/g	NC	30
9691645	Acid Extractable Arsenic (As)	2024/10/10	98	75 - 125	102	80 - 120	<1.0	ug/g	3.6	30
9691645	Acid Extractable Barium (Ba)	2024/10/10	91	75 - 125	99	80 - 120	<0.50	ug/g	1.4	30
9691645	Acid Extractable Beryllium (Be)	2024/10/10	100	75 - 125	102	80 - 120	<0.20	ug/g	NC	30
9691645	Acid Extractable Boron (B)	2024/10/10	96	75 - 125	98	80 - 120	<5.0	ug/g	NC	30
9691645	Acid Extractable Cadmium (Cd)	2024/10/10	94	75 - 125	98	80 - 120	<0.10	ug/g	NC	30
9691645	Acid Extractable Chromium (Cr)	2024/10/10	96	75 - 125	100	80 - 120	<1.0	ug/g	0.051	30
9691645	Acid Extractable Cobalt (Co)	2024/10/10	92	75 - 125	100	80 - 120	<0.10	ug/g	1.1	30
9691645	Acid Extractable Copper (Cu)	2024/10/10	95	75 - 125	99	80 - 120	<0.50	ug/g	4.1	30
9691645	Acid Extractable Lead (Pb)	2024/10/10	88	75 - 125	96	80 - 120	<1.0	ug/g	1.7	30
9691645	Acid Extractable Mercury (Hg)	2024/10/10	87	75 - 125	95	80 - 120	<0.050	ug/g	NC	30
9691645	Acid Extractable Molybdenum (Mo)	2024/10/10	91	75 - 125	94	80 - 120	<0.50	ug/g	NC	30
9691645	Acid Extractable Nickel (Ni)	2024/10/10	94	75 - 125	103	80 - 120	<0.50	ug/g	4.0	30
9691645	Acid Extractable Selenium (Se)	2024/10/10	94	75 - 125	101	80 - 120	<0.50	ug/g	NC	30
9691645	Acid Extractable Silver (Ag)	2024/10/10	89	75 - 125	94	80 - 120	<0.20	ug/g	NC	30
9691645	Acid Extractable Thallium (Tl)	2024/10/10	88	75 - 125	96	80 - 120	<0.050	ug/g	NC	30
9691645	Acid Extractable Uranium (U)	2024/10/10	90	75 - 125	97	80 - 120	<0.050	ug/g	3.5	30
9691645	Acid Extractable Vanadium (V)	2024/10/10	102	75 - 125	103	80 - 120	<5.0	ug/g	1.3	30
9691645	Acid Extractable Zinc (Zn)	2024/10/10	93	75 - 125	101	80 - 120	<5.0	ug/g	2.4	30
9691843	Hot Water Ext. Boron (B)	2024/10/10	98	75 - 125	93	75 - 125	<0.050	ug/g	15	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9693432	Conductivity	2024/10/10			100	90 - 110	<0.002	mS/cm	2.7	10

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) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) RT>2 seconds - PCDD/DF analysis-Peak maxima of monitored ions exceeds 2 seconds

(3) RT > 3 seconds - PCDD/DF analysis - Peak detected exceeds expected retention time (from internal standard) by greater than 3 seconds.RT>2 seconds - PCDD/DF analysis-Peak maxima of monitored ions exceeds 2 seconds

(4) EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

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VALIDATION SIGNATURE PAGE

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

Angel Guerrero, Supervisor, Ultra Trace Analysis, HRMS and SVOC

Cristina Carriere, Senior Scientific Specialist

Louise Harding, 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 Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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2024/08/10 08:30

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CHAIN OF CUSTODY RECORD

ENV COC - 00014v5

NONT-2024-08-2165

Invoice Information	Invoice to (requires report) ☐	Report Information (if differs from invoice)		Project Information	
Company:	DS Consultants	Company:		Quotation #:	
Contact Name:	Binta Goel	Contact Name:	Kristin Olsen	P.O. #/ AFE#:	
Street Address:	6221 Highway 7	Street Address:		Project #:	24-300-100
City:	Vaughan Prov: ON Postal Code:	City:	Prov: Postal Code:	Site #:	
Phone:		Phone:		Site Location:	
Email:	accounting@dsconsultants.ca	Email:	kolsen@dsconsultants.ca	Site Location Province:	
Copies:		Copies:	edina@dsconsultants.ca	Sampled By:	Dina Al-Shadah

Regulatory Criteria

REG 153: ☐ Table 1 ☑ Table 2 ☐ Table 3 ☐ Table ____ | ☑ Res/Park ☐ Ind/Comm ☐ Agri/other | ☐ Med/Fine ☐ Coarse ☐ For RSC

