FINAL REPORT

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

PROPERTY LOCATED AT
609 BORTHWICK AVENUE
AND
630 MONTREAL ROAD AVENUE
OTTAWA, ONTARIO

CLIENT CODE: **GMBC100**
REF/ABS: **EO-24-1324-00**

March 2025

_____FINAL VERSON_____

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CONFIDENTIAL

Report presented to
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REGISTER OF REVISIONS AND ISSUES

REVISION #	DATE	DESCRIPTION OF THE MODIFICATION AND/OR ISSUE
00	2024-12-18	Draft Report
01	2025-03-10	Final Report

DISTRIBUTION

DESCRIPTION	NAME | TITLE
One electronic report (PDF format)	Max Mahi | Chairman and Chief Executive Officer

EXECUTIVE SUMMARY

Groupe ABS Inc. (ABS) was retained by Group MB Canada Inc. (the "Client"), represented by Max Mahi, to complete a Phase Two Environmental Site Assessment (ESA) for the properties located at 609 Borthwick Avenue and 630 Montreal Road, Ottawa, Ontario (herein referred to as the "Phase Two Property" or the "Site") in support of a proposed residential development.

This Phase Two ESA has been completed in accordance with the requirements outlined in *Ontario Regulation 153/04: Records of Site Condition – Part XV.1 of the Act*, which was last amended by Ontario Regulation 274/20 on November 30, 2023 (O. Reg. 153/04). It is ABS's understanding that the Phase Two Property, currently an abandoned auto-body garage, is proposed for redevelopment from its existing commercial use to a residential land use. Given that this constitutes a change to more sensitive land use, this Phase Two ESA has been prepared to support the filing a Record of Site Condition (RSC) with the Ontario Ministry of Environment, Conservation and Parks (MECP) for the Phase Two Property.

The objectives of this Phase Two ESA were to investigate the potential subsurface impacts as a result of six (6) Areas of Potential Environmental Concern (APECs) identified in a Phase One ESA completed by PGL Environmental Consultants (PGL) in accordance with O.Reg. 153/04 as listed below.

Area of Potential Environmental Concern	APEC Location	Potentially Contaminating Activity*	PCA Location	Contaminants of Potential Concern	Media Potentially Impacted
APEC 1	Southeast quadrant of the Phase One Property	**PCA 10 – Commercial Autobody Shops** Use of onsite building for commercial autobody shop	On-site	PHCs, VOCs	Soil and groundwater
APEC 2	Southeast quadrant of the Phase One Property	**PCA 10 – Commercial Autobody Shops** Former waste-oil tank associated with autobody shop use	On-site	Metals, PAHs, PHCs, VOCs	Soil and groundwater
APEC 3	Southeast quadrant of the Phase One Property	**PCA 10 – Commercial Autobody Shops** Former oil/water separator associated with autobody shop use	On-site	Metals, PAHs, PHCs, VOCs	Soil and groundwater
APEC 4	Entire Phase One Property	**PCA 30 – Importation of Fill Material** The placement of fill of unknown quality in areas of former buildings to restore grade	On-site	Metals, PAHs	Soil

Area of Potential Environmental Concern	APEC Location	Potentially Contaminating Activity*	PCA Location	Contaminants of Potential Concern	Media Potentially Impacted
APEC 5	South portion of the Phase One Property	Undefined PCA Historical fire	On-site	Metals, PAHs	Soil
APEC 6	East property boundary of the Phase One Property	**PCA 28 – Gasoline and Associated Products Storage in Fixed Tanks** The current and past USTs and the distribution of gasoline	Off-site	Metals, PHCs, VOCs	Groundwater

Notes:
APEC – Area of Potential Environmental Concern
PCA – Potentially Contaminating Activity
PAHs – Polycyclic Aromatic Hydrocarbons
PHCs – Petroleum Hydrocarbons Fractions F1 to F4
VOCs – Volatile Organic Compounds
*Refers to Table 2 in Schedule D of O.Reg. 153/04

The Phase Two ESA investigation conducted by ABS included the following:

- ABS supervised the drilling of five (5) boreholes to depths ranging from 5.79 to 6.32 metres below ground surface (mbgs) across the Phase Two Property between July 16 and 25, 2024, in order to investigate the current soil and groundwater conditions.
- Two (2) of these boreholes were completed as groundwater monitoring wells to sample the groundwater. One (1) pre-existing groundwater monitoring well, installed by others, was also sampled as part of the Phase Two ESA.
- Based on the field observations made during the drilling program, the stratigraphy at the Phase Two Property can be generalized as a gravel and sand fill layer, underlain by a medium to fine-grained sand layer with varying small quantities of gravel that extends to the bedrock.
- A total of eleven (11) soil samples ranging from 0.0 to 6.1 mbgs and three (3) groundwater samples were collected between July 16 and 25, 2024, and submitted for laboratory analysis of the following:
    - Benzene, Toluene, Ethylbenzene, and Xylene (BTEX)
    - Metals and Inorganics (M&Is)
    - Petroleum Hydrocarbons (PHCs) fractions 1 through 4 (F1-F4);
    - Polycyclic Aromatic Hydrocarbons (PAHs); and/or
    - Volatile Organic Compounds (VOCs)
- Based on Site-specific information and potential future property use, Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use and Coarse-Textured Soils (Table 3 SCSs RPI) were considered as the applicable regulatory standards for the Phase Two Property.

- The laboratory results for soil and groundwater samples submitted during the Phase Two ESA investigation indicated that all analyzed parameters met the Table 3 SCSs RPI, except for the following exceedances
    - Soil sample MW24-2 SS1 (0.0-0.76 mbgs): lead (134 µg/g);
    - Groundwater sample MW20-13: chloride (2430000 µg/L), and chloroform (16 µg/L);
    - Groundwater sample MW24-1: chloroform (6.4 µg/L); and
    - Groundwater sample MW24-2: chloroform (6.4 µg/L)

It is important to note that exemptions under paragraphs 1 and 2 of O.Reg. 153/04 Section 49.1 are applied to the observed chloride and chloroform groundwater exceedances, as the chloride exceedance is considered to be a result of road salt applications for vehicular /pedestrian safety. The reported chloroform exceedances are likely due to either the degradation or leakage of the municipal water infrastructure beneath the Site or to the introduction of municipal water during drilling activities associated with concrete cutting at the auto-body service garage.

Based on the findings of the Phase Two ESA, the soil contamination identified at the Phase Two Property appears to be contained/isolated within the fill material, extending to a depth of approximately 0.76 metres below ground surface (mbgs) in the area surrounding the borehole MW24-2. It is ABS's opinion that contaminated fill originated from a poor-quality fill imported on-site.

RECOMMENDATIONS

Site remediation will be required to meet the Table 3 Standards for residential property use prior to an RSC submission to the MECP. ABS understands that the Site is planned for future redevelopment, so it is recommended that remediation activities be carried out concurrently with the redevelopment process to facilitate the RSC submission for the Phase Two Property. Additional details regarding a Remedial Action Plan (RAP) can be provided upon request.

Additionally, ABS recommends that a final round of groundwater sampling be conducted prior to any remedial activities at the Site to ensure that the current environmental condition remains unchanged. If the monitoring wells installed on-site are not going to be used in the future or will be destroyed during excavation/construction activities, then the wells on-site must be decommissioned according to O.Reg. 903 of the Ontario Water Resources Act. These monitoring wells will be registered with the MECP under the aforementioned regulation.

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1 INTRODUCTION

Groupe ABS Inc. (ABS) was retained by Group MB Canada Inc. (the "Client"), represented by Max Mahi, to complete a Phase Two Environmental Site Assessment (ESA) for the property located at 609 Borthwick Avenue and 630 Montreal Road, Ottawa, Ontario (the "Phase Two Property" or "Site") in support of a proposed residential development.

This Phase Two ESA has been completed in accordance with the requirements outlined in *Ontario Regulation 153/04: Records of Site Condition – Part XV.1 of the Act*, which was last amended by Ontario Regulation 274/20 on November 30, 2023 (O. Reg. 153/04). It is ABS's understanding that the Phase Two Property, currently an abandoned auto-body garage, is proposed for redevelopment from its existing commercial use to a residential land use. Given that this constitutes a change to more sensitive land use, this Phase Two ESA has been prepared to support the filing a Record of Site Condition (RSC) with the Ontario Ministry of Environment, Conservation and Parks (MECP) for the Phase Two Property.

1.1 Objectives

The objectives of this Phase Two ESA were to investigate the potential subsurface impacts as a result of six (6) Areas of Potential Environmental Concern (APECs) identified in a Phase One ESA completed by PGL Environmental Consultants (PGL) in accordance with O.Reg. 153/04.

1.2 Site Description

Information regarding the property details for the Phase Two Property is outlined in **Table 1-1**, and a Plan of Survey and a Site Location Map are presented in **Figure 1** in the **Figures** Section.

Table 1-1. Phase Two Property Information

Item	Description
Municipal Address	609 Borthwick Avenue and 630 Montreal Road, Ottawa, Ontario, K1K 0T5
Historical Land Use	Used car dealership, autobody shop, restaurant, confectionery, and animal hospital.
Current Land Use	Currently unoccupied/abandoned auto-body garage
Future Land Use	Residential
Coordinates	Zone: 18T Easting: 449847 m E Northing: 5032319 m N
Legal Description	LT 45, PL 343; PT LTS 3, 4 & 5, PL 343; designated as PARTS 5 & 7, 5R3853; City of Ottawa
Property Identification Number (PIN)	04268-0232 (LT)
Property Size	Approximately 0.1 ha
Location	The Phase Two Property is located at the intersection of Montreal Road (to the north), and Borthwick Avenue (to the west).
Zoning	Zoned by the City of Ottawa as Arterial Mainstreet (AM10 (2199))
On-Site Structures	The Phase Two Property has a two-storey single-family home (including a basement) that used to serve as an office space and a one-storey slab-on-grade garage that used to serve as an auto-body service garage.

Item	Description
Notes: Coordinates were measured with respect to the 1983 North American Datum using the Universal Transverse Mercator projection.	

1.3 Ownership and Client Information

Information regarding the ownership and contact information for the Phase Two Property is outlined in **Table 1-2**.

Table 1-2. Property Owner and Client Information

Item	Description
Owner	Chairman and Chief Executive Officer, Group MB Canada Inc. 657 Curé-Labelle Blvd., Suite 200, Laval, QC, H7V 2T8 mmahi@mbgroupcanada.com
Client	Max Mahi Chairman and Chief Executive Officer, Group MB Canada Inc. 657 Curé-Labelle Blvd., Suite 200, Laval, QC, H7V 2T8 mmahi@mbgroupcanada.com

1.4 Current and Proposed Future Property Uses

The Phase Two Property currently exists as an abandoned auto-body garage and is proposed to be redeveloped into a nine-storey residential building, including three (3) levels of underground parking.

1.5 Applicable Site Condition Standards

The Site Condition Standards (SCSs) deemed applicable to the Site for the comparison of soil and groundwater analytical data under the MECP "*Soil, Ground Water and Sediment Standards for use under part XV.1 of the Environmental Protection Act*" are as follows:

Soil

- Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional (RPI) Property Use and coarse-textured soils (Table 3 SCSs RPI)

Groundwater

- Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for All Types of Property Use and coarse-textured soils (Table 3 SCSs)

The SCSs were deemed applicable to the property in accordance with the requirements outlined in O.Reg. 153/04, as amended, based on the rationale presented in **Table 1-3**.

Table 1-3. Site Conditions and Characteristics

Criteria	Site Conditions and Characteristics
Groundwater Use	The Phase Two Property is located within the City of Ottawa, in an area serviced with potable water through the municipal water distribution system. Therefore, it shall be classified as a non-potable groundwater site, as per Section 35 of O.Reg. 153/04.
Environmentally Sensitive Site	The surface soil (i.e., less than 1.5m depth) had an observed pH value between 5.0 and 9.0; the subsurface soil (i.e., more than 1.5m in depth) had an observed pH value between 5.0 and 11.0; and the Ministry of Natural Resources and Forestry (MNRF) has not identified any Areas of Natural and Scientific Interest (ANSI) on or within 30 m of the Phase Two Property boundary. Therefore, the Phase Two Property shall NOT be classified as an environmentally sensitive site, as per Section 41 of O.Reg. 153/04.

Criteria	Site Conditions and Characteristics
Soil Thickness	Historical subsurface drilling revealed that greater than 2 m of overburden soil exists across more than two-thirds of the Phase Two Property. Therefore, the Phase Two Property shall NOT be considered as a shallow soil condition site, as per Section 43.1 of O.Reg. 153/04.
Surface Water Features	The Phase Two Property is neither adjacent to nor within 30 m of any surface water features. Therefore, the Phase Two Property shall NOT be considered as a surface water site, as per Section 43.1 of O.Reg. 153/04.
Soil Texture	The results of the soil grain size analysis on soil collected as part of this Phase Two ESA determined that the soil texture at the Phase Two Property is categorized as coarse. Therefore, the Phase Two Property shall be considered as a coarse-textured site.
Property Use	The Phase Two Property is intended to be redeveloped as a residential property. Therefore, 'Residential/Parkland/Institutional Property Use' represents the most appropriate proposed future use of the Phase Two Property.

2 BACKGROUND INFORMATION

2.1 Physical Setting

Information regarding the physical setting of the Phase Two Property is outlined in **Table 2-1**.

Table 2-1. Physical Setting of the Site

Item	Description
Water Bodies	**Phase Two Property**: There are no water bodies on the Phase Two Property. **Phase One Study Area**: Ottawa River, located approximately 2.2 kilometres (km) to the north of the Phase Two Property, is the closest waterbody.
Areas of Natural Significance	**Phase Two Property**: The MNRF has not identified any ANSIs on the Phase Two Property. **Phase One Study Area:** The MNRF has identified an unevaluated wetland 230 m north of the Phase Two Property.
Intake Protection Zones and Well Head Protection Areas	**Phase Two Property:** The Phase Two Property is not located within an area designated by The City of Ottawa as an Intake Protection Zone, nor as a Well Head Protection Area. **Phase One Study Area:** The Phase One Study Area is not located within an area designated by The City of Ottawa as an Intake Protection Zone, nor as a Well Head Protection Area.
Topography	**Phase Two Property**: The Phase Two Property exists roughly 80 m above sea level (masl) and slopes to the south. **Phase One Study Area**: Available topographic maps show that the Phase One Study area slopes to the southwest.
Surface Water Drainage Features	**Phase Two Property**: No surface water drainage features were observed at the Phase Two Property; however, surface water is inferred to run overland and drain into the municipal storm sewer catch basins.
Geology	**Overburden Geology**: The northern portion of the Phase Two Property is characterized by massive to well laminated fine-textured glaciomarine deposits of silt and clay, minor sand and gravel. The southern portion of the Phase Two Property is characterized by older alluvial deposits of clay, silt, sand, and gravel which may contain organic remains. **Bedrock Geology**: The bedrock at the Phase Two Property is characterized by upper Ordovician shale, limestone, dolostone, and/or siltstone from the Georgian Bay formation; the Blue Mountain formation; the Billings formation; the Collingwood member; or the Eastview member.

Item	Description
Hydrology	Regional groundwater is expected to flow northwest towards the Rideau River and Ottawa River and based on the topography of the Phase Two Property, it is inferred that the local groundwater flows southwest. It should be noted that localized flow directions may be affected by factors such as underground utility corridors, building foundations, or nearby dewatering programs.
Municipal Drinking Water System	**Phase Two Property:** The Phase Two Property is serviced by the City of Ottawa municipal drinking water system **Phase One Study Area**: As no domestic supply wells were observed within 250 m of the Site, it is inferred that all properties within the Phase One Study area are serviced by the City of Ottawa municipal drinking water system.

2.2 Past Investigations

Two (2) environmental reports previously prepared for the Phase Two Property were provided to ABS for review. Details from these reports are summarized in the proceeding subsections.

***Environmental Site Assessment Phase I, 630 Montreal Road, Ottawa, ON*, prepared by Enviro-Experts, Outsourced services: PGL Environmental Consultants, and dated April 4, 2022 (2022 Phase I ESA)**

PGL Environmental Consultants (PGL), subcontracted by Enviro-Experts, conducted a Phase One ESA for the property located at 609 Borthwick Avenue and 630 Montreal Road, Ottawa, Ontario. The Phase One ESA was conducted in general accordance with O. Reg. 153/04 and identified five (5) On-site and twenty (20) Off-site Potentially Contaminating Activities (PCAs) within the Phase One Study Area. Of these, five (5) On-site PCAs and one (1) Off-site PCA were interpreted as potential sources that could impact the environmental condition of the subsurface media on, in or under the Phase One Property and were considered to represent six (6) APECs.

***Environmental Site Assessment Phase II, 630 Montreal Road, Ottawa, ON*, prepared by Enviro-Experts, dated March 4, 2024 (2024 Phase II ESA)**

Enviro-Experts conducted a Phase II ESA for the properties located at 609 Borthwick Avenue and 630 Montreal Road, Ottawa, Ontario. This Phase II ESA was conducted in accordance with the Canadian Standards Association (CSA) Standard Z769-00 (R2023). As per the 2024 Phase II ESA, SFE was contracted to advance four (4) boreholes (designated as F1 through F4) using a MRJ 100 crawler drilling rig, equipped with solid stem augers and a standard penetration test drilling system, to depths ranging between 1.8 and 3.6 metres below ground surface (mbgs). No monitoring wells were installed within the newly advanced boreholes.

A total of eight (8) soil samples, from depths ranging from 0.0 to 3.6 mbgs, were submitted for analytical testing of Benzene, Toluene, Ethylbenzene and Xylenes (BTEX); metals; Polycyclic Aromatic Hydrocarbons (PAHs); Petroleum Hydrocarbons Fractions 1 to 4 (PHCs F1-F4); and/or Volatile Organic Compounds (VOCs). The soil analytical results were compared against MECP Table 3: *Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition* for Industrial, Commercial, Community (ICC) property use, and coarse-textured soil, and all parameters for all submitted soil samples met the selected SCS.

Existing Monitoring Wells Records

ABS conducted a review of the MECP well records map and identified seven (7) historical monitoring wells located within the Phase Two Property: MW20-1, MW20-4, MW20-7, MW20-9, MW20-11, MW20-12, and

MW20-13. These wells were installed in 2020, with the subsurface overburden described as comprising sand, sandy gravel, gravel, and shale. According to MECP well records dated March 2 and 3, 2020, monitoring wells MW20-1, MW20-4, MW20-7, and MW20-9 were reported as dry. Groundwater levels on March 17, 2020, were recorded in the remaining wells—MW20-11, MW20-12, and MW20-13—at depths of 3.87 metres, 5.51 metres, and 4.58 metres, respectively

On June 13, 2024, ABS conducted a site visit to assess the condition of these wells, measure groundwater levels, and validate the recorded information. At the time of this assessment, all of the monitoring wells were dry, except MW20-12 and MW20-13. Section 5.2.3 contains more information regarding these two (2) monitoring wells, and the MECP well records for these wells are included in the appendix section of the Sampling and Analysis Plan (SAP).

Details regarding the PCAs and the resulting APECs identified at the Phase One Property, including the corresponding CoPCs, are shown in **Figures 2A** and **2B**, and the locations of the monitoring wells are depicted in **Figure 3** in the **Figures** section.

3 SCOPE OF THE INVESTIGATION

3.1 Overview of Site Investigation

A summary of the investigation conducted by ABS as part of this Phase Two ESA is provided in **Table 3-1**.

Table 3-1. Overview of Site Investigation

Task	Details
Planning and Preparation	A Sampling and Analysis Plan (SAP) was prepared based on the results of PGL's Phase One ESA Report.
Underground Utility Clearance	The location of public utilities at the Phase Two Property was obtained through the Ontario One Call system and the location of private utilities at the Phase Two Property was provided by USL-1, retained by ABS, prior to subsurface activities.
Borehole Drilling and Soil Sampling	On July 16 and 22, 2024, five (5) boreholes were advanced within the Phase Two Property. Soil samples were collected from the boreholes and submitted for the analysis of BTEX, Metals and Inorganic Parameters (M&I), PAHs, PHCs F1-F4, and/or VOCs.
Monitoring Well Installation and Groundwater Sampling	On July 16 and 22, 2024, a total of two (2) groundwater monitoring wells were installed at select borehole locations. On July 25, 2024, a groundwater sampling program was completed at the Phase Two Property, which consisted of the collection of groundwater samples from the two (2) newly installed monitoring wells and from one (1) existing monitoring well. These samples were submitted for the analysis of BTEX, M&Is, PAHs, PHCs F1-F4, and/or VOCs.
Quality Assurance/Quality Control (QA/QC)	A comprehensive QA/QC program was adhered to throughout this Phase Two ESA, including proper sampling/handling of all samples, the collection of blank and duplicate samples, and a variety of specific laboratory QA/QC checks.
Elevation Survey	An elevation survey of the boreholes and monitoring wells was completed on September 11, 2024.
Comparison with Regulatory Standards	The analytical test results were compared to O.Reg. 153/04 Table 3 SCCs, as deemed applicable to the Phase Two Property.

Task	Details
Residual Management	All liquids produced during this Phase Two ESA (i.e. all purged groundwater produced during well development and sampling and all cleaning solution used to decontaminate the sapling equipment) were collected and sealed in 205-litre (55-gallon) plastic drums. These drums were stored at the Phase Two Property in order to be properly manifested/disposed of by the waste facility manager. No soil cuttings or residual soils were produced during this Phase Two ESA.
Reporting	A report in accordance with the requirements listed in Schedule E and Table 1 – Mandatory Requirements for Phase Two Environmental Site Assessment Reports of O. Reg. 153/04, summarizing the findings from the ABS field programs, conclusions, and recommendations were prepared by ABS and submitted to the Client.

3.2 Media investigated

The media selected to be included in this Phase Two ESA and an overview of the field investigation conducted on these media are provided in **Table 3-2**.

Table 3-2. Media Investigated and Contaminants of Potential Concern

Item	Details
Media Investigated	Soil and groundwater were the media investigated as part of this Phase Two ESA.
Soil Investigation	Five (5) boreholes were advanced at the Phase Two Property, and based on field screening results, representative soil samples were collected and submitted for analytical testing of their applicable CoPCs. Additionally, duplicate samples were collected and submitted as part of a QA/QC program.
Groundwater Investigation	Two (2) monitoring wells were installed at the Phase Two Property, and after the development and purging of these wells and the existing well included as part of this Phase Two ESA, groundwater samples were collected using low-flow sampling techniques. All groundwater samples were submitted for analysis of their applicable CoPCs. Additionally, blanks and duplicate samples were collected and submitted as part of the QA/QC program.
Surface Water Investigation	Surface water was not encountered at the Phase Two Property during this Phase Two ESA.
Sediment Investigation	Sediment was not encountered at the Phase Two Property during this Phase Two ESA.
Contaminants of Potential Concern (CoPCs)	BTEX, M&Is, PAHs, PHCs F1-F4, and VOCs were the CoPCs identified in PGL's Phase One ESA.

3.3 Phase One Conceptual Site Model

A Phase One Conceptual Site Model (CSM) was prepared by PGL as part of the Phase One ESA. This CSM has been reproduced and shown on **Figure 1** and **Figure 2** in the **Figures** Section and is summarized in the following section.

3.3.1 CSM Figure Summary

The CSM figures show the following information for the Phase One Property:

- Existing buildings and structures;
- Water features (full or partial) within the Phase One Study Area;
- Roads, including their names, within the Phase One Study Area;
- Land use of properties bordering the Phase One Property;
- PCAs within the Phase One Study Area;
- APECs at the Phase One Property; and
- ANSIs that are either fully or partially within the Phase One Study Area

3.3.2 Potentially Contaminating Activities

PGL identified five (5) on-site and twenty (20) offsite PCAs on, in, or under the Phase One Property and/or located within the Phase One Study Area. Given the distance from the PCAs to the Phase One Property, their downgradient or cross-gradient locations relative to the inferred groundwater flow direction in the Phase One Study Area and/or the nature of operations and potential contaminants related to these operations, a total of six (6) PCAs (including five (5) on-site and one (1) off-site) are considered to result in six (6) APECs at the Phase One Property as listed in **Table 3-3** and shown in **Figure 2A** in the **Figures** Section. The PCAs that do not contribute to APECs are shown in **Figure 2B** in the **Figures** Section.

3.3.3 Areas of Potential Environmental Concerns

PGL identified six (6) APECs at the Phase One Property. The APECs and their associated CoPCs and PCAs are outlined in **Table 3-3** and shown on **Figure 2A** in the **Figures** Section.

Table 3-3. Summary of APECs, PCAs, COPCs, and Media Potentially Impacted

Area of Potential Environmental Concern	APEC Location	Potentially Contaminating Activity*	PCA Location	Contaminants of Potential Concern	Media Potentially Impacted
APEC 1	Southeast quadrant of the Phase One Property	**PCA 10 – Commercial Autobody Shops** Use of onsite building for commercial autobody shop	On-site	PHCs, VOCs	Soil and groundwater
APEC 2	Southeast quadrant of the Phase One Property	**PCA 10 – Commercial Autobody Shops** Former waste-oil tank associated with autobody shop use	On-site	Metals, PAHs, PHCs, VOCs	Soil and groundwater
APEC 3	Southeast quadrant of the Phase One Property	**PCA 10 – Commercial Autobody Shops** Former oil/water separator associated with autobody shop use	On-site	Metals, PAHs, PHCs, VOCs	Soil and groundwater

Area of Potential Environmental Concern	APEC Location	Potentially Contaminating Activity*	PCA Location	Contaminants of Potential Concern	Media Potentially Impacted
APEC 4	Entire Phase One Property	**PCA 30 – Importation of Fill Material** The placement of fill of unknown quality in areas of former buildings to restore grade	On-site	Metals, PAHs	Soil
APEC 5	South portion of the Phase One Property	Undefined PCA Historical fire	On-site	Metals, PAHs	Soil
APEC 6	East property boundary of the Phase One Property	**PCA 28 – Gasoline and Associated Products Storage in Fixed Tanks** The current and past USTs and the distribution of gasoline	Off-site	Metals, PHCs, VOCs	Groundwater

Notes:
APEC – Area of Potential Environmental Concern
PCA – Potentially Contaminating Activity
PAHs – Polycyclic Aromatic Hydrocarbons
PHCs – Petroleum Hydrocarbons Fractions F1 to F4
VOCs – Volatile Organic Compounds
*Refers to Table 2 in Schedule D of O.Reg. 153/04

3.4 Deviation From Sampling and Analysis Plan

Soil sample MW24-2 SS1, collected from borehole MW24-2 at a depth of 0-0.76 mbgs, exceeded the applicable SCS for lead. Consequently, an additional soil sample (MW24-2 SS4), collected from a deeper interval (2.3–3.0 mbgs), was submitted for analytical testing of metals to vertically delineate the extent of lead contamination.

3.5 Impediments

ABS had full access to the Phase Two Property throughout this Phase Two ESA, and no restrictions were encountered; however, due to space constraints in APEC 2 and APEC 3, no boreholes were drilled within these areas. Instead, a single borehole (instrumented with a monitoring well) was placed strategically within APEC 1 to evaluate the soil and groundwater quality within APEC 1, APEC 2, and APEC 3.

4 INVESTIGATION METHOD

4.1 General

ABS implemented the field investigations for this Phase Two ESA as provided in the SAP, provided in **Appendix A**. All field investigations followed the protocols provided in the following MECP documents and complied with O. Reg. 153/04:

- *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*, MECP, December 1996;

- *Guide for completing Phase Two Environmental Site Assessments under Ontario Regulation*, MECP, March 2016, updated October 2021; and
- *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality*, MECP, March 2004, amended as of February 2021 (Analytical Protocol).

4.2 Borehole Drilling

A summary of the drilling program completed as part of this Phase Two ESA is provided in **Table 4-1**.

Table 4-1. Drilling Program Details

Item	Details
Contractor and Equipment	ABS retained Strata Drilling Inc. (Strata), licensed by the MECP under O.Reg. 903, to conduct the drilling program in support of this Phase Two ESA. Using a Geomachine GM100 and a Geoprobe 420M, and the direct push method (allowing for continuous sampling), Strata advanced five (5) boreholes at the Phase Two property.
Dilling Dates	July 16 and 22, 2024
Borehole Details	The boreholes were labelled as BH24-1, BH24-2, BH24-3, MW24-1, and MW24-2 and were advanced to depths ranging from 5.79 to 6.32 mbgs.
Monitoring Well Installation	Boreholes MW24-1 and MW24-2 were instrumented with groundwater monitoring wells, with the screens set to intercept the groundwater table.
Soil Sample Collection	Soil samples were collected in continuous 0.76 m (2.5 ft) intervals; logged according to texture, colour, and moisture; and screened for signs of contamination and headspace vapours prior to sample selection. To prevent cross-contamination, sampling tools were decontaminated using Alconox® detergent and rinsed prior to reuse; new disposable nitrile gloves were used for each sample; and all soil was collected directly into dedicated laboratory provided glass sampling jars and vials.
Reporting and Documentation	A site map illustrating the location of each borehole is provided in **Figure 3**, in the **Figures** Section, and the **Borehole Log Reports** are provided in **Appendix B**.

4.3 Soil Sampling

Continuous soil samples were collected from BH24-1 through BH24-3 as well as MW24-1 and MW24-2 in dedicated 50 cm outer diameter soil core liners for the full depth of each borehole using a Geoprobe 420M and Geomachine GM100, and the direct push drilling method. Discrete soil samples were collected directly from the single-use liners and put into dedicated laboratory-supplied glass sampling jars and vials.

All soil samples tested for PHCs F1, and VOCs were immediately collected into two 40 millilitre (mL) glass vials, which were pre-charged with 10 mL of methanol preservative, using single-use 5 mL disposable soil core sampling device; and all soils tested for PHCs F2 to F4 were sampled directly into 250 mL unpreserved glass jars, which were sealed with Teflon-lined lids.

All samples were labelled with the project name, sampling date, company name, and sample location/identification, stored in ice-packed coolers, and submitted to Eurofins Environment Testing Canada, Inc. (Eurofins) in Ottawa, Ontario. Formal Chain of Custody (CoC) records were maintained between ABS and the staff at Eurofins.

4.4 Field Screening Measurements

Each soil sample was logged in the field for texture, colour, moisture, and visible and/or olfactory signs of contamination, and a portion of each sample was placed in a zip-top plastic bag and allowed to equilibrate for 15 minutes in a warm environment before being screened for combustible vapour concentrations (CVCs). An RKI Eagle 2™ dual gas portable vapour meter (Eagle 2), equipped with a catalytic combustible gas detector (CCGD) calibrated to hexane (HEX) for petroleum hydrocarbons detection and a photoionization detector (PID) calibrated to isobutylene (IBL) for VOC detection, was used for CVC screening. Based on a review of the operator's manual, the Eagle PID has an accuracy/precision of up to 0.1 parts per million (ppm). The PID was calibrated prior to field use by Maxim Environmental in Ottawa.

The filed screening records are provided in the **Borehole Log Reports**, in **Appendix B**.

4.5 Groundwater Monitoring Well Installations

Detailed information on the groundwater monitoring well installation and development completed by ABS during this Phase Two ESA is provided in **Table 4-2**.

Table 4-2. Groundwater Monitoring Well Installation and Development Details

Item	Details
Contractor and Equipment	ABS retained Strata to install two (2) monitoring wells in accordance with O. Reg. 903, with continuous oversight by an ABS field representative.
Installation Dates	July 16 and 22, 2024
Groundwater Monitoring Well Details	Two (2) boreholes (MW24-1 and MW24-2) were instrumented with monitoring wells using 31 to 50 millimetres (mm) diameter Schedule 40 PVC casing and 10-slot well screen. Each monitoring well was fitted with a 3.0 m long 10-slot well screen; silica sand was used to fill the annular space around the well screens; bentonite clay was used to backfill and seal the remaining void spaces; a J-plug was installed in the monitoring well openings to prevent contamination from entering from the surface; protective flush mount protectors were installed to protect the monitoring wells from being damaged at the surface.
Groundwater Monitoring Well Development	All newly installed monitoring wells were left undisturbed for at least 24 hours after installation to allow the bentonite seals to be set prior to development. The well development was conducted on July 23, 2024, to remove any disturbances caused by the drilling operations/to restore the groundwater properties to an undisturbed state and to enhance hydraulic connectivity between the monitoring wells and the surrounding materials. Monitoring well development involved manually purging a minimum of three (3) to a maximum of seven (7) standing water column volumes using dedicated tubing and inertial lift foot valves.
Ontario Water Well Records	O.Reg. 903 requires that all wells installed to depths greater than 3.0 mbgs have a water well record completed by a licensed well technician. The owner of the monitoring well must keep the water well record on file for a period of two years, and the monitoring wells must be decommissioned if monitoring wells are no longer in use. Strata is a licensed well driller and submitted a water well record to the MECP to fulfill the requirements of O.Reg. 903.

Item	Details
Reporting and Documentation	A site map illustrating the location of each borehole is provided in **Figure 3** in the **Figures** Section, and groundwater monitoring well details are provided in **Table 1** in the **Tables** Section and the **Borehole Log Reports** in **Appendix B**.

4.6 Field Measurements of Water Quality Parameters

Using a peristaltic pump and a Horiba U-22 water quality meter (calibrated by Maxim Environmental prior to use), and low-flow sampling procedures, groundwater quality parameters (i.e., pH, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (ORP), temperature, and turbidity) were monitored and allowed stabilized prior to groundwater sampling. All purged water was inspected for the presence of separate phase liquids (e.g., an oily sheen), and observations related to the physical appearance and odour of the water were noted in the field record.

4.7 Groundwater Sampling

Groundwater samples were collected from the two (2) newly installed monitoring wells (MW24-1 and MW24-2), and one (1) existing monitoring well (MW20-13). A low-flow sampling method, using an inertia lift pump, was used to collect VOCs and PHC-F1, while the peristaltic pump was used to collect the PHCs, F2-F4, PAHs, and M&Is. All groundwater sampling equipment to collect groundwater samples was dedicated for single-use only (i.e., bailers, foot valves and tubing) to avoid cross-contamination, and all samples were handled with single-use disposable nitrile gloves, which were changed between samples. All non-dedicated sampling equipment (e.g., the oil-water interface probe and water-level meter) were decontaminated with an Alconox™ and distilled water solution prior to each use.

All groundwater samples were collected directly into pre-labelled laboratory-supplied bottles, stored in ice-packed coolers, and submitted under CoC protocol to Eurofins.

4.8 Analytical testing

All soil and groundwater analytical testing for this Phase Two ESA were completed by Eurofins in Ottawa, Ontario, a Canadian Association for Laboratory Accreditation Inc. (CALA) and an ISO/IEC 17025 accredited laboratory. A summary of the soil and groundwater samples submitted to Eurofins for analytical testing is provided in **SAP**, in **Appendix A**.

Eurofins conducted the laboratory analysis in accordance with the Analytical Protocol for this Phase Two ESA. Laboratory certificates of analysis (CoA) for all samples submitted as part of this Phase Two ESA and 2024 Phase II ESA completed by others are included in **Appendix C**.

4.9 Residue Management Procedure

All liquids produced during this Phase Two ESA (i.e., all purged groundwater produced during well development and sampling and all cleaning solution used to decontaminate the sapling equipment) were collected and sealed in 205-litre (55-gallon) plastic drums. These drums were stored at the Phase Two Property in order to be properly manifested/disposed of by the waste facility manager.

No soil cuttings or residual soils were produced during this Phase Two ESA.

4.10 Elevation Surveying

Transit elevation measurements of all boreholes/monitoring wells at the Phase Two Property were measured using a transit level, and a benchmark obtained from Farley, Smith & Dennis Surveying LTD's 2021 legal survey of the Phase Two Property, *Topographic Plan of Survey of Lot 45 and Part of Lots 3, 4 & 5 Registered Plan 343 City of Ottawa*. The elevations of all boreholes advanced as part of the Phase Two ESA are included in the **Borehole Log Reports** provided in **Appendix B.**

4.11 Quality Assurance and Quality Control Measures

The QA/QC protocols performed throughout the subsurface field program were completed in order to obtain representative soil and groundwater samples at the Phase Two Property.

A detailed description of the QA/QC measures (i.e., sampling, containerizing, preservation, labelling, handling, and custody of samples), as well as methods to avoid cross-contamination undertaken during the field program, is provided in **SAP**, in **Appendix A**.

4.11.1 Sampling Equipment Cleaning Procedures

All non-dedicated/non-disposable sampling equipment was decontaminated before and after each use to prevent cross-contamination between samples. The cleaning process included washing the equipment with an Alconox™ solution (i.e., a non-phosphate detergent) followed by a deionized water rinse.

4.11.2 Field and Sampling QA/QC Measures

The field and sampling QA/QC measures adhered to the requirements outlined in subsection 3(3) of Schedule E in O. Reg. 153/04, as amended, and included:

- Calibrating field instruments according to the manufacturer's directions, with calibration checks performed daily;
- Submitting one (1) field duplicate sample for every ten (10) samples collected;
    - In total, four (4) soil duplicate samples and one (1) groundwater duplicate sample were collected and submitted for analytical testing.
- Submitting trip blank samples when groundwater samples are to be analyzed for VOCs.
    - One (1) trip and one (1) field blank sample was submitted to the laboratory for VOCs analysis.

Sampling precision was assessed by calculating the Relative Percent Difference (RPD) for duplicate samples, where applicable, as follows:

$$Duplicate\ RPD = \frac{(sample\ result - sample\ duplicate\ result)}{(sample\ result - sample\ duplicate\ result)/2} \times 100\%$$

According to Analytical Protocol, RPD values are statistically valid when the concentrations of both the original and duplicate samples exceed five (5) times the method reporting limit (MRL). When one or both results of a duplicate pair were below the MRL (i.e., non-detect), RPD calculations were not applicable.

The results of the QA/QC analyses were evaluated against the recommended alert limits outlined in the Analytical Protocol. In accordance with the *Guidance Manual for Environmental Site Characterization in Support of Environmental and Human Health Risk Assessment, Volume 4 Analytical Methods document*,

Canadian Council of Ministers of the Environment (CCME), 2016, the calculated field sample RPDs should be compared to an alert limit equal to the laboratory duplicate performance criteria multiplied by a factor of two (2). The applicable alert limits presented in **Table 4-3** are deemed acceptable and confirm that the sampling methodology could produce repeatable results.

Table 4-3. Acceptable Alert Limits for Field Duplicates

Parameter Group	Media	Laboratory QA/QC Alert Limits	Field QA/QC Alert Limits
Metals	Soil	30%	60%
	Groundwater	20%	40%
PAHs	Soil	40%	80%
	Groundwater	30%	60%
PHCs	Soil	30%	60%
	Groundwater	30%	60%
VOCs	Soil	50%	100%
	Groundwater	30%	60%

4.11.3 Deviations in the QA/QC Measures

There were no deviations in the QA/QC measures as compared to the QA/QC program.

5 REVIEW AND EVALUATION

5.1 Geology

Based on the field observations made during the drilling program, the stratigraphy at the Phase Two Property can be generalized as a gravel and sand fill layer, underlain by a medium to fine-grained sand layer with varying small quantities of gravel that extends to the bedrock.

Practical refusal to augering on inferred bedrock surface was encountered at BH24-2 (5.33 mbgs), MW24-1 (5.79 mbgs), and MW24-2 (6.32 mbgs) suggesting that the depth to the bedrock ranges from approximately 5.33 to 6.32 mbgs across the Phase Two Property; and wet soil conditions were encountered at BH24-1 (5.33 mbgs), BH24-2 (4.57 mbgs), MW24-1 (4.49 mbgs), and MW24-2 (5.33 mbgs) suggesting that the depth to the groundwater table ranges from approximately 4.49 to 5.33 mbgs across the Phase Two Property.

Site geology details at the Phase Two Property are shown on **Figure 3** in the **Figures** Section and provided in the **Borehole Log Reports** in **Appendix B.**

5.2 Groundwater Elevations and Flow Direction

5.2.1 Rationale for Monitoring Well Locations and Screen Intervals

Taking into account the existing monitoring well MW20-13, monitoring wells MW24-1 and MW24-2 were strategically located to evaluate the groundwater elevations and flow direction at the Phase Two Property. The placement of these monitoring wells was carefully chosen to ensure sufficient spatial coverage for determining the groundwater flow direction, as well as assessing the environmental quality of the APECs.

Impacts on groundwater quality, if any, from PHCs, VOCs, PAHs, and/or M&Is would be expected in the shallow groundwater zone and, as such, the water table groundwater quality within the unconfined aquifer was assessed during this Phase Two ESA and the wells with the screened intervals, each measuring 3.0 in length, ranging from 2.797 to 7.53 mbgs were installed within the corresponding APECs so that their screens intersected the water table.

5.2.2 Result of Interface Probe Measurements

Following a period of inactivity, groundwater levels and the presence of light and/or dense non-aqueous phase liquids (LNAPLs or DNAPLs) were measured from each monitoring well on July 11 and 25, 2024, using a Solinst Model 122 Interface meter. No LNAPLs or DNAPLs were detected in any of the monitoring wells present at the Phase Two Property.

5.2.3 Groundwater Levels and Elevations

On July 11, 2024, the groundwater levels in existing monitoring wells, MW20-12 and MW20-13, were recorded at 5.32 mbgs, and 4.83 mbgs, respectively. A subsequent round of groundwater level measurements was conducted on July 25, 2024, after installing the new monitoring wells for all monitoring wells included in this Phase Two ESA. The static groundwater elevation observed onsite was between 73.95 masl at MW20-12 (located in the north of the Phase Two Property), and 74.65 masl at MW24-1 (located in the south of the Phase Two Property).

All monitoring well construction details, as well as groundwater monitoring data, are presented in **Table 1**, in the **Tables** Section.

5.2.4 Interpreted Ground Water Flow Direction

Groundwater level measurements taken from the monitoring wells at the Phase Two Property indicate a flow gradient towards the north, which aligns with the general inference that groundwater flows towards the nearest major water body (i.e., the Ottawa River, located north of the Phase Two Property) as shown on **Figure 3** in the **Figures** Section.

5.2.5 Influence of Buried Utilities

The water table was measured at depths between 4.67 to 5.37 mbgs across the Phase Two Property, and as utilities are generally installed nearer to the surface, the onsite utilities are not likely to affect the groundwater flow across the subject property.

5.3 Groundwater Hydraulic Gradients

Groundwater level measurements obtained at the Phase Two Property on July 25, 2024, were used to determine the minimum and maximum horizontal hydraulic gradients across the subject property. The horizontal hydraulic gradients were calculated as follows:

$$I = \Delta h / \Delta s$$

Where:

I = horizontal hydraulic gradient,

Δh (m) = groundwater elevation difference; and,

Δs (m) = separation distance

Using MW24-2 and MW20-13 for the east/west gradient and MW24-2 and MW24-1 for the north/south gradient, the average calculated hydraulic gradient for the Phase Two Property is approximately 0.001485 m/m.