OTHER: ☐ CCME ☐ Reg 558* *min 3 day TAT ☐ MISA ☐ PWQO | ☐ Reg 406, Table: ____ ☐ Sanitary Sewer Bylaw ☐ Storm Sewer Bylaw Municipality ____ ☐ Other: ____

Include Criteria on Certificate of Analysis (check if yes): ☑

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

	Sample Identification (Please print or Type)	Date Sampled YYYY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX/ F1	5 F2 - F4	6 VOCs	7 Reg 153 metals and inorganics	8 Reg 153 ICPMS metals	9 Reg 153 metals (Hg, Cr VI, ICPMS metals, HWS - B)	10 PAHs	11 pH	12	13	14	15	16	17	18	19	20	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE
1	BH24-1 SS1	2024	08	09	AM		Soil							✓			✓											1	
2	BH24-1 SS2																✓											1	
3	DUP1													✓			✓											1	
4	DUP2																✓											1	
5	BH24-1 SS4										✓	✓						✓										4	
6	BH24-1 SS5												✓															3	
7	BH24-2 SS1													✓			✓											2	
8	BH24-2 SS4										✓	✓						✓										4	
9	BH24-2 SS5												✓															3	
10	BH24-3 SS1																✓											1	
11	BH24-3 SS2													✓														1	
12	BH24-3 SS4										✓	✓																3	

Regular Turnaround Time (TAT)

☑ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply

☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YYYY MM DD

Comments

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LAB USE ONLY	Yes	No	°C	1	2	3
Seal present	✓		8	7	4	
Seal Intact	✓					
Cooling media present						

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal Intact						
Cooling media present						

LAB USE ONLY	Yes	No	°C	1	2	3	Temperature reading by:
Seal present	✓						
Seal Intact	✓						
Cooling media present							

	Relinquished by: (Signature/ Print)	Date YYYY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YYYY	MM	DD	Time HH	MM	Special Instructions
1	Dina Al-Shadah	2024	08	09	9:45	pm	SUCAN SALVANI	2024	08	10	08	30	
2													

C4O6235
2024/08/10 08:30

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CHAIN OF CUSTODY RECORD

ENV COC - 00014v5

Invoice Information	Invoice to (requires report) ☐	Report Information (if differs from Invoice)		Project Information	
Company:	DS Consultants	Company:		Quotation #:	LAB USE ONLY - PLACE STICKER HERE
Contact Name:	Binda Goel	Contact Name:	Kristin Olsen	P.O. #/ AFE#:	
Street Address:	22 Highway 7	Street Address:		Project #:	
City:	Vaughan Prov: ON Postal Code:	City:	Prov: Postal Code:	Site #:	24-300-1030
Phone:		Phone:		Site Location:	Rush Confirmation #:
Email:	accounting@dsconsultants.ca	Email:	kolsen@dsconsultants.ca adinea@dsconsultants.ca	Site Location Province:	
Copies:		Copies:		Sampled By:	Dina Al-Shalah

Regulatory Criteria

REG 153: ☐ Table 1 ☐ Res/Park ☐ Med/Fine ☑ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/other ☐ For RSC ☐ Table _____

OTHER: ☐ CCME ☐ Reg 406, Table: _____ ☐ Reg 558* ☐ Sanitary Sewer Bylaw *min 3 day TAT ☐ Storm Sewer Bylaw ☐ MISA Municipality _____ ☐ PWQO ☐ Other:

Include Criteria on Certificate of Analysis (check if yes): ☑

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

	Sample Identification (Please print or Type)	Date Sampled YYYY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX/ F1	5 F2 - F4	6 VOCs	7 Reg 153 metals and Inorganics	8 Reg 153 ICPMS metals	9 Reg 153 metals (Hg, Cr VI, ICPMS metals, HWS - B)	10 ABCBs	11 PAHs	12 PAHs	13 Dioxins & Furans	14	15	16	17	18	19	20	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE
1	BH24-3 SS5	2024	08	09	PM		Soil																					3	
2	BH24-4 SS1																✓	✓										2	
3	BH24-4 SS3																	✓										1	
4	DUP3										✓	✓																3	
5	DUP5																✓											1	
6	MW24-5 SS1													✓														1	
7	DUP4													✓														1	
8	MW24-5 SS2																		✓									1	
9	MW24-5 SS3																	✓										1	
10	MW24-5 SS4										✓	✓							✓	✓								3	
11	MW24-5 SS9										✓	✓	✓															3	
12	DUP6										[redacted]									✓								1	

Regular Turnaround Time (TAT)

☑ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply

☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YYYY MM DD

Comments

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LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal intact						
Cooling media present						

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal intact						
Cooling media present						

LAB USE ONLY	Yes	No	°C	1	2	3	Temperature reading by:
Seal present							
Seal intact							
Cooling media present							

	Relinquished by: (Signature/ Print)	Date YYYY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YYYY	MM	DD	Time HH	MM	Special Instructions
1	Dina Al-Shalah	2024	08	09	9:45	PM	1 SEE PAGE 1						
2							2						

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CHAIN OF CUSTODY RECORD

ENV COC - 00014v5

Invoice Information		Report Information (if differs from invoice)		Project Information	
Invoice to (requires report) ☐					
Company :	DS Consultants Ltd.	Company:	DS Consultants Ltd.	Quotation #:	
Contact Name:	Accounts Payable	Contact Name:	Kirstin Olsen	P.O. #/ AFE#:	
Street Address:	6221 Hwy 7, Unit 16	Street Address:	6221 Highway 7. Unit 16	Project #:	24-300-100
City: Vaughan Prov: ON Postal Code:	L4H 0K8	City: Vaughan Prov: ON Postal Code:	L4H 0K8	Site #:	
Phone:	905-264-9393	Phone:	437-928-2794	Site Location:	
Email:	accounting@dsconsultants.ca	Email:	kolsen@dsconsultants.ca	Site Location Province:	Ontario
Copies:		Copies:	adina@dsconsultants.ca	Sampled By:	Dina Al-Shalah

10-Aug-24 08:30
Ashton Gibson
C4O6235

Regulatory Criteria

REG 153: ☐ Table 1 ☑ Res/Park ☐ Med/Fine ☐ Table 2 ☑ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/other ☐ For RSC ☐ Table _____

OTHER: ☐ CCME ☐ Reg 406, Table: _____ ☐ Reg 558* ☐ Sanitary Sewer Bylaw *min 3 day TAT ☐ Storm Sewer Bylaw ☐ MISA Municipality _____ ☐ PWQO ☐ Other:

Include Criteria on Certificate of Analysis (check if yes): ☑

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

	Sample Identification (Please print or Type)	Date Sampled YYYY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX/ F1	5 F2 - F4	6 VOCs	7 Reg 153 metals and inorganics	8 Reg 153 ICPMS metals	9 Reg 153 metals (Hg, Cr VI, ICPMS metals, HWS - B)	10 PAHs	11 pH	12 OC Pesticides	13	14	15	16	17	18	19	20	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE	Comments
1	BH24-1 SS1	2024	08	09			Soil												X									1		Add to C4O6235
2	DUP7	2024	08	09			Soil												X									1		Add to C4O6235
3	BH24-1 SS2	2024	08	09			Soil							X														1		Add to C4O6235
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Additional

Regular Turnaround Time (TAT): ☑ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply: ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YYYY MM DD

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LAB USE ONLY	Yes	No	°C	1	2	3
Seal present	✓					
Seal intact	✓					
Cooling media present	✓			0	0	1

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal intact						
Cooling media present						

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal intact						
Cooling media present						

Temperature reading by:

	Relinquished by: (Signature/ Print)	Date YYYY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YYYY	MM	DD	Time HH	MM	Special Instructions
1	Dina Al-Shalah	2024	10	07	2:30	pm	1 Sukumar	2024	10	07	14	18	
2							2						

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

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
BH24-1 SS2	ZYT609-02	Conductivity	0.7	7.9	0.002	mS/cm

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.

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Your Project #: 24-300-10
Your C.O.C. #: C#1007141-01-01

Attention: Kirstin Olsen

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

Report Date: 2024/09/20
Report #: R8329205
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4P1529
Received: 2024/08/14, 16:40

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	2	N/A	2024/08/19	CAM SOP-00301	EPA 8270D m
Dioxins/Furans in Water (1613B) (1)	1	2024/08/27	2024/09/12	BRL SOP-00410;BRL SOP-00407 & 405	EPA 1613B m
Dioxins/Furans in Water (1613B) (1)	1	2024/08/27	2024/09/14	BRL SOP-00410;BRL SOP-00407 & 405	EPA 1613B m
PAH Compounds in Water by GC/MS (SIM)	2	2024/08/16	2024/08/18	CAM SOP-00318	EPA 8270E

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, EPA, APHA or the Quebec Ministry of Environment.

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 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.

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) Confirmatory runs for 2,3,7,8-TCDF are performed only if the primary result is greater than the RDL.