Due to the absence of deeper monitoring wells, the vertical hydraulic gradient was not assessed.

5.4 Soil Texture

Soil sample BH24-2 SS7 collected from borehole BH24-2 at a depth ranging from 4.6 to 5.3 mbgs, representative of the native materials, was submitted to Eurofins for grain size analysis. The results indicated that over 50% of the sample's particles were larger than 75 micrometres (µm), classifying the soil as "coarse textured soil" as per O.Reg 153/04, which is consistent with the field observations recorded during the drilling program.

Detailed results of the grain size analysis are presented in the laboratory CoAs provided in **Appendix C**.

5.5 Soil Field Screening

All soil samples were screened in the field for signs of environmental impacts, such as staining or gaseous smells, and for CVCs using an Eagle 2, which was equipped with CCGD and PID, and operated in methane elimination mode. Soil sample MW24-1 SS10 collected from borehole MW24-1 at a depth interval of 5.5-6.1 mbgs recorded the highest PID reading of 310 ppm by volume; all CCGD readings were between 0 and 1 ppm by volume, and no signs of environmental impact were observed in the field for any of the soil samples.

All Eagle 2 readings are presented in the **Borehole Log Reports** provided in **Appendix B**.

5.6 Soil Quality

5.6.1 Soil Sample Location and Depth

On July 16 and July 22, 2024, soil samples were collected from five (5) boreholes (BH24-1, BH24-2, BH24-3, MW24-1, and MW24-2) at the Phase Two Property. A total of eleven (11) soil samples ranging from 0.0 to 6.1 mbgs were submitted to Eurofins for analytical testing of a combination of CoPCs to assess potential subsurface impacts related to APECs identified in the 2022 Phase I ESA conducted by PGL.

Information regarding the sample depths and tested parameters is presented in **Table 2** in the **Tables** Section, and sampling locations are illustrated in **Figure 3** in the **Figures** Section.

5.6.2 Soil Analytical Results

The soil samples analytical results were compared to Table 3 SCSs RPI, and the following subsections provide a discussion of the findings.

The soil sample laboratory analytical results are summarized in **Table 2**, and the highest soil concentrations are tabulated in **Table 3** in the **Tables** Section. The laboratory CoAs for all submitted soil samples are included in **Appendix C**.

Metals and Inorganic Parameters

A review of the soil analytical results indicated that soil sample MW24-2 SS1 collected from borehole MW24-2 exceeded the applicable Table 3 SCSs RPI for metals as presented in **Table 5-1** and shown on **Figure 4**, in the **Figures** Section.

Table 5-1. M&Is Exceedances in Soil Samples

BH I.D.	Corresponding APEC	Sample I.D.	Sample Depth (mbgs)	Parameter	Table 3 SCS RPI (µg/g)	Analytical Result (µg/g)
MW24-2	APEC 4 APEC 6	MW24-2 SS1	0.0-0.76	Lead	120	134

PAHs

A review of the soil analytical results indicated that all reported concentrations of PAHs in the soil samples submitted for analysis were below the Table 3 SCSs RPI as shown on **Figure 5** in the **Figures** Section.

PHCs F1-F4 and BTEX

A review of the soil analytical results indicated that all reported concentrations of PHCs F1-F4 and BTEX in the soil samples submitted for analysis were below the Table 3 SCSs RPI as shown on **Figure 6** in the **Figures** Section.

VOCs

A review of the soil analytical results indicated that all reported concentrations of VOCs in the soil samples submitted for analysis were below the Table 3 SCSs RPI as shown on **Figure 7** in the **Figures** Section.

5.7 Groundwater quality

5.7.1 Groundwater Sampling Location and Depth

Groundwater samples were collected on July 25, 2024, from three (3) monitoring wells at the Phase Two Property. These included two (2) newly installed wells, MW24-1 and MW24-2, as well as the existing well, MW20-13. The samples were submitted to Eurofins for analytical testing of a combination of CoPCs to assess potential groundwater impacts associated with the APECs identified in the 2022 Phase I ESA conducted by PGL.

Details on the construction of the monitoring wells, including the well screen intervals, are provided in **Table 1** and the parameters tested are outlined in **Table 4** within the **Tables** Section. The locations of the sampled monitoring wells are illustrated on **Figure 3** in the **Figures** Section.

5.7.2 Field Filtering

All samples submitted for metals testing were field-filtered using a 45 µm filter. However, field filtering is not included in the standard protocols for groundwater sampling of BTEX, PAHs, PHC F1-F4, VOCs, or inorganic parameters.

5.7.3 Groundwater Analytical Results

The groundwater samples analytical results were compared to Table 3 SCSs, and the following subsections provide a discussion of the findings.

The groundwater samples laboratory analytical results are summarized in **Table 4**, and the highest groundwater concentrations are tabulated in **Table 5** in the **Tables** Section. The laboratory CoAs for all submitted groundwater samples are included in **Appendix C**.

Metals and Inorganic Parameters

A review of the groundwater analytical results indicated that groundwater sample MW20-13 exceeded the applicable Table 3 SCSs for M&Is as presented in **Table 5-2** and shown on **Figure 8** in the **Figures** Section.

Table 5-2. M&Is Exceedances in Groundwater Samples

Sample I.D.	Corresponding APEC	Screen Interval (mbgs)	Parameter	Table 3 SCS (µg/L)	Analytical Result (µg/L)
MW20-13	APEC 4	4.42 - 7.53	Chloride	2,300,000	2,430,000

PAHs

A review of the groundwater analytical results indicated that all reported concentrations of PAHs in the groundwater samples submitted for analysis were below the Table 3 SCSs.

PHCs F1-F4 and BTEX

A review of the groundwater analytical results indicated that all reported concentrations of PHCs F1-F4 and BTEX in the groundwater samples submitted for analysis were below the Table 3 SCSs.

VOCs

A review of the groundwater analytical results indicated that all of the groundwater samples exceeded the applicable Table 3 SCSs for VOCs, as presented in **Table 5-3** and shown on **Figure 9** in the **Figures** Section.

Table 5-3. VOCs Exceedances in Groundwater Samples

Sample I.D.	Corresponding APEC	Screen Interval (mbgs)	Parameter	Table 3 SCS (µg/L)	Analytical Result (µg/L)
MW20-13	APEC 4	4.42 - 7.53	Chloroform	2.4	16
MW24-1	APEC 1 APEC 4 APEC 5	2.79 - 5.79	Chloroform	2.4	6.4
MW24-2	APEC 4 APEC 6	3.32 - 6.32	Chloroform	2.4	6.4

5.8 Contaminants of Concern

Based on the analytical results for soil, lead in excess of the SCS was identified in the fill material at location MW24-2 and, therefore, metals (i.e., lead) are the soil Contaminants of Concern (CoCs) for the Phase Two Property. Based on the analytical results for groundwater, chloride and chloroform were identified in excess of the SCS in groundwater at locations MW20-13, MW24-1, and MW24-2 and, therefore, inorganic parameters (chloride) and VOCs (chloroform) are the groundwater CoCs for the Phase Two Property.

5.9 Contaminants Related to Possible Chemical and Biological Transformations

Based on the analytical results for soil and groundwater, contaminants associated with the possible chemical and/or biological transformation (e.g., degradation of chlorinated solvents/VOCs) were not identified at the Phase Two Property. As such, potential chemical or biological transformation occurring at the Site is not a concern.

5.10 Contamination Impact on Other Media

All of the analytical results for groundwater met the applicable SCS for metals. As such, it is ABS's opinion that the lead-impacted fill material is isolated in this layer, and it does not act as a potential source to impact the groundwater beneath the Phase Two Property.

All of the analytical results for soil met the applicable SCS for inorganic parameters (e.g., chloride) and VOCs (e.g. chloroform). As such, it is ABS's opinion that groundwater does not act as a potential source to impact the soil, and the chloride and chloroform contamination is likely localized in the groundwater.

5.11 Presence of LNAPL/DNAPL

As per the soil and groundwater analytical results, all submitted samples were either below the laboratory's detection limit or met the applicable SCSs for PHCs F1-F4 and VOCs (except for chloroform). Therefore, it is ABS's opinion that LNAPL and DNAPL are not present at the Phase Two Property. Additionally, no NAPLs were detected by the Solinst Model 122 Interface meter during the groundwater measuring or sampling events.

5.12 Quality Assurance and Quality Control Results

5.12.1 Quality Control

As per O.Reg. 153/04, a minimum of one (1) field duplicate sample for every ten (10) submitted samples must be submitted for analytical testing per parameter group in order to assess the precision of the laboratory's testing procedures.

Soil Field Duplicate Samples

A summary of the soil field duplicate sampling program that was conducted as part of this Phase Two ESA is provided in **Table 5-4**. As shown, the soil field duplicate sampling program met the requirements of O.Reg. 153/04, and all calculated RPD values met the acceptable alert limits.

RPD calculations for the soil duplicate samples are provided in **Table 6** within the **Tables** Section.

Table 5-4. Summary of Soil Field Duplicate Samples

Parameters Group	Total Soil Samples	Total Field Duplicate Samples	Field Duplicates I.D.	RPD
BTEX	9	2	BH24-12 SS7 MW24-12 SS7	No exceedances of the alert limits were noted
M&Is	11	2	BH24-12 SS7 BH24-13 SS2	No exceedances of the alert limits were noted
PAHs	6	2	BH24-12 SS3 MW24-12 SS7	No exceedances of the alert limits were noted
PHCs	9	2	BH24-12 SS7 MW24-12 SS7	No exceedances of the alert limits were noted
VOCs	7	2	BH24-12 SS7 MW24-12 SS7	No exceedances of the alert limits were noted

Parameters Group	Total Soil Samples	Total Field Duplicate Samples	Field Duplicates I.D.	RPD
Notes: BH24-12 SS3 = Duplicate of soil sample BH24-2 SS3 BH24-12 SS7 = Duplicate of soil sample BH24-2 SS7 BH24-13 SS2 = Duplicate of soil sample BH24-3 SS2 MW24-12 SS7 = Duplicate of soil sample MW24-2 SS7				

Groundwater Field Duplicate Samples

A summary of the groundwater field duplicate sampling program that was conducted as part of this Phase Two ESA is provided in **Table 5-5**. As shown, the groundwater field duplicate sampling program met the requirements of O.Reg. 153/04, and all calculated RPD values met the acceptable alert limits.

RPD calculations for the groundwater duplicate samples are provided in **Table 7** within the **Tables** Section.

Table 5-5. Summary of Groundwater Field Duplicate Samples

Parameters Group	Total Groundwater Samples	Total Field Duplicate Samples	Field Duplicate I.D.	RPD
BTEX	3	1	MW20-113	No exceedances of the alert limits were noted
M&Is	3	1	MW20-113	No exceedances of the alert limits were noted
PAHs	3	1	MW20-113	No exceedances of the alert limits were noted
PHCs	3	1	MW20-113	No exceedances of the alert limits were noted
VOCs	3	1	MW20-113	No exceedances of the alert limits were noted
Notes: MW20-113 = Duplicate of groundwater sample MW20-13				

Groundwater Field and Trip Blank Sample

During the groundwater sampling activities conducted as part of this Phase Two ESA, one (1) groundwater field blank sample and one (1) groundwater trip blank sample were submitted to Eurofins for analytical testing of VOCs. The results for all blank samples reported VOC concentrations below the laboratory detection limits. As such, the likelihood of introducing positive bias during the collection, transport, and/or storage of the groundwater samples is deemed to be minimal, and the sampling data should be considered reliable for the objectives of this Phase Two ESA.

The analytical results of groundwater blank samples are provided in **Table 4**, in the **Tables** Section**.**

5.12.2 Samples Not Handled in accordance with the Analytical Protocol

All samples were handled in accordance with the Analytical Protocol, and all holding times, preservation methods, storage conditions, and container specifications were respected at all times during this Phase Two ESA.

5.12.3 Subsection 47 (3) of the Regulation

All CoAs received pursuant to clause 47 (2) (b) of the regulation comply with subsection 47 (3), and they have been received for each sample submitted for analytical testing, provided in full in **Appendix C**.

5.12.4 Laboratory Certificates of Analysis

The QA/QC program also included laboratory analyses by Eurofins, who conducted a variety of internal QA/QC checks, including method blanks, control standards samples, certified reference material standards, method spikes, replicates, duplicates, and instrument blanks. A summary of the laboratory certificates of authenticity is provided in **Table 5-6.**

The results of the Eurofins QA/QC programs are provided in **Appendix C**.

Table 5-6. Summary of Certificates of Authenticity

Report Number	Laboratory Notes	Material Impact on Report Conclusions and Justification
3009469	Sample ID: 1736262 BH24-1 SS1 - For all samples in this report, the metals spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte. - (F2-F4) MRLs elevated due to matrix interferences (dilution done).	Given that the PHCs analytical results for this sample were either below the MRLs or did not exceed Table 3 SCSs RPI, the conclusions of this report were not impacted.
3009581	Sample ID: 1736941 MW24-1 SS2 - For samples in this report, the metals spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.	The conclusions of this report were not impacted.
3009744	Sample ID: 1737660 MW20-13 - Metals MRL elevated due to matrix interference (dilution was done). - Samples from this report were rerun for Cl and Ag upon client request (DQR). Previously, these samples were run for metals on July 30, 2024. - Metals spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.	Given that the metal analytical results for these samples were either below the MRLs or did not exceed Table 3 SCSs RPI, the conclusions of this report were not impacted.
	Sample ID: 1737661 MW20-113 - Metals MRL elevated due to matrix interference (dilution was done).	
	Sample ID: 1737663 MW24-2 -Metals MRL elevated due to matrix interference (dilution was done).	
3009765	Sample ID: 1736280 MW24-2 SS4 - Metals spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.	The conclusions of this report were not impacted.

5.12.5 Overall Quality of QA/QC Program

Following a comprehensive review of the sampling methods and the overall QA/QC program conducted during this Phase Two ESA, it has been determined that the data quality objectives have been met and that no issues have restricted the decision-making or the characterization of the soil and groundwater quality at the Phase Two Property were encountered.

5.13 Phase Two Conceptual Site Model

The Phase Two Property is an irregularly shaped parcel of land with an approximate footprint of 1034.47 m², located at the intersection of Montreal Road (to the north) and Borthwick Avenue (to the west) in the City of Ottawa. The Phase Two Property has a two-storey single-family home (including a basement) that used to serve as an office space and a one-storey slab-on-grade garage that used to serve as an auto-body service garage. The Phase Two Property has historically been used as a commercial property; however, it is currently an unoccupied/abandoned auto-body garage and is planned to be redeveloped for residential use.

As per Section 2.2 of this Phase Two ESA report, the Phase One CSM was developed to provide a detailed description of the APECs that occurred on, in or under the Phase Two Property. The Phase One CSM has been summarized in **Figure 1** and **Figure 2**, in the **Figures** Section.

The following subsections provide a narrative description and expand on the Phase One CSM with the findings of the Phase Two ESA.

5.13.1 Potentially Contaminating Activities

PGL's 2022 Phase One CSM identified five (5) On-site and twenty (20) Off-site PCAs within the Phase One Study Area. Of these, five (5) On-site PCAs and one (1) Off-site PCA were interpreted as potential sources that could impact the environmental condition of the subsurface media on, in or under the Phase Two Property and were considered to represent six (6) APECs. All PCAs contributing to APECs at the Phase Two Property are illustrated on a map provided in **Figure 2A** and **Figure 2B** in the **Figures** Section.

5.13.2 Areas of Potential Environmental Concerns

PGL's Phase One CSM identified six (6) APECs at the Phase Two Property that warranted further investigation. These APECs are detailed in **Table 3-2**, with their respective locations depicted on the map provided as **Figure 3** in the **Figures** Section. The Phase ESA was conducted to evaluate soil and groundwater quality, focusing on CoPCs associated with each identified APEC. A summary of the Site investigation findings for each APEC at the Phase Two Property is presented in **Table 5-7**.

Table 5-7. Summary of the Site Investigation of each APEC at the Phase Two Property

APECs	Borehole Location	CoPCs in Soil	CoPCs in Groundwater	Total Number of Submitted Soil Samples	Total Number of Submitted Groundwater Samples
APEC 1: Use of onsite building for commercial autobody shop	MW24-1	PHCs F1-F4, VOCs	PHCs F1-F4, VOCs	Two	One
APEC 2: Former waste-oil tank associated with autobody shop use	MW24-1	Metals, PAHs, PHCs F1-F4, VOCs	Metals, PAHs, PHCs F1-F4, VOCs	Two	One

APECs	Borehole Location	CoPCs in Soil	CoPCs in Groundwater	Total Number of Submitted Soil Samples	Total Number of Submitted Groundwater Samples
APEC 3: Former oil/water separator associated with autobody shop use	MW24-1	Metals, PAHs, PHCs F1-F4, VOCs	Metals, PAHs, PHCs F1-F4, VOCs	Two	One
APEC 4: The placement of fill of unknown quality in areas of former buildings to restore grade	BH24-1 BH24-2 BH24-3 MW24-2	Metals, PAHs	N/A	Nine	One
APEC 5: Historical fire	BH24-1 MW24-1	Metals, PAHs	N/A	Four	One
APEC 6: The current and past USTs and the distribution of gasoline	MW24-2	Metals, PHCs, VOCs	Metals, PHCs, VOCs	Three	One

5.13.3 Subsurface Structures and Utilities

The water table was measured at depths between 4.67 to 5.37 mbgs across the Phase Two Property, and as utilities are generally installed nearer to the surface. As such, the utility corridors are not expected to act as a preferential pathway for contaminant distribution and transport at the Phase Two Property.

5.13.4 Physical Setting

Stratigraphy

Based on the field observations made during the drill program, the stratigraphy at the Phase Two Property can be generalized as a gravel and sand fill layer, underlain by a medium to fine-grained sand layer with varying small quantities of gravel that extends to the bedrock, which is located between 5.33 and 6.32 mbgs.

The Site stratigraphy is illustrated in the **Borehole Log Reports** in **Appendix B**.

Hydrogeological Characteristics and Groundwater Flow

On July 25, 2024, groundwater levels were measured in all the monitoring wells at the Phase Two Property, and the static groundwater elevations were observed to be between 74.65 masl (4.86 mbgs) at MW24-1 (located in the south of the Phase Two Property) and 73.95 masl (5.37 mbgs) at MW20-12 (located in the north of the Phase Two Property). These measurements indicate a flow gradient towards the north, which aligns with the inference that groundwater generally flows towards the nearest major water body (i.e. the Ottawa River, located north of the Phase Two Property.

Approximate Depth to Bedrock

Practical refusal to augering on inferred bedrock surface was encountered at boreholes BH24-2 at 5.33 mbgs, MW24-1 at 5.79 mbgs, and MW24-2 at 6.32 mbgs suggesting that the depth to the bedrock ranges from approximately 5.33 to 6.32 mbgs across the Phase Two Property.

Approximate Depth to Water Table

Groundwater level measurements were obtained from all the monitoring wells, including MW24-1, MW24-2, MW20-12, and MW20-13 at the Phase Two Property on July 25, 2024, and ranged between 4.67 to 5.37 mbgs.

Applicable Site Condition Standards

The Site Condition Standards (SCSs) deemed applicable to the Phase Two Property for the comparison of soil and groundwater analytical data under the MECP "*Soil, Ground Water and Sediment Standards for use under part XV.1 of the Environmental Protection Act*" are as follows:

Soil

- Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional (RPI) Property Use and coarse-textured soils (Table 3 SCSs RPI)

Groundwater

- Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for All Types of Property Use and coarse-textured soils (Table 3 SCSs)

The SCSs were deemed applicable to the property in accordance with the requirements outlined in O.Reg. 153/04, as amended, based on the rationale presented in Table 5-8.

Table 5-8. Site Conditions and Characteristics

Criteria	Site Conditions and Characteristics
Groundwater Use	The Phase Two Property is located within the City of Ottawa, in an area serviced with potable water through the municipal water distribution system. Therefore, it shall be classified as a non-potable groundwater site, as per Section 35 of O.Reg. 153/04.
Environmentally Sensitive Site	The surface soil (i.e., less than 1.5m depth) had an observed pH value between 5.0 and 9.0; the subsurface soil (i.e., more than 1.5m in depth) had an observed pH value between 5.0 and 11.0; and the Ministry of Natural Resources and Forestry (MNRF) has not identified any Areas of Natural and Scientific Interest (ANSI) on or within 30 m of the Phase Two Property boundary. Therefore, the Phase Two Property shall NOT be classified as an environmentally sensitive site, as per Section 41 of O.Reg. 153/04.
Soil Thickness	Historical subsurface drilling revealed that greater than 2 m of overburden soil exists across more than two-thirds of the Phase Two Property. Therefore, the Phase Two Property shall NOT be considered as a shallow soil condition site, as per Section 43.1 of O.Reg. 153/04.
Surface Water Features	The Phase Two Property is neither adjacent to nor within 30 m of any surface water features. Therefore, the Phase Two Property shall NOT be considered as a surface water site, as per Section 43.1 of O.Reg. 153/04.
Soil Texture	The results of the soil grain size analysis on soil collected as part of this Phase Two ESA determined that the soil texture at the Phase Two Property is categorized as coarse. Therefore, the Phase Two Property shall be considered as a coarse-textured site.

Criteria	Site Conditions and Characteristics
Property Use	The Phase Two Property is intended to be redeveloped as a residential property. Therefore, 'Residential/Parkland/Institutional Property Use' represents the most appropriate proposed future use of the Phase Two Property.

Fill Materials

No soil was brought from another property and placed on, in, or under the Phase Two Property for backfilling and/or grading purposes as part of the Phase One/Two ESA investigation.

Existing and Proposed Structure

Details regarding the current and proposed future land use, including structural arrangements, are provided in **Table 5-9**.

Table 5-9. Existing and Proposed Buildings or Structures

Item	Description
Current Land Use and Structures	Commercial - The Phase Two Property is currently an abandoned commercial auto-body garage and contains two (2) buildings: a two-storey single family home (including a basement), which used to serve as an office space, located in the southeast of the Site; and a one-storey slab on grade garage, which used to serve as the auto-body service garage, located east adjacent to the office building. At present, the Phase Two Property is vacant
Future Land Use and Structures	Residential - An official building proposal/plan was not made available to ABS as of the reporting date of this Phase Two ESA; however, the Phase Two Property is proposed to be redeveloped into a nine-storey residential building, including three (3) levels of underground parking.

5.13.5 Contamination On, In or Under the Phase Two ESA Property

Contaminations in Soil

Soil samples were collected from five (5) boreholes, including BH24-1, BH24-2, BH24-3, MW24-1, and MW24-2 advanced at the Phase Two Property on July 16 and 22, 2024, and select soil samples were submitted to Eurofins for analytical testing of all CoPCs identified in PGL's Phase One CSM (i.e. BETX, M&Is, PAHs, PHCs F1-F4, and/or VOCs). A review of the soil analytical results determined that soil sample MW24-2 SS1 from location MW24-2 at depths between of 0.0 and 0.76 mbgs exceeded the applicable Table 3 SCSs RPI for lead; all other test parameters met their applicable Table 3 SCSs RPI.

An additional soil sample, MW24-2 SS4, at a sample depth between 2.3 and 3.0 mbgs in the fill layer, was submitted for analytical testing of metals to delineate the extent of the lead impact at location MW24-2. Based on the analytical result, all metal parameter concentrations met the applicable Table 3 SCSs RPI. Therefore, the marginal lead exceedance is expected to be a result of poor-quality fill brought onto the Phase Two Property.

Contaminations in Groundwater

Groundwater samples were collected from three (3) monitoring wells, including MW24-1, MW24-2, and MW20-13, at the Phase Two Property on July 25, 2024, and submitted to Eurofins for analytical testing of all CoPCs identified during PGL's Phase One CSM (i.e. BETX, M&Is, PAHs, PHCs F1-F4, and/or VOCs). A

review of the groundwater analytical results determined that all three (3) samples exceeded the applicable Table 3 SCSs for chloroform and that sample MW20-13 also exceeded the applicable Table 3 SCSs for chloride; all other test parameters met their applicable Table 3 SCSs.

It is ABS's opinion that the chloroform concentration in excess of the applicable SCS is considered to be a result of either the degradation or leakage of the municipal water infrastructure beneath the Site or to the introduction of municipal water during drilling activities associated with concrete cutting at the auto-body service garage. The chloride concentration in excess of the applicable SCS is expected to be a result of the de-icing application of road salt onsite and on Montreal Road (located north adjacent and upgradient to the Site) for the safety of vehicular and/or pedestrian traffic. Therefore, as per paragraphs 1 and 2 of O.Reg. 153/04 Section 49.1, the applicable SCSs are deemed not to be exceeded. As such, these exemptions are being relied upon, such that chloroform and chloride are not considered CoCs present in the groundwater beneath the Phase Two Property.

Contaminants Migration and Preferential Pathways

As lead (i.e., the soil CoCs identified at the Phase Two Property) was not identified or confirmed by the analytical groundwater results, the lead-impacted soil is considered to be localized in the fill material in the immediate vicinity of borehole MW24-2 east of the Site. Metals are considered less mobile, and thus, they are not expected to migrate into the underlying native soil. Therefore, contaminant exposure pathways are not anticipated.

Climatic or Meteorological Influences on Migration

Temporal fluctuations in the groundwater levels and other climatic or meteorological conditions are not expected to impact the distribution or migration of the observed lead contamination as the groundwater at the Phase Two Property complies with the applicable SCS.

Based on the analytical results, the lead-impacted fill material is isolated in the upper fill layer on the (i.e., central/west/south etc.) portion of the Site. It is in the opinion of the QP that meteorological or climatic conditions have not influenced the distribution or migration of lead contamination at the Phase Two Property, as all of the groundwater results meet the applicable SCS.

Soil Vapour Intrusion

Lead is not a volatile contaminant under natural environmental conditions; therefore, the potential for vapours to be present at the Phase Two Property is very unlikely.

6 ASSESSMENT AND CONCLUSION

Groupe ABS Inc. (ABS) was retained by Group MB Canada Inc. (the "Client"), represented by Max Mahi, to complete a Phase Two Environmental Site Assessment (ESA) for the properties located at 609 Borthwick Avenue and 630 Montreal Road, Ottawa, Ontario (herein referred to as the "Phase Two Property" or the "Site") in support of a proposed residential development.

This Phase Two ESA has been completed in accordance with the requirements outlined in *Ontario Regulation 153/04: Records of Site Condition – Part XV.1 of the Act*, which was last amended by Ontario Regulation 274/20 on November 30, 2023 (O. Reg. 153/04). It is ABS's understanding that the Phase Two

Property, currently an abandoned auto-body garage, is proposed for redevelopment from its existing commercial use to a residential land use. Given that this constitutes a change to more sensitive land use, this Phase Two ESA has been prepared to support the filing a Record of Site Condition (RSC) with the Ontario Ministry of Environment, Conservation and Parks (MECP) for the Phase Two Property.

The objectives of this Phase Two ESA were to investigate the potential subsurface impacts as a result of six (6) Areas of Potential Environmental Concern (APECs) identified in a Phase One ESA completed by PGL Environmental Consultants (PGL) in accordance with O.Reg. 153/04.

The Phase Two ESA investigation conducted by ABS included the following:

- ABS supervised the drilling of five (5) boreholes to depths ranging from 5.79 to 6.32 metres below ground surface (mbgs) across the Phase Two Property between July 16 and 25, 2024, in order to investigate the current soil and groundwater conditions.
- Two (2) of these boreholes were completed as groundwater monitoring wells to sample the groundwater. One (1) pre-existing groundwater monitoring well, installed by others, was also sampled as part of the Phase Two ESA.
- Based on the field observations made during the drilling program, the stratigraphy at the Phase Two Property can be generalized as a gravel and sand fill layer, underlain by a medium to fine-grained sand layer with varying small quantities of gravel that extends to the bedrock.
- A total of eleven (11) soil samples ranging from 0.0 to 6.1 mbgs and three (3) groundwater samples were collected between July 16 and 25, 2024, and submitted for laboratory analysis of the following:
    - Benzene, Toluene, Ethylbenzene, and Xylene (BTEX)
    - Metals and Inorganics (M&Is)
    - Petroleum Hydrocarbons (PHCs) fractions 1 through 4 (F1-F4);
    - Polycyclic Aromatic Hydrocarbons (PAHs); and/or
    - Volatile Organic Compounds (VOCs)
- Based on Site-specific information and potential future property use, Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use and Coarse-Textured Soils (Table 3 SCSs RPI) were considered as the applicable regulatory standards for the Phase Two Property.
- The laboratory results for soil and groundwater samples submitted during the Phase Two ESA investigation indicated that all analyzed parameters met the Table 3 SCSs RPI, except for the following exceedances
    - Soil sample MW24-2 SS1 (0.0-0.76 mbgs): lead (134 µg/g);
    - Groundwater sample MW20-13: chloride (2430000 µg/L), and chloroform (16 µg/L);
    - Groundwater sample MW24-1: chloroform (6.4 µg/L); and
    - Groundwater sample MW24-2: chloroform (6.4 µg/L)

It is important to note that exemptions under paragraphs 1 and 2 of O.Reg. 153/04 Section 49.1 are applied to the observed chloride and chloroform groundwater exceedances, as the chloride exceedance

is considered to be a result of road salt applications for vehicular /pedestrian safety. The reported chloroform exceedances are likely due to either the degradation or leakage of the municipal water infrastructure beneath the Site or to the introduction of municipal water during drilling activities associated with concrete cutting at the auto-body service garage.

Based on the findings of the Phase Two ESA, the soil contamination identified at the Phase Two Property appears to be contained/isolated within the fill material, extending to a depth of approximately 0.76 metres below ground surface (mbgs) in the area surrounding the borehole MW24-2. It is ABS's opinion that contaminated fill originated from a poor-quality fill imported on-site.

7 RECOMMENDATIONS

Site remediation will be required to meet the Table 3 Standards for residential property use prior to an RSC submission to the MECP. ABS understands that the Site is planned for future redevelopment, so it is recommended that remediation activities be carried out concurrently with the redevelopment process to facilitate the RSC submission for the Phase Two Property. Additional details regarding a Remedial Action Plan (RAP) can be provided upon request.

Additionally, ABS recommends that a final round of groundwater sampling be conducted prior to any remedial activities at the Site to ensure that the current environmental condition remains unchanged. If the monitoring wells installed on-site are not going to be used in the future or will be destroyed during excavation/construction activities, then the wells on-site must be decommissioned according to O.Reg. 903 of the Ontario Water Resources Act. These monitoring wells will be registered with the MECP under the aforementioned regulation.

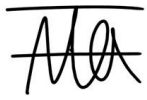
8 TERMS AND LIMITATIONS

This Phase Two ESA was performed for MB Canada Group Inc. (the "Client") in order to investigate potential environmental impacts at 609 Borthwick Avenue and 630 Montreal Road, Ottawa, Ontario (the "Site"). The term recognized environmental condition means the presence or likely presence of any hazardous substance at the Site under conditions that indicate an existing release, past release, or a material threat of a release of a hazardous substance on the property and/or beneath the property. This Phase Two ESA does not quantify the extent of the current and/or recognized environmental condition or the cost of any remediation. Our conclusions derived are specific to the immediate area of study and cannot be extrapolated extensively away from the locations sampled in this subsurface program conducted by ABS. Samples have been analyzed for a limited number of contaminants that are expected to be present at the Site, and the absence of information relating to a specific contaminant does not indicate that it is not present. No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions on a property. Completion of this Phase Two ESA was performed to the standards established by ABS to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions on and/or beneath the Site and recognize reasonable limits on time and cost. This Phase Two ESA was performed in compliance with currently acceptable practices for environmental site investigations, and specific to the Client requests, as applicable to this Site. This report was prepared for the exclusive use of the Client, subject to the terms, conditions and limitations contained within the duly authorized proposal for this project. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, is the sole responsibility of such third parties. ABS accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted. If additional parties require reliance on this report, written authorization from ABS will be required. ABS disclaims responsibility for consequential financial effects on transactions or property values or requirements for follow-up actions and costs. No other warranties are implied or expressed. Furthermore, this report should not be construed as legal advice. ABS will not provide results or information to any party unless disclosure by ABS is required by law. ABS makes no other representations whatsoever, including those concerning the legal significance of its findings or as to other legal matters touched on in this report, including, but not limited to, ownership of any property or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and these interpretations may change over time.

9 CLOSURE

We trust that the information provided in this report meets your current requirements. If you have any questions or concerns, please do not hesitate to contact the undersigned.

Sincerely,



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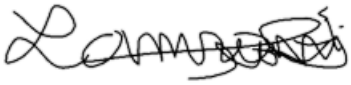

Ahmed Lamrani, M.Eng., P.Eng.
Director - Ontario

10 REFERENCES

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- City of Ottawa. **geoOttawa** (interactive map). Accessed December 2024
- Ministry of Natural Resources, **Make A Map: Natural Heritage Areas** (interactive make). Accessed December 2024
- Ontario Geological Survey. 2011. 1:250,000 scale bedrock geology of Ontario. Ontario Geological Survey, Miscellaneous Release—Data 126-Revision 1
- Ontario Ministry of Environment (MOE, now MECP). 1996. Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario. December 1996.
- Ontario Ministry of the Environment (MECP). Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. March 9, 2004, amended July 1, 2011.
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- Ontario Regulation 153/04: Records of Site Condition – Part XV.1 of the Act. Last amended by Ontario Regulation 274/20 on July 1, 2020.
- R.R.O. 1990, Regulation 347, General – Waste Management, as amended by Ontario Regulation 234/11.
- U.S. Environmental Protection Agency - Region 1. Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells. Revised January 19, 2010.

Tables

Table 1: Groundwater Monitoring Well Elevations, Depth, and Construction Details

Monitoring Well I.D.	Installation Date (YYYY-MM-DD)	Ground Surface Elevation (masl)	Top of Casing Elevation (masl)	Total Well Depth (mbgs)	Well Diameter (cm)	Monitoring Well Screen Interval (mbgs)	Screen Length (m)	Sealant Interval (mbgs)	Date of Monitoring (YYYY-MM-DD)	Measured Depth to Groundwater (mbgs)	Groundwater Elevation (masl)
MW20-12	2020-03-17	79.32	79.22	9.22	5.08	6.30 - 9.35	3.05	0.3 - 5.9	2024-07-25	5.37	73.95
MW20-13	2020-03-17	78.79	78.74	7.34	5.08	4.42 -7.53	3.11	0.3 - 3.96	2024-07-25	4.86	74.46
MW24-1	2024-07-22	78.62	78.56	5.79	3.18	2.79 - 5.79	3	0.3 - 2.49	2024-07-25	4.67	74.65
MW24-2	2024-07-16	79.05	78.99	6.32	5.08	3.32 - 6.32	3	0.3 - 3.02	2024-07-25	5.07	74.25

Notes:

masl-metres above sea level

mbgs-metres below ground surface

NM-not measured

Table 2: Soil Analytical Results - Compared to Table 3 SCS RPI

Sample Location			BH24-1		BH24-2				BH24-3			MW24-1		MW24-2			
Laboratory I.D.			1736262	1736263	1736264	1736273	1736265	1736270	1736266	1736271	1736267	1736941	1736942	1736268	1736280	1736269	1736272
Sample I.D.			BH24-1 SS1	BH24-1 SS6	BH24-2 SS3	BH24-12 SS3	BH24-2 SS7	BH24-12 SS7	BH24-3 SS2	BH24-13 SS2	BH24-3 SS6	MW24-1 SS2	MW24-1 SS10	MW24-2 SS1	MW24-2 SS4	MW24-2 SS7	MW24-12 SS7
Sample Collection Date (YYYY-MM-DD)			2024-07-16	2024-07-16	2024-07-16	2024-07-16	2024-07-16	2024-07-16	2024-07-16	2024-07-16	2024-07-16	2024-07-22	2024-07-22	2024-07-16	2024-07-16	2024-07-16	2024-07-16
Sample Depth (mbgs)			0.0-0.76	3.8-4.5	1.5-2.3	1.5-2.3	4.6-5.3	4.6-5.3	0.76-1.5	0.76-1.5	3.8-4.5	0.76-1.5	5.5-5.8	0.0-0.76	2.3-3.0	4.5-5.3	4.5-5.3
Analyte Name	**Units**	**Table 3 SCS RPI**															
PHCs & BTEX																	
Benzene	ug/g	**0.21**	<0.0068	<0.0068	-	-	<0.0068	<0.0068	<0.0068	-	<0.0068	<0.0068	<0.0068	<0.0068	-	<0.0068	<0.0068
Ethylbenzene	ug/g	**2**	<0.018	<0.018	-	-	<0.018	<0.018	<0.018	-	<0.018	<0.018	<0.018	<0.018	-	<0.018	<0.018
F1 (C6 to C10)	ug/g	**55**	<10	<10	-	-	<10	<10	<10	-	<10	<10	<10	<10	-	<10	<10
F1-BTEX	ug/g	**55**	<10	<10	-	-	<10	<10	<10	-	<10	<10	<10	<10	-	<10	<10
F2 (C10 to C16)	ug/g	**98**	<20	<2	-	-	<2	<2	<2	-	<2	<2	<2	2	-	<2	<2
F3 (C16 to C34)	ug/g	**300**	200	<20	-	-	50	<20	<20	-	<20	30	<20	70	-	40	60
F4 (C34 to C50)	ug/g	**2800**	<200	<20	-	-	110	30	<20	-	<20	<20	40	90	-	80	120
Toluene	ug/g	**2.3**	<0.08	<0.08	-	-	<0.08	<0.08	<0.08	-	<0.08	<0.08	<0.08	<0.08	-	<0.08	<0.08
Xylene (Total)	ug/g	**3.1**	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Xylene, m/p-	ug/g	**NV**	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Xylene, o-	ug/g	**NV**	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
M&Is																	
Antimony	ug/g	**7.5**	<1	<1	<1	-	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	-
Arsenic	ug/g	**18**	1	1	4	-	2	2	3	3	2	2	1	5	1	4	-
Barium	ug/g	**390**	33	27	54	-	66	36	93	69	24	27	21	142	17	72	-
Beryllium	ug/g	**4**	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
Boron	ug/g	**120**	<5	<5	<5	-	5	<5	<5	5	<5	<5	<5	7	<5	<5	-
Boron (Hot Water Soluble)	ug/g	**1.5**	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-
Cadmium	ug/g	**1.2**	<0.4	<0.4	<0.4	-	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.6	<0.4	<0.4	-
Chromium	ug/g	**160**	10	16	24	-	30	20	28	17	17	14	13	28	8	32	-
Cobalt	ug/g	**22**	2	5	9	-	7	6	6	5	5	5	3	6	3	10	-
Copper	ug/g	**140**	5	11	21	-	18	11	20	13	15	9	10	25	6	25	-
Cyanide (Free)	ug/g	**0.051**	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	-
Electrical Conductivity (EC)	mS/cm	**0.7**	0.14	0.13	0.12	-	0.18	0.19	0.17	0.17	0.11	0.41	0.31	0.2	-	0.18	-
Hexavalent Chromium	ug/g	**8**	<0.2	0.3	0.3	-	0.5	0.4	<0.2	<0.2	0.3	<0.2	0.27	<0.2	-	0.4	-
Lead	ug/g	**120**	11	4	20	-	9	5	26	16	4	4	2	**134**	2	12	-
Mercury	ug/g	**0.27**	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	-	<0.1	-
Molybdenum	ug/g	**6.9**	<1	<1	1	-	4	2	2	1	<1	2	1	1	<1	3	-
Nickel	ug/g	**100**	6	8	15	-	18	12	21	15	9	9	6	17	5	24	-
pH-CaCl2	pH Unit	**NV**	7.86	7.78	7.78	-	7.82	7.83	7.82	7.81	7.76	7.5	7.65	7.81	-	7.81	-
Selenium	ug/g	**2.4**	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	0.9	<0.5	-
Silver	ug/g	**20**	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-
Sodium Absorption Ratio (SAR)	SAR Unit	**5**	0.17	2.74	0.49	-	3.29	1.85	0.3	0.26	0.27	0.4	2.81	0.63	-	1.56	-
Thallium	ug/g	**1**	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
Uranium	ug/g	**23**	<0.5	<0.5	3.3	-	0.6	0.5	1.2	0.8	0.5	0.9	0.6	0.5	<0.5	0.8	-
Vanadium	ug/g	**86**	12	20	31	-	21	22	20	18	23	24	16	23	17	29	-
Zinc	ug/g	**340**	26	15	32	-	24	18	41	29	18	19	12	132	8	31	-
Moisture (%)	%	**NV**	7	5.4	-	-	4	5.1	5.5	-	4.7	3.4	7.5	6.2	-	4.4	3.4
PAHs																	
1 + 2-Methylnaphthalene	ug/g	**0.99**	<0.05	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Acenaphthene	ug/g	**7.9**	<0.05	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Acenaphthylene	ug/g	**0.15**	<0.05	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Anthracene	ug/g	**0.67**	<0.05	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Benzo(a)anthracene	ug/g	**0.5**	0.08	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Benzo(a)pyrene	ug/g	**0.3**	0.12	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Benzo(b)fluoranthene	ug/g	**0.78**	0.11	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Benzo(g,h,i)perylene	ug/g	**6.6**	<0.05	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Benzo(k)fluoranthene	ug/g	**0.78**	0.08	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Chrysene	ug/g	**7**	0.11	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Dibenzo(a,h)anthracene	ug/g	**0.1**	<0.05	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Fluoranthene	ug/g	**0.69**	0.21	-	0.08	0.07	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Fluorene	ug/g	**62**	<0.05	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	ug/g	**0.38**	0.05	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Methylnapthalene, 1-	ug/g	**0.99**	<0.05	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Methylnapthalene, 2-	ug/g	**0.99**	<0.05	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
Naphthalene	ug/g	**0.6**	<0.013	-	<0.013	<0.013	-	-	<0.013	-	-	<0.013	<0.013	-	-	<0.013	<0.013
Phenanthrene	ug/g	**6.2**	0.06	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	<0.05	-	-	0.05	<0.05
Pyrene	ug/g	**78**	0.19	-	0.07	0.06	-	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05
VOCs																	
1,1,1,2-Tetrachloroethane	ug/g	**0.058**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
1,1,1-Trichloroethane	ug/g	**0.38**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	**0.05**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
1,1,2-Trichloroethane	ug/g	**0.05**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
1,1-Dichloroethane	ug/g	**3.5**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
1,1-Dichloroethene	ug/g	**0.05**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	**3.4**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
1,2-Dichloroethane	ug/g	**0.05**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
1,2-Dichloropropane	ug/g	**0.05**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	**4.8**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
1,3-Dichloropropene, cis + trans	ug/g	**0.05**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	**0.083**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Acetone	ug/g	**16**	-	<0.50	-	-	<0.50	<0.50	-	-	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
Bromodichloromethane	ug/g	**13**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Bromoform	ug/g	**0.27**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Bromomethane	ug/g	**0.05**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Carbon Tetrachloride	ug/g	**0.05**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Chloroform	ug/g	**0.05**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
cis-1,2-Dichloroethene	ug/g	**3.4**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Dibromochloromethane	ug/g	**9.4**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Dichlorodifluoromethane	ug/g	**16**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Dichloroethylene, trans-1,2-	ug/g	**0.084**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Dichloromethane	ug/g	**0.1**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Ethylene Dibromide	ug/g	**0.05**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Hexane	ug/g	**2.8**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Methyl ethyl ketone (MEK)	ug/g	**16**	-	<0.50	-	-	<0.50	<0.50	-	-	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
Methyl isobutyl ketone (MIBK)	ug/g	**1.7**	-	<0.50	-	-	<0.50	<0.50	-	-	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
Methyl tert-butyl ether (MTBE)	ug/g	**0.75**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Monochlorobenzene	ug/g	**2.4**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Styrene	ug/g	**0.7**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Tetrachloroethylene	ug/g	**0.28**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Trichloroethylene	ug/g	**0.061**	-	<0.01	-	-	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01
Trichlorofluoromethane	ug/g	**4**	-	<0.05	-	-	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05
Vinyl Chloride	ug/g	**0.02**	-	<0.02	-	-	<0.02	<0.02	-	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02