Your Project #: 24-300-10
Your C.O.C. #: C#1007141-01-01

Attention: Kirstin Olsen

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

Report Date: 2024/09/20
Report #: R8329205
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4P1529
Received: 2024/08/14, 16:40

Encryption Key

Bureau Veritas
20 Sep 2024 19:06:05

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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This report has been generated and distributed using a secure automated process.
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 Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

DIOXINS AND FURANS BY HRMS (WATER)

Bureau Veritas ID		ZZV804						
Sampling Date		2024/08/14						
COC Number		C#1007141-01-01			TOXIC EQUIVALENCY		# of	
	UNITS	MW24-5	EDL	RDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch
Dioxins & Furans								
2,3,7,8-Tetra CDD *	pg/L	<1.13	1.13	9.52	1.00	1.13	0	9601658
1,2,3,7,8-Penta CDD *	pg/L	<1.46	1.46	47.6	1.00	1.46	0	9601658
1,2,3,4,7,8-Hexa CDD *	pg/L	<1.80	1.80	47.6	0.100	0.180	0	9601658
1,2,3,6,7,8-Hexa CDD *	pg/L	<1.36	1.36	47.6	0.100	0.136	0	9601658
1,2,3,7,8,9-Hexa CDD *	pg/L	4.07	1.50	47.6	0.100	0.407	1	9601658
1,2,3,4,6,7,8-Hepta CDD *	pg/L	8.67	1.07	47.6	0.0100	0.0867	1	9601658
Octa CDD *	pg/L	52.2	1.24	95.2	0.000300	0.0157	1	9601658
Total Tetra CDD *	pg/L	9.87	1.13	9.52			1	9601658
Total Penta CDD *	pg/L	14.9	1.46	47.6			3	9601658
Total Hexa CDD *	pg/L	34.9	1.54	47.6			4	9601658
Total Hepta CDD *	pg/L	33.7	1.07	47.6			2	9601658
2,3,7,8-Tetra CDF **	pg/L	<1.19	1.19	9.52	0.100	0.119	0	9601658
1,2,3,7,8-Penta CDF **	pg/L	<1.33	1.33	47.6	0.0300	0.0399	0	9601658
2,3,4,7,8-Penta CDF **	pg/L	<1.11	1.11	47.6	0.300	0.333	0	9601658
1,2,3,4,7,8-Hexa CDF **	pg/L	<1.17	1.17	47.6	0.100	0.117	0	9601658
1,2,3,6,7,8-Hexa CDF **	pg/L	<1.04	1.04	47.6	0.100	0.104	0	9601658
2,3,4,6,7,8-Hexa CDF **	pg/L	<1.14	1.14	47.6	0.100	0.114	0	9601658
1,2,3,7,8,9-Hexa CDF **	pg/L	<1.29	1.29	47.6	0.100	0.129	0	9601658
1,2,3,4,6,7,8-Hepta CDF **	pg/L	<1.14	1.14	47.6	0.0100	0.0114	0	9601658
1,2,3,4,7,8,9-Hepta CDF **	pg/L	<1.19	1.19	47.6	0.0100	0.0119	0	9601658
Octa CDF **	pg/L	<1.06	1.06	95.2	0.000300	0.000318	0	9601658
Total Tetra CDF **	pg/L	<1.19	1.19	9.52			0	9601658
Total Penta CDF **	pg/L	<1.21	1.21	47.6			0	9601658
Total Hexa CDF **	pg/L	<1.15	1.15	47.6			0	9601658
Total Hepta CDF **	pg/L	<1.16	1.16	47.6			0	9601658

EDL = Estimated Detection Limit

RDL = Reportable Detection Limit

TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.

WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

QC Batch = Quality Control Batch

* CDD = Chloro Dibenzo-p-Dioxin

** CDF = Chloro Dibenzo-p-Furan

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DIOXINS AND FURANS BY HRMS (WATER)

Bureau Veritas ID		ZZV804						
Sampling Date		2024/08/14						
COC Number		C#1007141-01-01			TOXIC EQUIVALENCY		# of	
	UNITS	MW24-5	EDL	RDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch
TOTAL TOXIC EQUIVALENCY	pg/L					4.39		
Surrogate Recovery (%)								
37CL4 2378 Tetra CDD *	%	94						9601658
C13-1234678 HeptaCDD *	%	106						9601658
C13-1234678 HeptaCDF **	%	96						9601658
C13-123478 HexaCDD *	%	87						9601658
C13-123478 HexaCDF **	%	91						9601658
C13-1234789 HeptaCDF **	%	109						9601658
C13-123678 HexaCDD *	%	114						9601658
C13-123678 HexaCDF **	%	102						9601658
C13-12378 PentaCDD *	%	108						9601658
C13-12378 PentaCDF **	%	94						9601658
C13-123789 HexaCDF **	%	100						9601658
C13-234678 HexaCDF **	%	94						9601658
C13-23478 PentaCDF **	%	105						9601658
C13-2378 TetraCDD *	%	95						9601658
C13-2378 TetraCDF **	%	90						9601658
C13-OCDD *	%	115						9601658

EDL = Estimated Detection Limit

RDL = Reportable Detection Limit

TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.

WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

QC Batch = Quality Control Batch

* CDD = Chloro Dibenzo-p-Dioxin

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DIOXINS AND FURANS BY HRMS (WATER)

Bureau Veritas ID		ZZV805						
Sampling Date		2024/08/14						
COC Number		C#1007141-01-01			TOXIC EQUIVALENCY		# of	
	UNITS	DUP1	EDL	RDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch
Dioxins & Furans								
2,3,7,8-Tetra CDD *	pg/L	<1.17	1.17	9.62	1.00	1.17	0	9601658
1,2,3,7,8-Penta CDD *	pg/L	3.11	1.36	48.1	1.00	3.11	1	9601658
1,2,3,4,7,8-Hexa CDD *	pg/L	<2.17	2.17	48.1	0.100	0.217	0	9601658
1,2,3,6,7,8-Hexa CDD *	pg/L	5.40	1.22	48.1	0.100	0.540	1	9601658
1,2,3,7,8,9-Hexa CDD *	pg/L	10.4	1.26	48.1	0.100	1.04	1	9601658
1,2,3,4,6,7,8-Hepta CDD *	pg/L	34.4	1.13	48.1	0.0100	0.344	1	9601658
Octa CDD *	pg/L	108	1.33	96.2	0.000300	0.0324	1	9601658
Total Tetra CDD *	pg/L	25.2	1.17	9.62			3	9601658
Total Penta CDD *	pg/L	72.3	1.36	48.1			6	9601658
Total Hexa CDD *	pg/L	103	1.29	48.1			4	9601658
Total Hepta CDD *	pg/L	94.7	1.13	48.1			2	9601658
2,3,7,8-Tetra CDF **	pg/L	<8.49 (1)	8.49	9.62	0.100	0.849	0	9601658
1,2,3,7,8-Penta CDF **	pg/L	<2.45	2.45	48.1	0.0300	0.0735	0	9601658
2,3,4,7,8-Penta CDF **	pg/L	5.12	1.13	48.1	0.300	1.54	1	9601658
1,2,3,4,7,8-Hexa CDF **	pg/L	14.1	1.14	48.1	0.100	1.41	1	9601658
1,2,3,6,7,8-Hexa CDF **	pg/L	7.04	1.04	48.1	0.100	0.704	1	9601658
2,3,4,6,7,8-Hexa CDF **	pg/L	9.15	1.08	48.1	0.100	0.915	1	9601658
1,2,3,7,8,9-Hexa CDF **	pg/L	1.50	1.28	48.1	0.100	0.150	1	9601658
1,2,3,4,6,7,8-Hepta CDF **	pg/L	29.4	1.23	48.1	0.0100	0.294	1	9601658
1,2,3,4,7,8,9-Hepta CDF **	pg/L	3.12	1.41	48.1	0.0100	0.0312	1	9601658
Octa CDF **	pg/L	7.81	1.15	96.2	0.000300	0.00234	1	9601658

EDL = Estimated Detection Limit

RDL = Reportable Detection Limit

TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.

WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

QC Batch = Quality Control Batch

* CDD = Chloro Dibenzo-p-Dioxin

** CDF = Chloro Dibenzo-p-Furan

(1) EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.
RT>2 seconds - PCDD/DF analysis-Peak maxima of monitored ions exceeds 2 seconds
RT > 3 seconds - PCDD/DF analysis - Peak detected exceeds expected retention time (from internal standard) by greater than 3 seconds.

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DIOXINS AND FURANS BY HRMS (WATER)

Bureau Veritas ID		ZZV805						
Sampling Date		2024/08/14						
COC Number		C#1007141-01-01			TOXIC EQUIVALENCY		# of	
	UNITS	DUP1	EDL	RDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch
Total Tetra CDF **	pg/L	5.59	1.58	9.62			2	9601658
Total Penta CDF **	pg/L	45.9	1.16	48.1			7	9601658
Total Hexa CDF **	pg/L	58.6	1.13	48.1			7	9601658
Total Hepta CDF **	pg/L	32.5	1.31	48.1			2	9601658
TOTAL TOXIC EQUIVALENCY	pg/L					12.4		
Surrogate Recovery (%)								
37CL4 2378 Tetra CDD *	%	77						9601658
C13-1234678 HeptaCDD *	%	106						9601658
C13-1234678 HeptaCDF **	%	102						9601658
C13-123478 HexaCDD *	%	109						9601658
C13-123478 HexaCDF **	%	104						9601658
C13-1234789 HeptaCDF **	%	104						9601658
C13-123678 HexaCDD *	%	125						9601658
C13-123678 HexaCDF **	%	114						9601658
C13-12378 PentaCDD *	%	105						9601658
C13-12378 PentaCDF **	%	104						9601658
C13-123789 HexaCDF **	%	112						9601658
C13-234678 HexaCDF **	%	110						9601658
C13-23478 PentaCDF **	%	102						9601658
C13-2378 TetraCDD *	%	95						9601658
C13-2378 TetraCDF **	%	106						9601658
C13-OCDD *	%	117						9601658