Notes	
Table 3 SCS RPI	Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (Caorse Soil)
Result	Exceeds Table 3 SCS RPI
mbgs	meters below ground surface
mS/cm	milliSiemens per centimetre
NV	No value
<	Value is less than the detection limit
-	Parameter was not tested
Underline	Duplicate Sample

Table 3: Maximum Concentrations in Soil

Analyte Name	Units	Table 3 SCS RPI	Maximum Concentration (ug/g)	Sample Location	Sample I.D.	Sample Depth (mbgs)
PHCs & BTEX						
Benzene	ug/g	**0.21**	NV	NA	NA	NA
Ethylbenzene	ug/g	**2**	NV	NA	NA	NA
F1 (C6 to C10)	ug/g	**55**	NV	NA	NA	NA
F1-BTEX	ug/g	**55**	NV	NA	NA	NA
F2 (C10 to C16)	ug/g	**98**	2	MW24-2	MW24-2 SS1	0.0-0.76
F3 (C16 to C34)	ug/g	**300**	200	BH24-1	BH24-1 SS1	0.0-0.76
F4 (C34 to C50)	ug/g	**2800**	120	MW24-2	MW24-12 SS7	4.5-5.3
Toluene	ug/g	**2.3**	NV	NA	NA	NA
Xylene (Total)	ug/g	**3.1**	NV	NA	NA	NA
Xylene, m/p-	ug/g	**NV**	NV	NA	NA	NA
Xylene, o-	ug/g	**NV**	NV	NA	NA	NA
M&Is						
Antimony	ug/g	**7.5**	2	MW24-1	MW24-1 SS2	0.76-1.5
Arsenic	ug/g	**18**	5	MW24-2	MW24-2 SS1	0.0-0.76
Barium	ug/g	**390**	142	MW24-2	MW24-2 SS1	0.0-0.76
Beryllium	ug/g	**4**	NV	NA	NA	NA
Boron	ug/g	**120**	7	MW24-2	MW24-2 SS1	0.0-0.76
Boron (Hot Water Soluble)	ug/g	**1.5**	NV	NA	NA	NA
Cadmium	ug/g	**1.2**	0.6	MW24-2	MW24-2 SS1	0.0-0.76
Chromium	ug/g	**160**	32	MW24-2	MW24-2 SS7	4.5-5.3
Cobalt	ug/g	**22**	10	MW24-2	MW24-2 SS7	4.5-5.3
Copper	ug/g	**140**	25	MW24-2	MW24-2 SS1 MW24-2 SS7	0.0-0.76 4.5-5.3
Cyanide (Free)	ug/g	**0.051**	NV	NA	NA	NA
Electrical Conductivity (EC)	mS/cm	**0.7**	0.41	MW24-1	MW24-1 SS2	0.76-1.5
Hexavalent Chromium	ug/g	**8**	0.5	BH24-2	BH24-2 SS7	4.6-5.3
Lead	ug/g	**120**	134	MW24-2	MW24-2 SS1	0.0-0.76
Mercury	ug/g	**0.27**	0.1	MW24-2	MW24-2 SS1	0.0-0.76
Molybdenum	ug/g	**6.9**	4	BH24-2	BH24-2 SS7	4.6-5.3
Nickel	ug/g	**100**	24	MW24-2	MW24-2 SS7	4.5-5.3
pH-CaCl2	pH Unit	**NV**	7.86	BH24-1	BH24-1 SS1	0.0-0.76
Selenium	ug/g	**2.4**	0.9	MW24-1 MW24-2	MW24-1 SS2 MW24-2 SS4	0.76-1.5 2.3-3.0
Silver	ug/g	**20**	NV	NA	NA	NA
Sodium Absorption Ratio (SAR)	SAR Unit	**5**	3.29	BH24-2	BH24-2 SS7	4.6-5.3
Thallium	ug/g	**1**	NV	NA	NA	NA
Uranium	ug/g	**23**	3.3	BH24-2	BH24-2 SS3	1.5-2.3
Vanadium	ug/g	**86**	31	BH24-2	BH24-2 SS3	1.5-2.3
Zinc	ug/g	**340**	132	MW24-2	MW24-2 SS1	0.0-0.76
Moisture (%)	%	**NV**	7.5	MW24-1	MW24-1 SS10	5.5-6.1
PAHs						
1 + 2-Methylnaphthalene	ug/g	**0.99**	NV	NA	NA	NA
Acenaphthene	ug/g	**7.9**	NV	NA	NA	NA
Acenaphthylene	ug/g	**0.15**	NV	NA	NA	NA
Anthracene	ug/g	**0.67**	NV	NA	NA	NA
Benzo(a)anthracene	ug/g	**0.5**	0.08	BH24-1	BH24-1 SS1	0.0-0.76
Benzo(a)pyrene	ug/g	**0.3**	0.12	BH24-1	BH24-1 SS1	0.0-0.76
Benzo(b)fluoranthene	ug/g	**0.78**	0.11	BH24-1	BH24-1 SS1	0.0-0.76
Benzo(g,h,i)perylene	ug/g	**6.6**	NV	NA	NA	NA
Benzo(k)fluoranthene	ug/g	**0.78**	0.08	BH24-1	BH24-1 SS1	0.0-0.76
Chrysene	ug/g	**7**	0.11	BH24-1	BH24-1 SS1	0.0-0.76
Dibenzo(a,h)anthracene	ug/g	**0.1**	NV	NA	NA	NA
Fluoranthene	ug/g	**0.69**	0.21	BH24-1	BH24-1 SS1	0.0-0.76
Fluorene	ug/g	**62**	NV	NA	NA	NA
Indeno(1,2,3-c,d)pyrene	ug/g	**0.38**	0.05	BH24-1	BH24-1 SS1	0.0-0.76
Methylnapthalene, 1-	ug/g	**0.99**	NV	NA	NA	NA
Methylnapthalene, 2-	ug/g	**0.99**	NV	NA	NA	NA
Naphthalene	ug/g	**0.6**	NV	NA	NA	NA
Phenanthrene	ug/g	**6.2**	0.06	BH24-1	BH24-1 SS1	0.0-0.76
Pyrene	ug/g	**78**	0.19	BH24-1	BH24-1 SS1	0.0-0.76
VOCs						
1,1,1,2-Tetrachloroethane	ug/g	**0.058**	NV	NA	NA	NA
1,1,1-Trichloroethane	ug/g	**0.38**	NV	NA	NA	NA
1,1,2,2-Tetrachloroethane	ug/g	**0.05**	NV	NA	NA	NA
1,1,2-Trichloroethane	ug/g	**0.05**	NV	NA	NA	NA
1,1-Dichloroethane	ug/g	**3.5**	NV	NA	NA	NA
1,1-Dichloroethene	ug/g	**0.05**	NV	NA	NA	NA
1,2-Dichlorobenzene	ug/g	**3.4**	NV	NA	NA	NA
1,2-Dichloroethane	ug/g	**0.05**	NV	NA	NA	NA
1,2-Dichloropropane	ug/g	**0.05**	NV	NA	NA	NA
1,3-Dichlorobenzene	ug/g	**4.8**	NV	NA	NA	NA
1,3-Dichloropropene, cis + trans	ug/g	**0.05**	NV	NA	NA	NA
1,4-Dichlorobenzene	ug/g	**0.083**	NV	NA	NA	NA
Acetone	ug/g	**16**	NV	NA	NA	NA
Bromodichloromethane	ug/g	**13**	NV	NA	NA	NA
Bromoform	ug/g	**0.27**	NV	NA	NA	NA
Bromomethane	ug/g	**0.05**	NV	NA	NA	NA
Carbon Tetrachloride	ug/g	**0.05**	NV	NA	NA	NA
Chloroform	ug/g	**0.05**	NV	NA	NA	NA
cis-1,2-Dichloroethene	ug/g	**3.4**	NV	NA	NA	NA
Dibromochloromethane	ug/g	**9.4**	NV	NA	NA	NA
Dichlorodifluoromethane	ug/g	**16**	NV	NA	NA	NA
Dichloroethylene, trans-1,2-	ug/g	**0.084**	NV	NA	NA	NA
Dichloromethane	ug/g	**0.1**	NV	NA	NA	NA
Ethylene Dibromide	ug/g	**0.05**	NV	NA	NA	NA
Hexane	ug/g	**2.8**	NV	NA	NA	NA
Methyl ethyl ketone (MEK)	ug/g	**16**	NV	NA	NA	NA
Methyl isobutyl ketone (MIBK)	ug/g	**1.7**	NV	NA	NA	NA
Methyl tert-butyl ether (MTBE)	ug/g	**0.75**	NV	NA	NA	NA
Monochlorobenzene	ug/g	**2.4**	NV	NA	NA	NA
Styrene	ug/g	**0.7**	NV	NA	NA	NA
Tetrachloroethylene	ug/g	**0.28**	NV	NA	NA	NA
Trichloroethylene	ug/g	**0.061**	NV	NA	NA	NA
Trichlorofluoromethane	ug/g	**4**	NV	NA	NA	NA
Vinyl Chloride	ug/g	**0.02**	NV	NA	NA	NA

Notes	
Table 3 SCSs RPI	Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (Caorse Soil)
mbgs	meters below ground surface
NV	No Value
NA	Not Applicable

Table 4: Groundwater Analytical Results - Compared to Table 3 SCS

		Sample Location	MW20-13	MW20-113	MW24-1	MW24-2		
		Laboratory I.D.	1737660	1737661	1737662	1737663	1737664	1737665
		Sample I.D.	MW20-13	MW20-113	MW24-1	MW24-2	T. Blank	F. Blank
		Sample Collection Date (YYYY-MM-DD)	2024-07-25	2024-07-25	2024-07-25	2024-07-25	2024-07-25	2024-07-25
		Screen Interval (mbgs)	4.42 -7.53	4.42 -7.53	2.79 - 5.79	3.32 - 6.32		
Analyte Name	**Units**	**Table 3 SCS**						
PHCs & BTEX								
Benzene	ug/L	**44**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	ug/L	**2300**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F1 (C6 to C10)	ug/L	**750**	<20	<20	<20	<20	-	-
F1-BTEX	ug/L	**750**	<20	<20	<20	<20	-	-
F2 (C10 to C16)	ug/L	**150**	<20	<20	<20	<20	-	-
F3 (C16 to C34)	ug/L	**500**	<50	<50	<50	<50	-	-
F4 (C34 to C50)	ug/L	**500**	<50	<50	<50	<50	-	-
Toluene	ug/L	**18000**	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Xylene (Total)	ug/L	**4200**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene, m/p-	ug/L	**NV**	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Xylene, o-	ug/L	**NV**	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
M&Is								
Antimony	ug/L	**20000**	<1	<1	<0.5	<1	-	-
Arsenic	ug/L	**1900**	<2	<2	<1	<1	-	-
Barium	ug/L	**29000**	410	420	160	410	-	-
Beryllium	ug/L	**67**	<1	<1	<0.5	<0.5	-	-
Boron	ug/L	**45000**	40	40	40	40	-	-
Cadmium	ug/L	**2.7**	<0.2	<0.2	<0.1	<0.2	-	-
Chloride	ug/L	**2300000**	**2430000**	**2540000**	1070000	1780000	-	-
Chromium	ug/L	**810**	<2	<2	<1	<1	-	-
Cobalt	ug/L	**66**	<0.4	<0.4	0.4	2.6	-	-
Copper	ug/L	**87**	<2	<2	2	1	-	-
Cyanide (Free)	ug/L	**66**	<5	<5	<5	<5	-	-
Conductivity	uS/cm	**NA**	8240	8300	3970	6270	-	-
Hexavalent Chromium	ug/L	**140**	<1	<1	<1	<1	-	-
Lead	ug/L	**25**	<2	<2	<1	<1	-	-
Mercury	ug/L	**0.29**	<0.2	<0.2	<0.2	<0.1	-	-
Molybdenum	ug/L	**9200**	<10	<10	5	9	-	-
Nickel	ug/L	**490**	<10	<10	<5	<5	-	-
pH	pH Unit	**NV**	7.7	7.69	7.91	7.86	-	-
Selenium	ug/L	**63**	<2	<2	<1	<1	-	-
Silver	ug/L	**1.5**	0.7	0.6	<0.1	<0.2	-	-
Sodium	ug/L	**2300000**	1320000	1340000	570000	974000	-	-
Thallium	ug/L	**510**	<0.2	<0.2	0.6	0.2	-	-
Uranium	ug/L	**420**	3	3	4	4	-	-
Vanadium	ug/L	**250**	<2	<2	<1	<1	-	-
Zinc	ug/L	**1100**	<20	<20	<10	<10	-	-
PAHs								
1 + 2-Methylnaphthalene	ug/L	**1800**	<0.1	<0.1	<0.1	<0.1	-	-
Acenaphthene	ug/L	**600**	<0.1	<0.1	<0.1	<0.1	-	-
Acenaphthylene	ug/L	**1.8**	<0.1	<0.1	<0.1	<0.1	-	-
Anthracene	ug/L	**2.4**	<0.1	<0.1	<0.1	<0.1	-	-
Benzo(a)anthracene	ug/L	**4.7**	<0.1	<0.1	<0.1	<0.1	-	-
Benzo(a)pyrene	ug/L	**0.81**	<0.01	<0.01	<0.01	<0.01	-	-
Benzo(b)fluoranthene	ug/L	**0.75**	<0.05	<0.05	<0.05	<0.05	-	-
Benzo(g,h,i)perylene	ug/L	**0.2**	<0.1	<0.1	<0.1	<0.1	-	-
Benzo(k)fluoranthene	ug/L	**0.4**	<0.05	<0.05	<0.05	<0.05	-	-
Chrysene	ug/L	**1**	<0.05	<0.05	<0.05	<0.05	-	-
Dibenzo(a,h)anthracene	ug/L	**0.52**	<0.1	<0.1	<0.1	<0.1	-	-
Fluoranthene	ug/L	**130**	<0.1	<0.1	<0.1	<0.1	-	-
Fluorene	ug/L	**400**	<0.1	<0.1	<0.1	<0.1	-	-
Indeno(1,2,3-c,d)pyrene	ug/L	**0.2**	<0.1	<0.1	<0.1	<0.1	-	-
Methylnapthalene, 1-	ug/L	**1800**	<0.1	<0.1	<0.1	<0.1	-	-
Methylnapthalene, 2-	ug/L	**1800**	<0.1	<0.1	<0.1	<0.1	-	-
Naphthalene	ug/L	**1400**	<0.1	<0.1	<0.1	<0.1	-	-
Phenanthrene	ug/L	**580**	<0.1	<0.1	<0.1	<0.1	-	-
Pyrene	ug/L	**68**	<0.1	<0.1	<0.1	<0.1	-	-
VOCs								
1,1,1,2-Tetrachloroethane	ug/L	**3.3**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	**640**	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,1,2,2-Tetrachloroethane	ug/L	**3.2**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	**4.7**	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,1-Dichloroethane	ug/L	**320**	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,1-Dichloroethene	ug/L	**1.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	ug/L	**4600**	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,2-Dichloroethane	ug/L	**1.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	**16**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	ug/L	**9600**	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
1,3-Dichloropropene, cis + trans	ug/L	**5.2**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	ug/L	**8**	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Acetone	ug/L	**130000**	<5	<5	<5	<5	<5	<5
Bromodichloromethane	ug/L	**85000**	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Bromoform	ug/L	**380**	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Bromomethane	ug/L	**5.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	ug/L	**0.79**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chloroform	ug/L	**2.4**	**16**	**15.9**	**6.4**	**6.4**	<0.5	<0.5
cis-1,2-Dichloroethene	ug/L	**1.6**	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Dibromochloromethane	ug/L	**82000**	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dichlorodifluoromethane	ug/L	**4400**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichloroethylene, trans-1,2-	ug/L	**1.6**	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Dichloromethane	ug/L	**610**	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Ethylene Dibromide	ug/L	**0.25**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Hexane	ug/L	**51**	<5	<5	<5	<5	<5	<5
Methyl ethyl ketone (MEK)	ug/L	**470000**	<2	<2	<2	<2	<2	<2
Methyl isobutyl ketone (MIBK)	ug/L	**140000**	<5	<5	<5	<5	<5	<5
Methyl tert-butyl ether (MTBE)	ug/L	**190**	<2	<2	<2	<2	<2	<2
Monochlorobenzene	ug/L	**630**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	ug/L	**1300**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethylene	ug/L	**1.6**	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Trichloroethylene	ug/L	**1.6**	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Trichlorofluoromethane	ug/L	**2500**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl Chloride	ug/L	**0.5**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes	
Table 3 SCS	Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for All Types of Property Use (Caorse Soil)
Result	Exceeds Table 3 SCS
mbgs	meters below ground surface
NV	No value
<	Value is less than the detection limit
-	Parameter was not tested
Underline	Duplicate Sample