EDL = Estimated Detection Limit

RDL = Reportable Detection Limit

TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.

WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

QC Batch = Quality Control Batch

** CDF = Chloro Dibenzo-p-Furan

* CDD = Chloro Dibenzo-p-Dioxin

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O.REG 153 PAHS (WATER)

Bureau Veritas ID		ZZV804	ZZV805		
Sampling Date		2024/08/14	2024/08/14		
COC Number		C#1007141-01-01	C#1007141-01-01		
	UNITS	MW24-5	DUP1	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/L	<0.071	<0.071	0.071	9575579
Polyaromatic Hydrocarbons					
Acenaphthene	ug/L	<0.050	<0.050	0.050	9583059
Acenaphthylene	ug/L	<0.050	<0.050	0.050	9583059
Anthracene	ug/L	<0.050	<0.050	0.050	9583059
Benzo(a)anthracene	ug/L	<0.050	<0.050	0.050	9583059
Benzo(a)pyrene	ug/L	<0.0090	<0.0090	0.0090	9583059
Benzo(b/j)fluoranthene	ug/L	<0.050	<0.050	0.050	9583059
Benzo(g,h,i)perylene	ug/L	<0.050	<0.050	0.050	9583059
Benzo(k)fluoranthene	ug/L	<0.050	<0.050	0.050	9583059
Chrysene	ug/L	<0.050	<0.050	0.050	9583059
Dibenzo(a,h)anthracene	ug/L	<0.050	<0.050	0.050	9583059
Fluoranthene	ug/L	<0.050	<0.050	0.050	9583059
Fluorene	ug/L	<0.050	<0.050	0.050	9583059
Indeno(1,2,3-cd)pyrene	ug/L	<0.050	<0.050	0.050	9583059
1-Methylnaphthalene	ug/L	<0.050	<0.050	0.050	9583059
2-Methylnaphthalene	ug/L	<0.050	<0.050	0.050	9583059
Naphthalene	ug/L	<0.050	<0.050	0.050	9583059
Phenanthrene	ug/L	0.038	0.043	0.030	9583059
Pyrene	ug/L	0.080	0.10	0.050	9583059
Surrogate Recovery (%)					
D10-Anthracene	%	105	102		9583059
D14-Terphenyl (FS)	%	86	82		9583059
D8-Acenaphthylene	%	97	98		9583059

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4P1529
Report Date: 2024/09/20

DS Consultants Limited
Client Project #: 24-300-10
Sampler Initials: KS

TEST SUMMARY

Bureau Veritas ID: ZZV804
Sample ID: MW24-5
Matrix: Water

Collected: 2024/08/14
Shipped:
Received: 2024/08/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9575579	N/A	2024/08/19	Automated Statchk
Dioxins/Furans in Water (1613B)	HRMS/MS	9601658	2024/08/27	2024/09/12	Yan Qin
PAH Compounds in Water by GC/MS (SIM)	GC/MS	9583059	2024/08/16	2024/08/18	Jonghan Yoon

Bureau Veritas ID: ZZV805
Sample ID: DUP1
Matrix: Water

Collected: 2024/08/14
Shipped:
Received: 2024/08/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9575579	N/A	2024/08/19	Automated Statchk
Dioxins/Furans in Water (1613B)	HRMS/MS	9601658	2024/08/27	2024/09/14	Yan Qin
PAH Compounds in Water by GC/MS (SIM)	GC/MS	9583059	2024/08/16	2024/08/18	Jonghan Yoon