Table 5: Maximum Concentrations in Groundwater

Analyte Name	Units	Table 3 SCS	Maximum Concentration (µg/L)	Sample Location	Screen Interval (mbgs)
PHCs & BTEX					
Benzene	ug/L	**44**	NV	NA	NA
Ethylbenzene	ug/L	**2300**	NV	NA	NA
F1 (C6 to C10)	ug/L	**750**	NV	NA	NA
F1-BTEX	ug/L	**750**	NV	NA	NA
F2 (C10 to C16)	ug/L	**150**	NV	NA	NA
F3 (C16 to C34)	ug/L	**500**	NV	NA	NA
F4 (C34 to C50)	ug/L	**500**	NV	NA	NA
Toluene	ug/L	**18000**	NV	NA	NA
Xylene (Total)	ug/L	**4200**	NV	NA	NA
Xylene, m/p-	ug/L	**NV**	NV	NA	NA
Xylene, o-	ug/L	**NV**	NV	NA	NA
M&Is					
Antimony	ug/L	**20000**	NV	NA	NA
Arsenic	ug/L	**1900**	NV	NA	NA
Barium	ug/L	**29000**	420	MW20-13	4.42 -7.53
Beryllium	ug/L	**67**	NV	NA	NA
Boron	ug/L	**45000**	40	MW20-13 MW24-1 MW24-2	4.42 -7.53 2.79 - 5.79 3.32 - 6.32
Boron (Hot Water Soluble)		**NA**	NV	NA	NA
Cadmium	ug/L	**2.7**	NV	NA	NA
Chloride	ug/L	**2300000**	2540000	MW20-13	4.42 -7.53
Chromium	ug/L	**810**	NV	NA	NA
Cobalt	ug/L	**66**	2.6	MW24-2	3.32 - 6.32
Copper	ug/L	**87**	2	MW24-1	2.79 - 5.79
Cyanide (Free)	ug/L	**66**	NV	NA	NA
Conductivity	uS/cm	**NA**	8300	MW20-13	4.42 -7.53
Hexavalent Chromium	ug/L	**140**	NV	NA	NA
Lead	ug/L	**25**	NV	NA	NA
Mercury	ug/L	**0.29**	NV	NA	NA
Molybdenum	ug/L	**9200**	9	MW24-2	3.32 - 6.32
Nickel	ug/L	**490**	NV	NA	NA
pH	pH Unit	**NV**	7.91	MW24-1	2.79 - 5.79
Selenium	ug/L	**63**	NV	NA	NA
Silver	ug/L	**1.5**	0.7	MW20-13	4.42 -7.53
Sodium	ug/L	**2300000**	1340000	MW20-13	4.42 -7.53
Thallium	ug/L	**510**	0.6	MW24-1	2.79 - 5.79
Uranium	ug/L	**420**	4	MW24-2	3.32 - 6.32
Vanadium	ug/L	**250**	NV	NA	NA
Zinc	ug/L	**1100**	NV	NA	NA
PAHs					
1 + 2-Methylnaphthalene	ug/L	**1800**	NV	NA	NA
Acenaphthene	ug/L	**600**	NV	NA	NA
Acenaphthylene	ug/L	**1.8**	NV	NA	NA
Anthracene	ug/L	**2.4**	NV	NA	NA
Benzo(a)anthracene	ug/L	**4.7**	NV	NA	NA
Benzo(a)pyrene	ug/L	**0.81**	NV	NA	NA
Benzo(b)fluoranthene	ug/L	**0.75**	NV	NA	NA
Benzo(g,h,i)perylene	ug/L	**0.2**	NV	NA	NA
Benzo(k)fluoranthene	ug/L	**0.4**	NV	NA	NA
Chrysene	ug/L	**1**	NV	NA	NA
Dibenzo(a,h)anthracene	ug/L	**0.52**	NV	NA	NA
Fluoranthene	ug/L	**130**	NV	NA	NA
Fluorene	ug/L	**400**	NV	NA	NA
Indeno(1,2,3-c,d)pyrene	ug/L	**0.2**	NV	NA	NA
Methylnapthalene, 1-	ug/L	**1800**	NV	NA	NA
Methylnapthalene, 2-	ug/L	**1800**	NV	NA	NA
Naphthalene	ug/L	**1400**	NV	NA	NA
Phenanthrene	ug/L	**580**	NV	NA	NA
Pyrene	ug/L	**68**	NV	NA	NA
VOCs					
1,1,1,2-Tetrachloroethane	ug/L	**3.3**	NV	NA	NA
1,1,1-Trichloroethane	ug/L	**640**	NV	NA	NA
1,1,2,2-Tetrachloroethane	ug/L	**3.2**	NV	NA	NA
1,1,2-Trichloroethane	ug/L	**4.7**	NV	NA	NA
1,1-Dichloroethane	ug/L	**320**	NV	NA	NA
1,1-Dichloroethene	ug/L	**1.6**	NV	NA	NA
1,2-Dichlorobenzene	ug/L	**4600**	NV	NA	NA
1,2-Dichloroethane	ug/L	**1.6**	NV	NA	NA
1,2-Dichloropropane	ug/L	**16**	NV	NA	NA
1,3-Dichlorobenzene	ug/L	**9600**	NV	NA	NA
1,3-Dichloropropene, cis + trans	ug/L	**5.2**	NV	NA	NA
1,4-Dichlorobenzene	ug/L	**8**	NV	NA	NA
Acetone	ug/L	**130000**	NV	NA	NA
Bromodichloromethane	ug/L	**85000**	NV	NA	NA
Bromoform	ug/L	**380**	NV	NA	NA
Bromomethane	ug/L	**5.6**	NV	NA	NA
Carbon Tetrachloride	ug/L	**0.79**	NV	NA	NA
Chloroform	ug/L	**2.4**	16	MW20-13	4.42 -7.53
cis-1,2-Dichloroethene	ug/L	**1.6**	NV	NA	NA
Dibromochloromethane	ug/L	**82000**	NV	NA	NA
Dichlorodifluoromethane	ug/L	**4400**	NV	NA	NA
Dichloroethylene, trans-1,2-	ug/L	**1.6**	NV	NA	NA
Dichloromethane	ug/L	**610**	NV	NA	NA
Ethylene Dibromide	ug/L	**0.25**	NV	NA	NA
Hexane	ug/L	**51**	NV	NA	NA
Methyl ethyl ketone (MEK)	ug/L	**470000**	NV	NA	NA
Methyl isobutyl ketone (MIBK)	ug/L	**140000**	NV	NA	NA
Methyl tert-butyl ether (MTBE)	ug/L	**190**	NV	NA	NA
Monochlorobenzene	ug/L	**630**	NV	NA	NA
Styrene	ug/L	**1300**	NV	NA	NA
Tetrachloroethylene	ug/L	**1.6**	NV	NA	NA
Trichloroethylene	ug/L	**1.6**	NV	NA	NA
Trichlorofluoromethane	ug/L	**2500**	NV	NA	NA
Vinyl Chloride	ug/L	**0.5**	NV	NA	NA

Notes	
Table 3 SCS	Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for All Types of Property Use (Coarse Soil)
mbgs	meters below ground surface
<	value is less than the detection limit
-	parameter was not tested

Table 6: Soil Duplicate Samples RPD Values

			Laboratory I.D.	1736264	1736273	RPD	1736265	1736270	RPD	1736266	1736271	RPD	1736269	1736272	RPD
			Sample I.D.	BH24-2 SS3	BH24-12 SS3		BH24-2 SS7	BH24-12 SS7		BH24-3 SS2	BH24-13 SS2		MW24-2 SS7	MW24-12 SS7	
			Sample Collection Date (YYYY-MM-DD)	2024-07-16	2024-07-16		2024-07-16	2024-07-16		2024-07-16	2024-07-16		2024-07-16	2024-07-16	
			Sample Depth (mbgs)	1.5-2.3	1.5-2.3		4.6-5.3	4.6-5.3		0.76-1.5	0.76-1.5		4.5-5.3	4.5-5.3	
Analyte Name	**Units**	**MRL**	**Alert Limits**												
PHCs & BTEX															
Benzene	ug/g	0.0068	100%	-	-	NV	<0.0068	<0.0068	NV	<0.0068	-	NV	<0.0068	<0.0068	NV
Ethylbenzene	ug/g	0.018	100%	-	-	NV	<0.018	<0.018	NV	<0.018	-	NV	<0.018	<0.018	NV
F1 (C6 to C10)	ug/g	10	60%	-	-	NV	<10	<10	NV	<10	-	NV	<10	<10	NV
F1-BTEX	ug/g	10	60%	-	-	NV	<10	<10	NV	<10	-	NV	<10	<10	NV
F2 (C10 to C16)	ug/g	2	60%	-	-	NV	<2	<2	NV	<2	-	NV	<2	<2	NV
F3 (C16 to C34)	ug/g	20	60%	-	-	NV	50	<20	NV	<20	-	NV	40	60	NV
F4 (C34 to C50)	ug/g	20	60%	-	-	NV	110	30	NV	<20	-	NV	80	120	NV
Toluene	ug/g	0.08	100%	-	-	NV	<0.08	<0.08	NV	<0.08	-	NV	<0.08	<0.08	NV
Xylene (Total)	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	<0.05	-	NV	<0.05	<0.05	NV
Xylene, m/p-	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	<0.05	-	NV	<0.05	<0.05	NV
Xylene, o-	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	<0.05	-	NV	<0.05	<0.05	NV
M&Is															
Antimony	ug/g	1	60%	<1	-	NV	<1	<1	NV	<1	<1	NV	<1	-	NV
Arsenic	ug/g	1	60%	4	-	NV	2	2	NV	3	3	NV	4	-	NV
Barium	ug/g	1	60%	54	-	NV	66	36	59%	93	69	30%	72	-	NV
Beryllium	ug/g	1	60%	<1	-	NV	<1	<1	NV	<1	<1	NV	<1	-	NV
Boron	ug/g	5	60%	<5	-	NV	5	<5	NV	<5	5	NV	<5	-	NV
Boron (Hot Water Soluble)	ug/g	0.25	80%	<0.5	-	NV	<0.5	<0.5	NV	<0.5	<0.5	NV	<0.5	-	NV
Cadmium	ug/g	0.4	60%	<0.4	-	NV	<0.4	<0.4	NV	<0.4	<0.4	NV	<0.4	-	NV
Chromium	ug/g	1	60%	24	-	NV	30	20	40%	28	17	49%	32	-	NV
Cobalt	ug/g	1	60%	9	-	NV	7	6	15%	6	5	NV	10	-	NV
Copper	ug/g	1	60%	21	-	NV	18	11	48%	20	13	42%	25	-	NV
Cyanide (Free)	ug/g	0.005	70%	<0.005	-	NV	<0.005	<0.005	NV	<0.005	<0.005	NV	<0.005	-	NV
Electrical Conductivity (EC)	mS/cm	0.05	20%	0.12	-	NV	0.18	0.19	NV	0.17	0.17	NV	0.18	-	NV
Hexavalent Chromium	ug/g	0.2	70%	0.3	-	NV	0.5	0.4	NV	<0.2	<0.2	NV	0.4	-	NV
Lead	ug/g	1	60%	20	-	NV	9	5	NV	26	16	48%	12	-	NV
Mercury	ug/g	0.1	60%	<0.1	-	NV	<0.1	<0.1	NV	<0.1	<0.1	NV	<0.1	-	NV
Molybdenum	ug/g	1	60%	1	-	NV	4	2	NV	2	1	NV	3	-	NV
Nickel	ug/g	1	60%	15	-	NV	18	12	40%	21	15	33%	24	-	NV
pH-CaCl2	pH Unit	2	60%	7.78	-	NV	7.82	7.83	NV	7.82	7.81	NV	7.81	-	NV
Selenium	ug/g	0.5	60%	<0.5	-	NV	<0.5	<0.5	NV	<0.5	<0.5	NV	<0.5	-	NV
Silver	ug/g	0.2	60%	<0.2	-	NV	<0.2	<0.2	NV	<0.2	<0.2	NV	<0.2	-	NV
Sodium Absorption Ratio (SAR)	SAR Unit	0.01	60%	0.49	-	NV	3.29	1.85	56%	0.3	0.26	14%	1.56	-	NV
Thallium	ug/g	1	60%	<1	-	NV	<1	<1	NV	<1	<1	NV	<1	-	NV
Uranium	ug/g	0.5	60%	3.3	-	NV	0.6	0.5	NV	1.2	0.8	NV	0.8	-	NV
Vanadium	ug/g	2	60%	31	-	NV	21	22	5%	20	18	11%	29	-	NV
Zinc	ug/g	2	60%	32	-	NV	24	18	29%	41	29	34%	31	-	NV
PAHs															
1 + 2-Methylnaphthalene	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Acenaphthene	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Acenaphthylene	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Anthracene	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Benzo(a)anthracene	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Benzo(a)pyrene	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Benzo(b)fluoranthene	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Benzo(g,h,i)perylene	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Benzo(k)fluoranthene	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Dibenzo(a,h)anthracene	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Fluoranthene	ug/g	0.05	80%	0.08	0.07	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Fluorene	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Indeno(1,2,3-c,d)pyrene	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Methylnapthalene, 1-	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Methylnapthalene, 2-	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
Naphthalene	ug/g	0.013	80%	<0.013	<0.013	NV	-	-	NV	<0.013	-	NV	<0.013	<0.013	NV
Phenanthrene	ug/g	0.05	80%	<0.05	<0.05	NV	-	-	NV	<0.05	-	NV	0.05	<0.05	NV
Pyrene	ug/g	0.05	80%	0.07	0.06	NV	-	-	NV	<0.05	-	NV	<0.05	<0.05	NV
VOCs															
1,1,1,2-Tetrachloroethane	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
1,1,1-Trichloroethane	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
1,1,2,2-Tetrachloroethane	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
1,1,2-Trichloroethane	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
1,1-Dichloroethane	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
1,1-Dichloroethene	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
1,2-Dichlorobenzene	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
1,2-Dichloroethane	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
1,2-Dichloropropane	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
1,3-Dichlorobenzene	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
1,3-Dichloropropene, cis + trans	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
1,4-Dichlorobenzene	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Acetone	ug/g	0.5	100%	-	-	NV	<0.50	<0.50	NV	-	-	NV	<0.50	<0.50	NV
Bromodichloromethane	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Bromoform	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Bromomethane	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Carbon Tetrachloride	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Chloroform	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
cis-1,2-Dichloroethene	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Dibromochloromethane	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Dichlorodifluoromethane	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Dichloroethylene, trans-1,2-	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Dichloromethane	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Ethylene Dibromide	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Hexane	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Methyl ethyl ketone (MEK)	ug/g	0.5	100%	-	-	NV	<0.50	<0.50	NV	-	-	NV	<0.50	<0.50	NV
Methyl isobutyl ketone (MIBK)	ug/g	0.5	100%	-	-	NV	<0.50	<0.50	NV	-	-	NV	<0.50	<0.50	NV
Methyl tert-butyl ether (MTBE)	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Monochlorobenzene	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Styrene	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Tetrachloroethylene	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Trichloroethylene	ug/g	0.01	100%	-	-	NV	<0.01	<0.01	NV	-	-	NV	<0.01	<0.01	NV
Trichlorofluoromethane	ug/g	0.05	100%	-	-	NV	<0.05	<0.05	NV	-	-	NV	<0.05	<0.05	NV
Vinyl Chloride	ug/g	0.02	100%	-	-	NV	<0.02	<0.02	NV	-	-	NV	<0.02	<0.02	NV

Notes	
Result	Exceeds Alert Limits
mbgs	meters below ground surface
MRL	Method Reporting Limit
NV	No Value
RPD	Relative Percent Difference
<	Value is less than the detection limit
-	Parameter was not tested

Table 7: Groundwater Duplicate Samples RPD Values

			Laboratory I.D.	1737660	1737661	RPD
			Sample I.D.	MW20-13	MW20-113	
			Sample Collection Date (YYYY-MM-DD)	2024-07-25	2024-07-25	
			Screen Interval (mbgs)	4.42 -7.53	4.42 -7.53	
Analyte Name	**Units**	**MRL**	**Alert Limits**			
PHCs & BTEX						
Benzene	ug/L	0.5	60%	<0.5	<0.5	NV
Ethylbenzene	ug/L	0.5	60%	<0.5	<0.5	NV
F1 (C6 to C10)	ug/L	20	60%	<20	<20	NV
F1-BTEX	ug/L	20	60%	<20	<20	NV
F2 (C10 to C16)	ug/L	20	60%	<20	<20	NV
F3 (C16 to C34)	ug/L	50	60%	<50	<50	NV
F4 (C34 to C50)	ug/L	50	60%	<50	<50	NV
Toluene	ug/L	0.4	60%	<0.4	<0.4	NV
Xylene (Total)	ug/L	0.5	60%	<0.5	<0.5	NV
Xylene, m/p-	ug/L	0.4	60%	<0.4	<0.4	NV
Xylene, o-	ug/L	0.4	60%	<0.4	<0.4	NV
M&Is						
Antimony	ug/L	1	40%	<1	<1	NV
Arsenic	ug/L	2	40%	<2	<2	NV
Barium	ug/L	10	40%	410	420	2%
Beryllium	ug/L	1	40%	<1	<1	NV
Boron	ug/L	20	40%	40	40	NV
Cadmium	ug/L	0.2	40%	<0.2	<0.2	NV
Chloride	ug/L	1000	40%	2430000	2540000	4%
Chromium	ug/L	2	40%	<2	<2	NV
Cobalt	ug/L	0.4	40%	<0.4	<0.4	NV
Copper	ug/L	2	40%	<2	<2	NV
Cyanide (Free)	ug/L	5	40%	<5	<5	NV
Conductivity	uS/cm	5	40%	8240	8300	1%
Hexavalent Chromium	ug/L	1	40%	<1	<1	NV
Lead	ug/L	2	40%	<2	<2	NV
Mercury	ug/L	0.2	40%	<0.2	<0.2	NV
Molybdenum	ug/L	10	40%	<10	<10	NV
Nickel	ug/L	10	40%	<10	<10	NV
pH	pH Unit	1	40%	7.7	7.69	0%
Selenium	ug/L	2	40%	<2	<2	NV
Silver	ug/L	0.2	40%	0.7	0.6	NV
Sodium	ug/L	1000	40%	1320000	1340000	2%
Thallium	ug/L	0.2	40%	<0.2	<0.2	NV
Uranium	ug/L	2	40%	3	3	NV
Vanadium	ug/L	2	40%	<2	<2	NV
Zinc	ug/L	20	40%	<20	<20	NV
PAHs						
1 + 2-Methylnaphthalene	ug/L	0.1	60%	<0.1	<0.1	NV
Acenaphthene	ug/L	0.1	60%	<0.1	<0.1	NV
Acenaphthylene	ug/L	0.1	60%	<0.1	<0.1	NV
Anthracene	ug/L	0.1	60%	<0.1	<0.1	NV
Benzo(a)anthracene	ug/L	0.1	60%	<0.1	<0.1	NV
Benzo(a)pyrene	ug/L	0.01	60%	<0.01	<0.01	NV
Benzo(b)fluoranthene	ug/L	0.05	60%	<0.05	<0.05	NV
Benzo(g,h,i)perylene	ug/L	0.1	60%	<0.1	<0.1	NV
Benzo(k)fluoranthene	ug/L	0.05	60%	<0.05	<0.05	NV
Chrysene	ug/L	0.05	60%	<0.05	<0.05	NV
Dibenzo(a,h)anthracene	ug/L	0.1	60%	<0.1	<0.1	NV
Fluoranthene	ug/L	0.1	60%	<0.1	<0.1	NV
Fluorene	ug/L	0.1	60%	<0.1	<0.1	NV
Indeno(1,2,3-c,d)pyrene	ug/L	0.1	60%	<0.1	<0.1	NV
Methylnapthalene, 1-	ug/L	0.1	60%	<0.1	<0.1	NV
Methylnapthalene, 2-	ug/L	0.1	60%	<0.1	<0.1	NV
Naphthalene	ug/L	0.1	60%	<0.1	<0.1	NV
Phenanthrene	ug/L	0.1	60%	<0.1	<0.1	NV
Pyrene	ug/L	0.1	60%	<0.1	<0.1	NV
VOCs						
1,1,1,2-Tetrachloroethane	ug/L	0.5	60%	<0.5	<0.5	NV
1,1,1-Trichloroethane	ug/L	0.4	60%	<0.4	<0.4	NV
1,1,2,2-Tetrachloroethane	ug/L	0.5	60%	<0.5	<0.5	NV
1,1,2-Trichloroethane	ug/L	0.4	60%	<0.4	<0.4	NV
1,1-Dichloroethane	ug/L	0.4	60%	<0.4	<0.4	NV
1,1-Dichloroethene	ug/L	0.5	60%	<0.5	<0.5	NV
1,2-Dichlorobenzene	ug/L	0.4	60%	<0.4	<0.4	NV
1,2-Dichloroethane	ug/L	0.5	60%	<0.5	<0.5	NV
1,2-Dichloropropane	ug/L	0.5	60%	<0.5	<0.5	NV
1,3-Dichlorobenzene	ug/L	0.4	60%	<0.4	<0.4	NV
1,3-Dichloropropene, cis + trans	ug/L	0.5	60%	<0.5	<0.5	NV
1,4-Dichlorobenzene	ug/L	0.4	60%	<0.4	<0.4	NV
Acetone	ug/L	5	60%	<5	<5	NV
Bromodichloromethane	ug/L	0.3	60%	<0.3	<0.3	NV
Bromoform	ug/L	0.4	60%	<0.4	<0.4	NV
Bromomethane	ug/L	0.5	60%	<0.5	<0.5	NV
Carbon Tetrachloride	ug/L	0.2	60%	<0.2	<0.2	NV
Chloroform	ug/L	0.5	60%	16	15.9	1%
cis-1,2-Dichloroethene	ug/L	0.4	60%	<0.4	<0.4	NV
Dibromochloromethane	ug/L	0.3	60%	<0.3	<0.3	NV
Dichlorodifluoromethane	ug/L	0.5	60%	<0.5	<0.5	NV
Dichloroethylene, trans-1,2-	ug/L	0.4	60%	<0.4	<0.4	NV
Dichloromethane	ug/L	4	60%	<4.0	<4.0	NV
Ethylene Dibromide	ug/L	0.2	60%	<0.2	<0.2	NV
Hexane	ug/L	5	60%	<5	<5	NV
Methyl ethyl ketone (MEK)	ug/L	2	60%	<2	<2	NV
Methyl isobutyl ketone (MIBK)	ug/L	5	60%	<5	<5	NV
Methyl tert-butyl ether (MTBE)	ug/L	2	60%	<2	<2	NV
Monochlorobenzene	ug/L	0.5	60%	<0.5	<0.5	NV
Styrene	ug/L	0.5	60%	<0.5	<0.5	NV
Tetrachloroethylene	ug/L	0.3	60%	<0.3	<0.3	NV
Trichloroethylene	ug/L	0.3	60%	<0.3	<0.3	NV
Trichlorofluoromethane	ug/L	0.5	60%	<0.5	<0.5	NV
Vinyl Chloride	ug/L	0.2	60%	<0.2	<0.2	NV

Notes	
Result	Exceeds Alert Limits
mbgs	meters below ground surface
MRL	Method Reporting Limit
NV	No Value
RPD	Relative Percent Difference
<	Value is less than the detection limit
-	Parameter was not tested

Figures

371970, 5034005

TOPOGRAPHIC PLAN OF SURVEY OF

LOT 45 AND PART OF LOTS 3, 4 & 5 REGISTERED PLAN 343 CITY OF OTTAWA

FARLEY, SMITH & DENIS SURVEYING LTD. 2021

Scale 1: 100

0 2.5 5 7.5 10 metres

Metric Note

Distances and coordinates on this plan are in metres and can be converted to feet by dividing by 0.3048.

Bearing Note

Bearings are astronomic and are referred to the easterly limit of Borthwick Avenue having a bearing of N 21° 34' 40" E as shown on Plan 5R-14833.

Elevation Notes

1. Elevations shown are geodetic and are referred to Geodetic Datum CGVD-1928 :1978. (See FSD File No. 629-19)
2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that it's relative elevation and description agrees with the information shown on this drawing.

Utility Notes

1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
2. Only visible surface utilities were located.
3. Underground utility data derived from City of Ottawa utility sheet reference: C-21-10, E33e-01, 6004p&p, 6078p&p01, 10166p&p2, 10166p&p3 & 12574p&p01.
4. Sanitary and storm sewer grades were derived from field measurements and inverts were compiled from: City of Ottawa Utility Sheets.
5. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.

Notes & Legend

Denotes

—□—	=	Survey Monument Planted
—■—	=	*Survey Monument Found*
SIB	=	Standard Iron Bar
SSIB	=	Short Standard Iron Bar
IB	=	Iron Bar
(Wit)	=	Witness
Meas	=	Measured
(P1)	=	Registered Plan 343
(P2)	=	Plan 5R-14833
(P3)	=	Plan by (1287) dated August 26, 1986 (Job No. 490/86)
(P4)	=	Plan by (AOG) dated July 4, 1994 (Job No. 0-354-94)
(P5)	=	Plan 5R-3853
MH–ST	=	Maintenance Hole (Storm)
MH–S	=	Maintenance Hole (Sanitary)
ST	=	Underground Storm Sewer
S	=	Underground Sanitary Sewer
W	=	Underground Water
P	=	Underground Power
G	=	Underground Gas
B	=	Underground Bell
TV	=	Underground Cable
OHW	=	Overhead Wires
UP	=	Utility Pole
AN	=	Anchor
CB	=	Catch Basin
GM	=	Gas Meter
B	=	Bollard
S	=	Sign
AC	=	Air Conditioner
M–W	=	Monitoring Well
Ø	=	Diameter
CLF	=	Chain Link Fence
CRW	=	Concrete Retaining Wall
SRW	=	Stone Retaining Wall
Inv.	=	Invert
Inv(City)	=	Invert From City of Ottawa Utility Sheets
T/G	=	Top of Grate
U/Eave	=	Underside of Eave
TpFdn	=	Top of Foundation
C/L	=	Centreline
+65.00	=	Location of Elevations
+65.00	=	Top of Concrete Curb/Retaining Wall Elevation
	=	Property Line

Deciduous Tree - The Symbol shown denotes location and trunk diameter only. Size of its' root system/overhead canopy may be smaller/larger than the symbol size depicted on this plan.

Coniferous Tree - The Symbol shown denotes location and trunk diameter only. Size of its' root system/overhead canopy may be smaller/larger than the symbol size depicted on this plan.

Surveyor's Certificate

I certify that :

1. This survey and plan are correct and in accordance with the Surveys Act, the Surveyors Act and the Regulations made under them.
2. The survey was completed on the 3rd day of June, 2021.

June 22/21
Date

Emad Alrefaai
Ontario Land Surveyor

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
V-13123

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

FARLEY, SMITH & DENIS SURVEYING LTD.

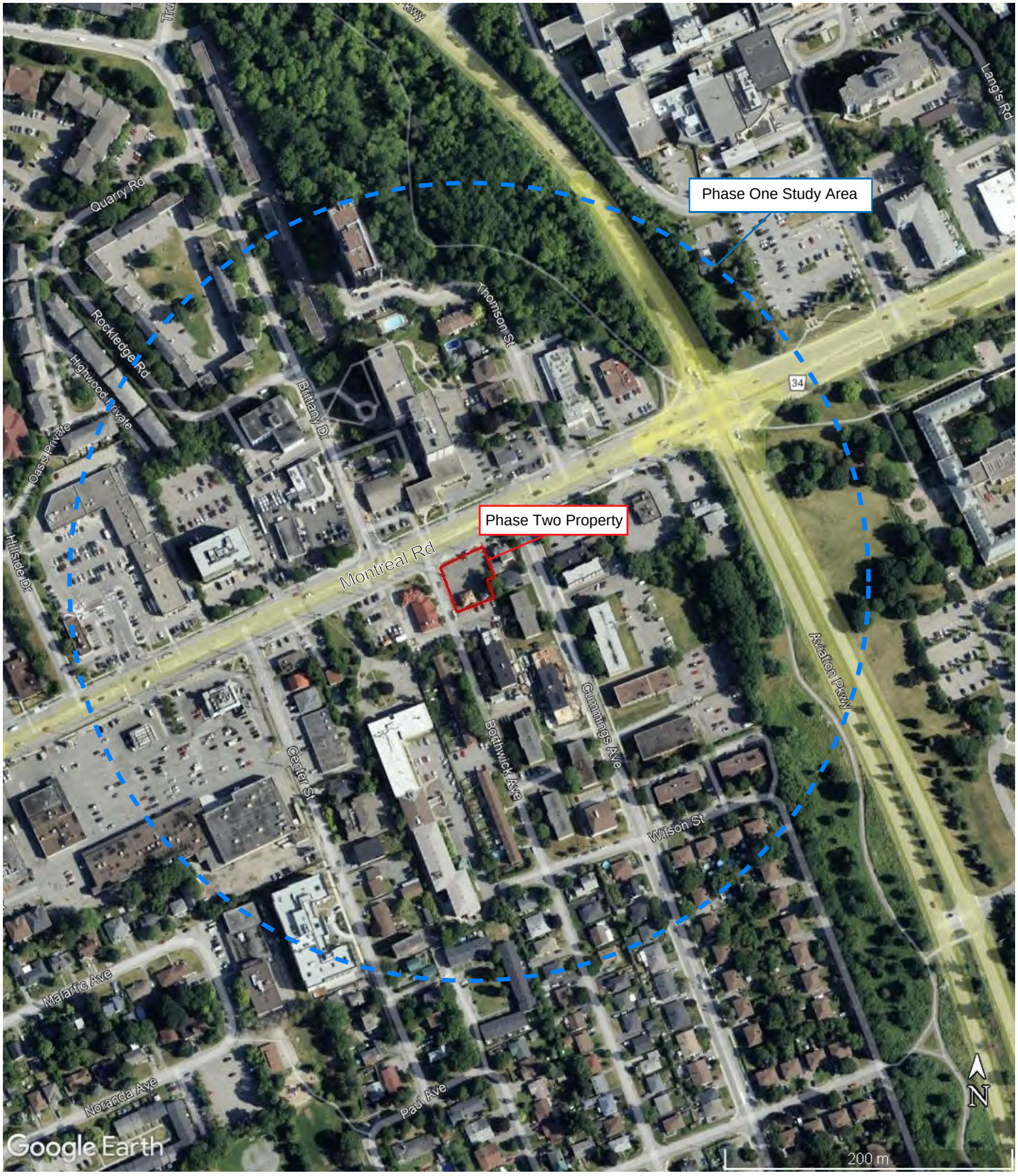
ONTARIO LAND SURVEYORS
CANADA LAND SURVEYORS

Unit 275, 30 COLONNADE ROAD, OTTAWA, ONTARIO K2E 7J6
TEL. (613) 727-8226 E-mail: fsdsurveys@bellnet.ca

FILE No. : 291-21

TOPO 24X36

J:\2021\291-21_630 Montreal Rd, Borthwick ave_topo\Final\291-21_630 Montreal Rd_Lt45 Pt3,4&5 RP343_T_F.dwg



Sources : Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community | Image © 2024 Google / © 2024 DigitalGlobe

ABS
850 Industrial Avenue
Ottawa, ONTARIO K1G 4H3
Tel. : 450 454-5644

Date : December 2024

Client : Group MB Canada Inc.

Projet: Phase Two Environmental Site Assessment

Drawn by: K. Si Moussa

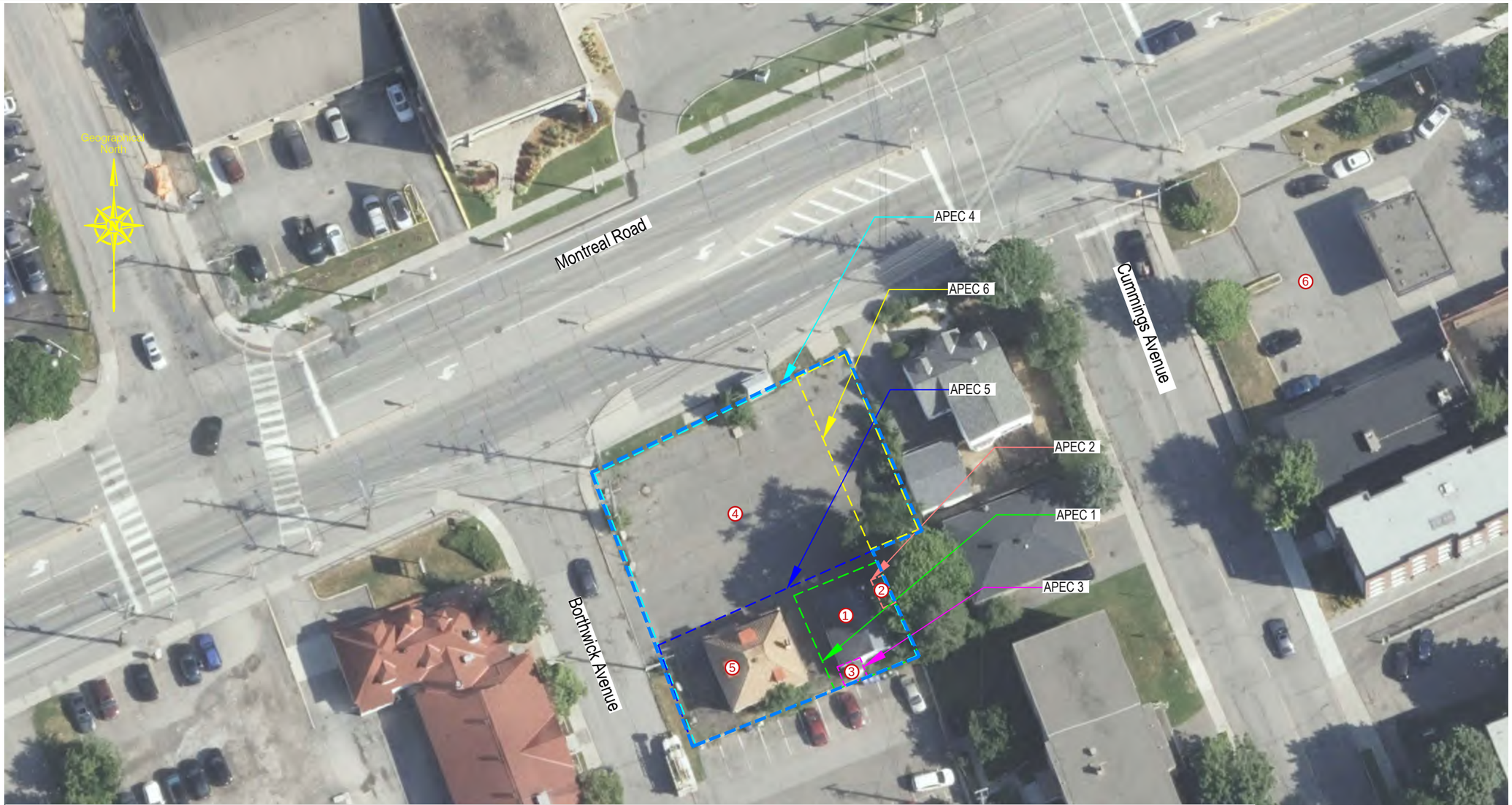
Reviewed by: A. Babakhani, Ph.D., E.I.T.

Title: Site Location Map

Location: 630 Montreal Road and 609 Borthwick Avenue
Ottawa, Ontario

Client code: GMBC100
F/N: EO-24-1324-00
N° Projet : Client
Drawing # Figure 1

Dernière sauvegarde: 2024-10-17 10:15 | Format : ANSI full bleed A (8.50 x 11.00 Inches)
Chemin: Q:\GMBC100\241324- 630, Montreal Road\EO\5 Deliverables\figures\CAD\EO2413240O.dwg



APEC Designation	Location of APEC on the Phase One Property	PCA Description*	Location of PCA	Contaminants of Potential Concern	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC-1	Southeast quadrant of the Phase One Property	Item 10 - Commercial Autobody Shops	On-Site Use of on-site building for commercial autobody shop	PHCs, VOCs	Soil and Groundwater
APEC-2	Southeast quadrant of the Phase One Property	Item 10 - Commercial Autobody Shops	On-Site Former waste-oil tank associated with autobody shop use	Metals, PAHs, PHCs, VOCs	Soil and Groundwater
APEC-3	Southeast quadrant of the Phase One Property	Item 10 - Commercial Autobody Shops	On-Site Former oil/water separator associated with autobody shop use	Metals, PAHs, PHCs, VOCs	Soil and Groundwater
APEC-4	Entire Phase One Property	Item 30 - Importation of Fill Material of Unknown Quality	On-Site The placement of fill of unknown quality in areas of former buildings to restore grade	Metals, PAHs	Soil
APEC-5	South portion of the Phase One Property	Other	On-Site Historical fire	Metals, PAHs	Soil
APEC-6	East property boundary of the Phase One Property	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site The current and past USTs and the distribution of gasoline	Metals, PHCs, VOCs	Groundwater

Notes:
PAHs-Polycyclic Aromatic Hydrocarbons
PHCs-Petroleum Hydrocarbons (F1-F4)
VOCs-Volatile Organic Compounds
*Refers to Table 2 in Schedule D of O.Reg. 153/04

Source : ©2024 Google

Legend

Phase Two Property

PCA contributing to APEC

Issue date of plan: December 2024

ABS
850 Industrial Avenue
Ottawa, ONTARIO K1G 4H3
Tel. : 450 454-5644

Drawn by: K. Si Moussa
Reviewed by: A. Babakhani, Ph.D.,E.I.T.

Client :
Group MB Canada Inc.

Title:
Potential Contaminating Activities
and
Areas of Potential Environmental Concern

Project:
Phase Two Environmental Site Assessment

Location:
630 Montreal Road and 609 Borthwick Avenue
Ottawa, Ontario

Scale: 1:500
Client code: GMBC100
F/N: EO-24-1324-00
Drawing # Figure 2A
Client ref.:
1/1

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Note : Toutes les informations présentes sur ce dessin sont localisées approximativement selon des images satellites et/ou des chaînages. Les matrices graphiques sont, quant à elles, géoréférencées. Il est à noter que seuls les sondages relevés par l'arpenteur sont géoréférencés. Cette information sera indiquée dans la légende.
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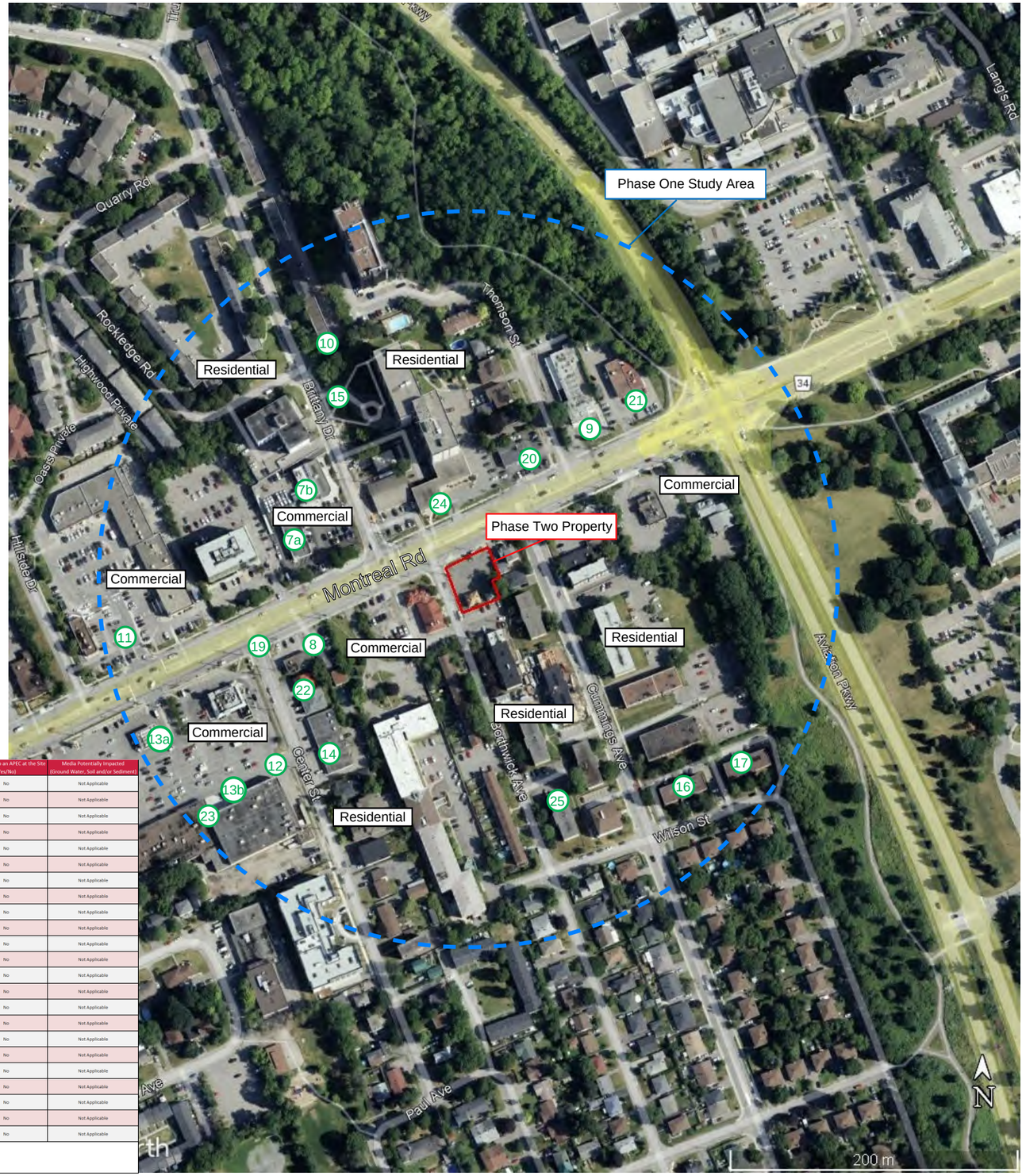

PCA Designation	PCA Description*	Location of PCA	Distance from Phase One Property	Contributing to an APEC at the Site (Yes/No)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
PCA-7a	Item 34 - Metal Fabrication	Off-Site The former use of the property as a machine shop	90m-Northwest	No	Not Applicable
PCA-7b	Item 10 - Commercial Autobody Shops	Off-Site Use of property as a commercial autobody shop	90m-Northwest	No	Not Applicable
PCA-8	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site The former USTs and the distribution of gasoline	110m-West	No	Not Applicable
PCA-9	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site The former USTs and the distribution of gasoline	115m-North	No	Not Applicable
PCA-10	Item 37 - Operation of Dry Cleaning Equipment (where chemicals are used)	Off-Site The former use of the property as a dry-cleaning operation	165m-North	No	Not Applicable
PCA-11	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site Gasoline and hydraulic oil spills to ground	230m-West	No	Not Applicable
PCA-12	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site Hydraulic oil spill to ground	220m-Southwest	No	Not Applicable
PCA-13a	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site The current and past USTs and the distribution of gasoline	225m-West	No	Not Applicable
PCA-13b	Item 37 - Operation of Dry Cleaning Equipment (where chemicals are used)	Off-Site The former use of the property as a dry-cleaning operation	225m-West	No	Not Applicable
PCA-14	Item 37 - Operation of Dry Cleaning Equipment (where chemicals are used)	Off-Site The former use of the property as a dry-cleaning operation	110m-Southwest	No	Not Applicable
PCA-15	Item 55 - Transformer Manufacturing, Processing and Use	Off-Site Transformer oil spill to ground	160m-Northwest	No	Not Applicable
PCA-16	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site Waste generation of light fuels	160m-Southeast	No	Not Applicable
PCA-17	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site Waste generation of light fuels	180m-Southeast	No	Not Applicable
PCA-18	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site Gasoline spills to ground	40m-Northwest	No	Not Applicable
PCA-19	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site Hydraulic oil spill to ground	130m-West	No	Not Applicable
PCA-20a	Item 10 - Commercial Autobody Shops	Off-Site Use of property as a commercial autobody shop	55m-Northeast	No	Not Applicable
PCA-20b	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site The former USTs and the distribution of gasoline	55m-Northeast	No	Not Applicable
PCA-21a	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site The former USTs and the distribution of gasoline	115m-Northeast	No	Not Applicable
PCA-21b	Item 10 - Commercial Autobody Shops	Off-Site Use of property as a commercial autobody shop	115m-Northeast	No	Not Applicable
PCA-22	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site The former USTs and the distribution of gasoline	110m-West	No	Not Applicable
PCA-23	Item 37 - Operation of Dry Cleaning Equipment (where chemicals are used)	Off-Site The former use of the property as a dry-cleaning operation	225m-West	No	Not Applicable
PCA-24	Item 40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	Off-Site The former use of the property as an orchard	25m-North	No	Not Applicable
PCA-25	Item 40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	Off-Site The former use of the property as an orchard	130m-South	No	Not Applicable

Notes:
APEC – Area of Potential Environmental Concern
PCA – Potentially Contaminating Activity
*Refers to Table 2 in Schedule D of O.Reg. 153/04

Source : ©2024 Google

Legend

Phase Two Property

PCA not contributing to APEC

Issue date of plan: December 2024

ABS
850 Industrial Avenue
Ottawa, ONTARIO K1G 4H3
Tel. : 450 454-5644

Drawn by: K. Si Moussa
Reviewed by: A. Babakhani, Ph.D.,E.I.T.

Client :
Group MB Canada Inc.