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

GENERAL COMMENTS

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

Package 1	14.7°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9583059	D10-Anthracene	2024/08/17	77	50 - 130	104	50 - 130	107	%		
9583059	D14-Terphenyl (FS)	2024/08/17	82	50 - 130	96	50 - 130	98	%		
9583059	D8-Acenaphthylene	2024/08/17	92	50 - 130	95	50 - 130	98	%		
9601658	37CL4 2378 Tetra CDD	2024/09/12			83	35 - 197	87	%		
9601658	C13-1234678 HeptaCDD	2024/09/12			113	23 - 140	93	%		
9601658	C13-1234678 HeptaCDF	2024/09/12			103	28 - 143	84	%		
9601658	C13-123478 HexaCDD	2024/09/12			99	32 - 141	90	%		
9601658	C13-123478 HexaCDF	2024/09/12			90	26 - 152	80	%		
9601658	C13-1234789 HeptaCDF	2024/09/12			111	28 - 138	91	%		
9601658	C13-123678 HexaCDD	2024/09/12			103	28 - 130	91	%		
9601658	C13-123678 HexaCDF	2024/09/12			105	26 - 123	90	%		
9601658	C13-12378 PentaCDD	2024/09/12			119	25 - 181	95	%		
9601658	C13-12378 PentaCDF	2024/09/12			103	24 - 185	88	%		
9601658	C13-123789 HexaCDF	2024/09/12			110	29 - 147	94	%		
9601658	C13-234678 HexaCDF	2024/09/12			102	28 - 136	87	%		
9601658	C13-23478 PentaCDF	2024/09/12			116	21 - 178	96	%		
9601658	C13-2378 TetraCDD	2024/09/12			84	25 - 164	86	%		
9601658	C13-2378 TetraCDF	2024/09/12			88	24 - 169	86	%		
9601658	C13-OCDD	2024/09/12			121	17 - 157	103	%		
9583059	1-Methylnaphthalene	2024/08/18	102	50 - 130	105	50 - 130	<0.050	ug/L	NC	30
9583059	2-Methylnaphthalene	2024/08/18	101	50 - 130	105	50 - 130	<0.050	ug/L	NC	30
9583059	Acenaphthene	2024/08/18	101	50 - 130	106	50 - 130	<0.050	ug/L	NC	30
9583059	Acenaphthylene	2024/08/18	100	50 - 130	105	50 - 130	<0.050	ug/L	NC	30
9583059	Anthracene	2024/08/18	48 (1)	50 - 130	106	50 - 130	<0.050	ug/L	NC	30
9583059	Benzo(a)anthracene	2024/08/18	44 (1)	50 - 130	101	50 - 130	<0.050	ug/L	NC	30
9583059	Benzo(a)pyrene	2024/08/18	46 (1)	50 - 130	102	50 - 130	<0.0090	ug/L	NC	30
9583059	Benzo(b/j)fluoranthene	2024/08/18	46 (1)	50 - 130	103	50 - 130	<0.050	ug/L	NC	30
9583059	Benzo(g,h,i)perylene	2024/08/18	46 (1)	50 - 130	99	50 - 130	<0.050	ug/L	NC	30
9583059	Benzo(k)fluoranthene	2024/08/18	49 (1)	50 - 130	106	50 - 130	<0.050	ug/L	NC	30
9583059	Chrysene	2024/08/18	46 (1)	50 - 130	102	50 - 130	<0.050	ug/L	NC	30
9583059	Dibenzo(a,h)anthracene	2024/08/18	45 (1)	50 - 130	102	50 - 130	<0.050	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9583059	Fluoranthene	2024/08/18	40 (1)	50 - 130	109	50 - 130	<0.050	ug/L	NC	30
9583059	Fluorene	2024/08/18	88	50 - 130	104	50 - 130	<0.050	ug/L	NC	30
9583059	Indeno(1,2,3-cd)pyrene	2024/08/18	46 (1)	50 - 130	102	50 - 130	<0.050	ug/L	NC	30
9583059	Naphthalene	2024/08/18	101	50 - 130	104	50 - 130	<0.050	ug/L	NC	30
9583059	Phenanthrene	2024/08/18	57	50 - 130	108	50 - 130	<0.030	ug/L	NC	30
9583059	Pyrene	2024/08/18	41 (1)	50 - 130	108	50 - 130	<0.050	ug/L	NC	30
9601658	1,2,3,4,6,7,8-Hepta CDD	2024/09/12			107	70 - 140	<1.60, EDL=1.60 (2)	pg/L	1.9	25
9601658	1,2,3,4,6,7,8-Hepta CDF	2024/09/12			105	82 - 122	<1.36, EDL=1.36	pg/L	3.7	25
9601658	1,2,3,4,7,8,9-Hepta CDF	2024/09/12			106	78 - 138	<1.44, EDL=1.44	pg/L	0.94	25
9601658	1,2,3,4,7,8-Hexa CDD	2024/09/12			106	70 - 164	<1.41, EDL=1.41	pg/L	2.9	25
9601658	1,2,3,4,7,8-Hexa CDF	2024/09/12			109	72 - 134	<1.23, EDL=1.23	pg/L	0	25
9601658	1,2,3,6,7,8-Hexa CDD	2024/09/12			107	76 - 134	<1.39, EDL=1.39	pg/L	0.93	25
9601658	1,2,3,6,7,8-Hexa CDF	2024/09/12			102	84 - 130	<1.10, EDL=1.10	pg/L	5.7	25
9601658	1,2,3,7,8,9-Hexa CDD	2024/09/12			116	64 - 162	<1.36, EDL=1.36	pg/L	7.1	25
9601658	1,2,3,7,8,9-Hexa CDF	2024/09/12			104	78 - 130	<1.29, EDL=1.29	pg/L	3.8	25
9601658	1,2,3,7,8-Penta CDD	2024/09/12			106	25 - 181	<1.42, EDL=1.42	pg/L	0	25
9601658	1,2,3,7,8-Penta CDF	2024/09/12			108	80 - 134	<1.46, EDL=1.46	pg/L	4.5	25
9601658	2,3,4,6,7,8-Hexa CDF	2024/09/12			103	70 - 156	<1.30, EDL=1.30	pg/L	3.8	25
9601658	2,3,4,7,8-Penta CDF	2024/09/12			104	68 - 160	<1.24, EDL=1.24	pg/L	2.8	25
9601658	2,3,7,8-Tetra CDD	2024/09/12			110	67 - 158	<1.20, EDL=1.20	pg/L	5.3	25
9601658	2,3,7,8-Tetra CDF	2024/09/12			107	75 - 158	0, RDL=10.0	pg/L	0	25
9601658	Octa CDD	2024/09/12			106	78 - 144	<4.84, EDL=4.84 (2)	pg/L	1.9	25
9601658	Octa CDF	2024/09/12			105	63 - 170	5.07, EDL=1.02	pg/L	3.7	25
9601658	Total Hepta CDD	2024/09/12					<1.91, EDL=1.91	pg/L		
9601658	Total Hepta CDF	2024/09/12					<1.38, EDL=1.38	pg/L		
9601658	Total Hexa CDD	2024/09/12					<1.39, EDL=1.39	pg/L		
9601658	Total Hexa CDF	2024/09/12					<1.20, EDL=1.20	pg/L		
9601658	Total Penta CDD	2024/09/12					<1.42, EDL=1.42	pg/L		
9601658	Total Penta CDF	2024/09/12					<1.34, EDL=1.34	pg/L		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9601658	Total Tetra CDD	2024/09/12					<1.20, EDL=1.20	pg/L		
9601658	Total Tetra CDF	2024/09/12					<1.25, EDL=1.25	pg/L		

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 (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) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

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VALIDATION SIGNATURE PAGE

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

Angel Guerrero, Supervisor, Ultra Trace Analysis, HRMS and SVOC

Louise Harding, 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 Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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Page of

NONT-2024-08-2999

Bottle Order #: 1007141

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#32616 DS Consultants Limited	Company Name:	DS consultants	Quotation #:	C35427
Attention:	Accounts Payable	Attention:	Kirstin colsen	P.O. #:	
Address:	6221 Highway 7, Unit 16 Vaughan ON L4H 0K8	Address:		Project:	24-300-10
Tel:	(905) 264-9393 Fax:	Tel:	Fax:	Project Name:	
Email:	accounting@dsconsultants.ca;bindu.goel@dsconsultant	Email:	Kolsen@dsconsultants.ca, Ksalib@dsconsultants.ca	Site #: Sampled By:	Karim S.

COC #: C#1007141-01-01 | Project Manager: Ashton Gibson

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☑ Res/Park ☐ Medium/Fine	☐ CCME ☐ Sanitary Sewer Bylaw	
☑ Table 2 ☐ Ind/Comm ☐ Coarse	☐ Reg 558. ☐ Storm Sewer Bylaw	
☐ Table 3 ☐ Agri/Other ☐ For RSC	☐ MISA Municipality	
☐ Table	☐ PWQO ☐ Reg 406 Table	
	☐ Other	

Include Criteria on Certificate of Analysis (Y/N)? Y

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

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.

Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required: ☐
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O. Reg 153 PAHs	Dioxins/Furans in Water	# of Bottles	Comments
1		MW24-5	Aug.14.24	AM	GW		✓	✓	3	
2		DUP1	↓	↓	↓		✓	✓	3	
3										
4										
5										
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
Karim S.	24/08/14		SUGAR SALMAN	2024/08/14	16:40	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	15 / 14 / 15	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/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-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/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.

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

White: Bureau Veritas Yellow: Client

ON ICE

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