Title:
Potential Contaminating Activities
and
Surrounding Properties Land Use

Project:
Phase Two Environmental Site Assessment

Location:
630 Montreal Road and 609 Borthwick Avenue
Ottawa, Ontario

Scale: 1:500
Client code: GMBC100
F/N: EO-24-1324-00
Drawing # Figure 2B
1/1
Client ref.:

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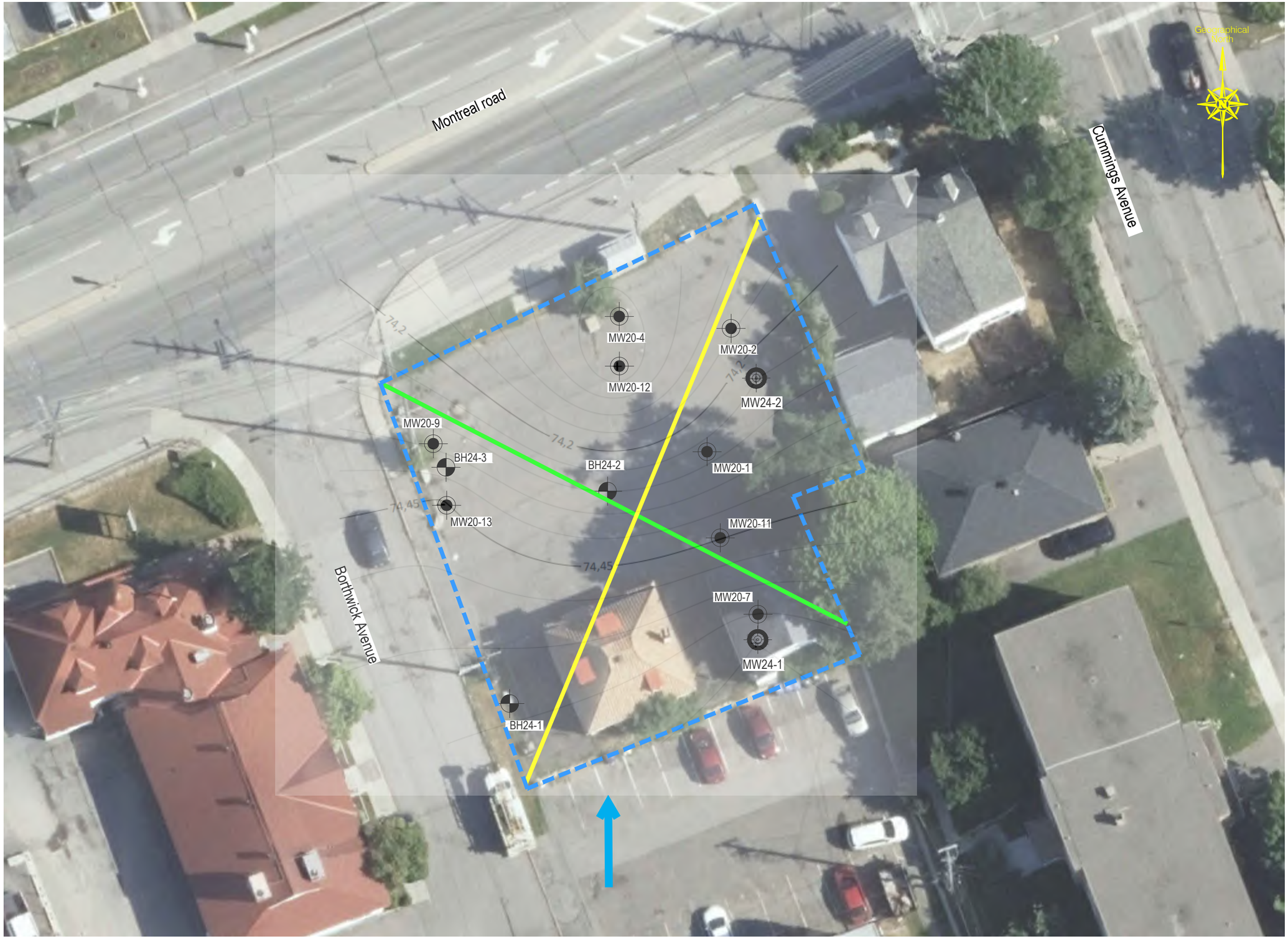

Source: ©2024 Google

Legend

- Phase Two Property
- Monitoring wells installed by others in 2020
- Boreholes advanced by ABS in 2024
- Monitoring wells installed by ABS in 2024
- Cross Line BB'
- Cross Line AA'
- Groundwater Flow Direction

Issue date of plan: December 2024

ABS
850 Industrial Avenue
Ottawa, ONTARIO K1G 4H3
Tel. : 450 454-5644

Drawn by: K. Si Moussa
Reviewed by: A. Babakhani, Ph.D., E.I.T.

Client: Group MB Canada Inc.

Title: Borehole Location Plan

Project: Phase Two Environmental Site Assessment

Location: 630 Montreal Road and 609 Borthwick Avenue Ottawa, Ontario

Scale: 1:300 | Client code: GMBC100
F/N: EO-24-1324-00 | Drawing # Figure 3A | 1/3
Client ref.:

0 3m 6m 9m 12m 15m

Dernière sauvegarde: 2024-10-17 10:15 | Format : ANSI full bleed B (11.00 x 17.00 inches)
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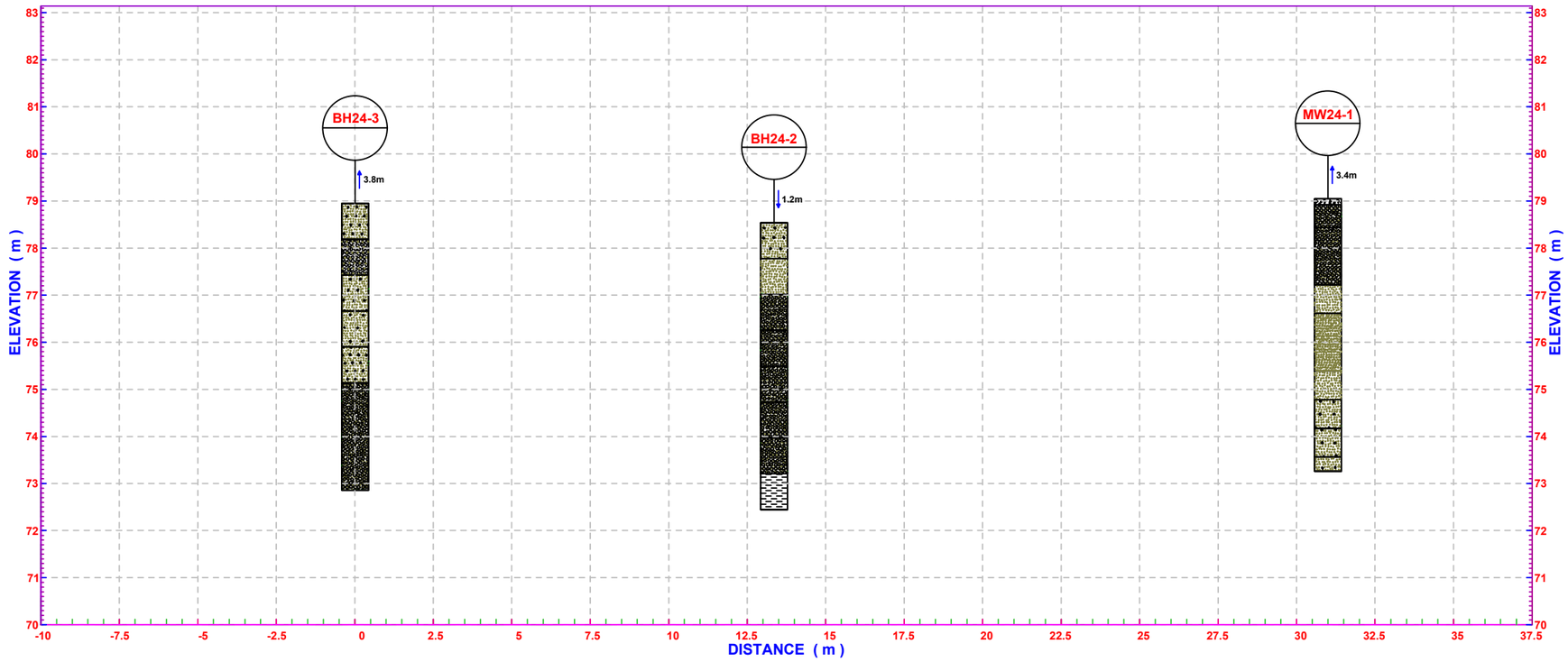

Legend

- Phase Two Property
- Cross AA'
- Monitoring wells installed by others in 2020
- Boreholes drilled by ABS in 2024
- Monitoring wells installed by ABS in 2024
- Sand and gravel
- Sand and cobbles
- Sand
- Bedrock

Issue date of plan: December 2024

ABS
850 Industrial Avenue
Ottawa, ONTARIO K1G 4H3
Tel. : 450 454-5644

Drawn by: K. Si Moussa
Reviewed by: A. Babakhani, Ph.D., E.I.T.

Client : MB Canada Group Inc.

Title: Cross Section Figure AA'

Project: Phase Two Environmental Site Assessment

Location: 630 Montreal Road and 609 Borthwick Avenue Ottawa, Ontario

Scale: 1:1500 | Client code: GMBC100
F/N: EO-24-1324-00 | Drawing # Figure 3B | 2/3
Client ref.:

0 3m 6m 9m 12m 15m

Dernière sauvegarde: 2024-10-17 10:15 | Format : ANSI full bleed B (11.00 x 17.00 Inches)
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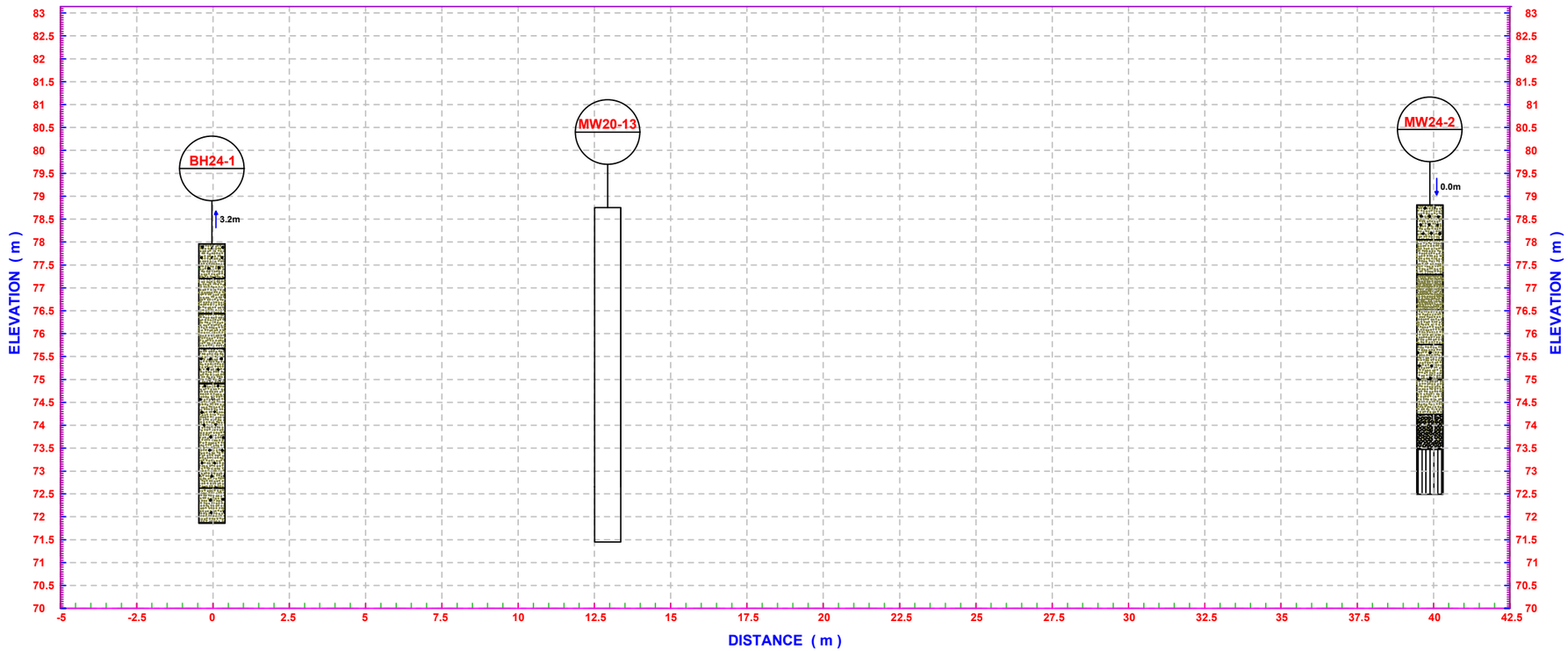

Legend

- Phase Two Property
- Cross BB'
- Monitoring wells installed by others in 2020
- Boreholes drilled by ABS in 2024
- Monitoring wells installed by ABS in 2024
- Sand and gravel
- Sand and cobbles
- Sand
- Bedrock
- Silt

Issue date of plan: Octobre 2024

ABS
850 Industrial Avenue
Ottawa, ONTARIO K1G 4H3
Tel. : 450 454-5644

Drawn by: K. Si Moussa, Drafter
Reviewed by: A. Babakhani, Ph.D., E.I.T.

Client : MB Canada Group Inc.

Title: Cross Section Figure BB'

Project: Phase Two Environmental Site Assessment

Location: 630 Montreal Road and 609 Borthwick Avenue Ottawa, Ontario

Scale: 1:2500 | Client code: GMBC100
F/N: EO-24-1324-00 | Drawing # Figure 3C | 3/3
Client ref.:

0 3m 6m 9m 12m 15m

Note : Toutes les informations présentes sur ce dessin sont localisées approximativement selon des images satellites et/ou des chaînages. Il est à noter que seuls les sondages relevés par l'arpenteur sont géoréférencés. Cette information sera indiquée dans la légende.
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Source: ©2024 Google

Legend

- Phase Two Property
- Monitoring wells installed by others in 2020
- Boreholes drilled by ABS in 2024
- Monitoring wells installed by ABS in 2024
- Soil sample exceeds Table 3 SCSs RPI
- Soil sample meets Table 3 SCSs RPI

Issue date of plan: December 2024

ABS
850 Industrial Avenue
Ottawa, ONTARIO K1G 4H3
Tel. : 450 454-5644

Drawn by: K. Si Moussa, Drafter
Reviewed by: A. Babakhani, Ph.D., E.I.T.Eng.

Client: MB Canada Group Inc.

Title: Soil Quality (Metals and Inorganics) - Plan View

Project: Phase Two Environmental Site Assessment

Location: 630 Montreal Road and 609 Borthwick Avenue Ottawa, Ontario

Scale: 1:300 | Client code: GMBC100
F/N: EO-24-1324-00 | Drawing # Figure 4A | 1/3
Client ref.:

0 3m 6m 9m 12m 15m

Note: All indications in this drawing are located approximately, according to satellite images and/or chaining. The graphical registers are, for their part, georeferenced with the lot limits. It should be noted that only the surveys recorded by the surveyor are georeferenced. This information will be indicated in the legend.
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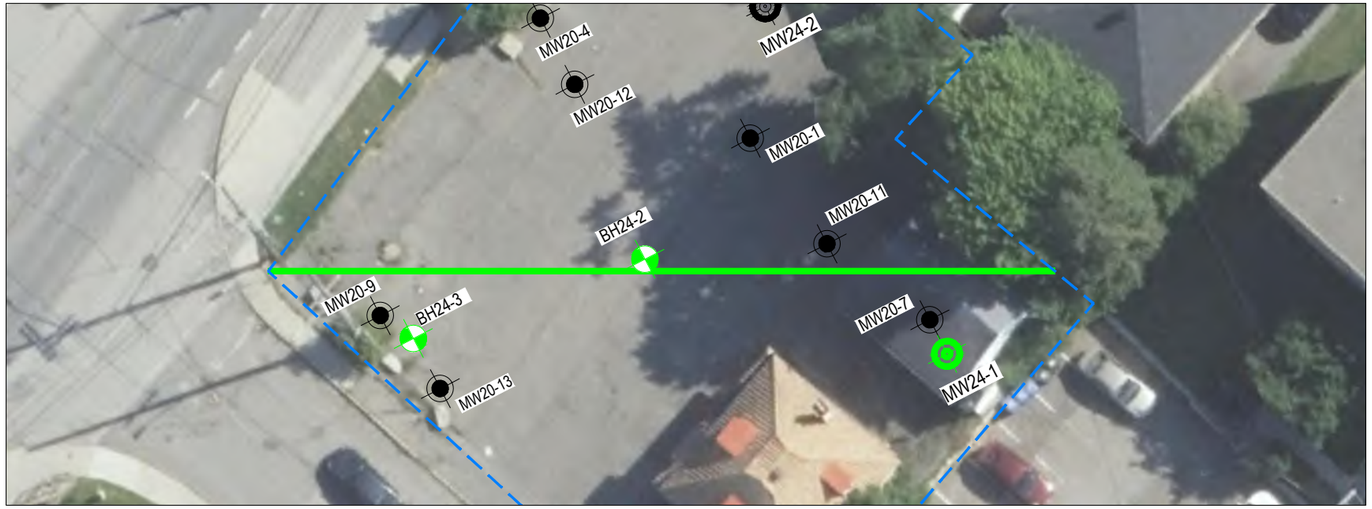

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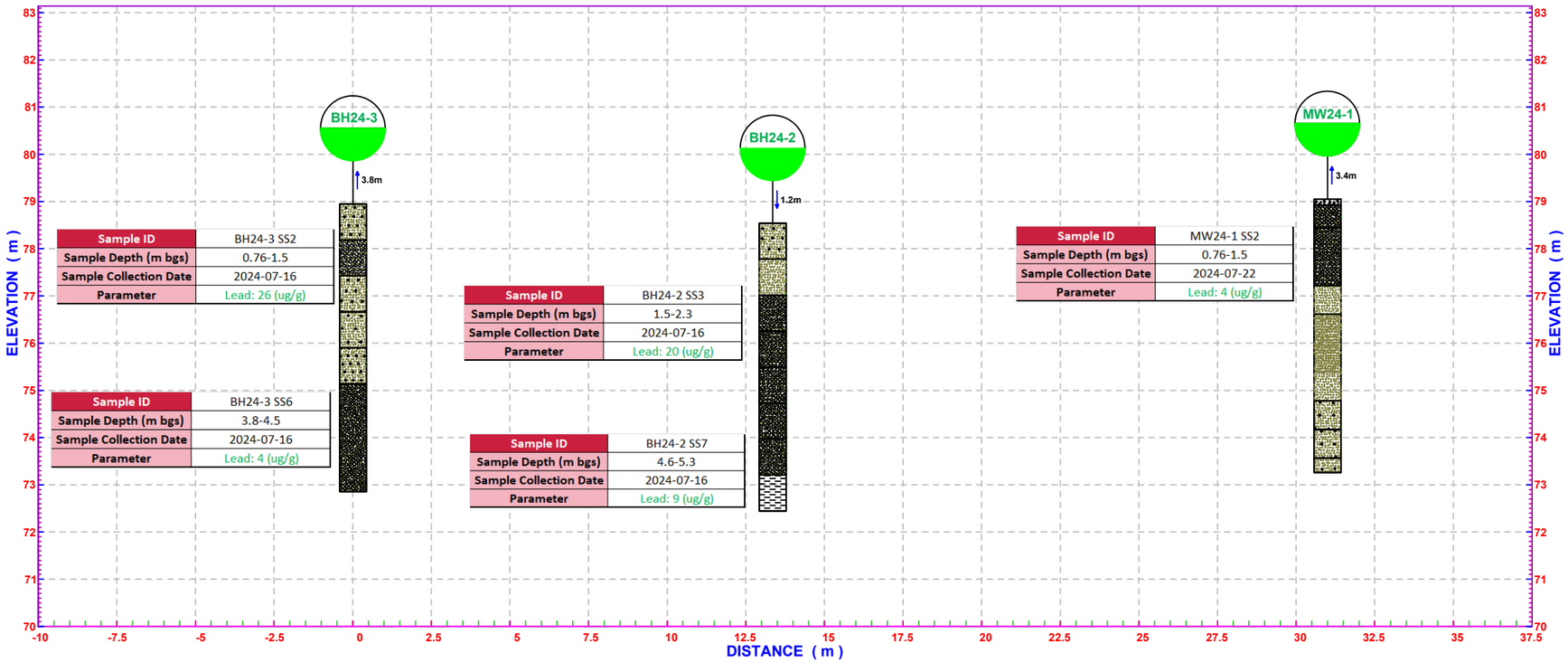

Legend

- Phase Two Property
- Cross AA'
- Monitoring wells installed by others in 2020
- Boreholes drilled by ABS in 2024
- Monitoring wells installed by ABS in 2024
- Sand and gravel
- Sand and cobbles
- Sand
- Bedrock

Issue date of plan: December 2024

ABS
850 Industrial Avenue
Ottawa, ONTARIO K1G 4H3
Tel. : 450 454-5644

Drawn by: K. Si Moussa, Drafter
Reviewed by: A. Babakhani, Ph.D., E.I.T.

Client : MB Canada Group Inc.

Title: Cross Section AA'

Project: Phase Two Environmental Site Assessment

Location: 630 Montreal Road and 609 Borthwick Avenue Ottawa, Ontario

Scale: 1:1500 | Client code: GMBC100
F/N: EO-24-1324-00 | Drawing # Figure 4B | 2/3
Client ref.:

0 3m 6m 9m 12m 15m

Note : Toutes les informations présentes sur ce dessin sont localisées approximativement selon des images satellites et/ou des chaînages. Il est à noter que seuls les sondages relevés par l'arpenteur sont géoréférencés. Cette information sera indiquée dans la légende.
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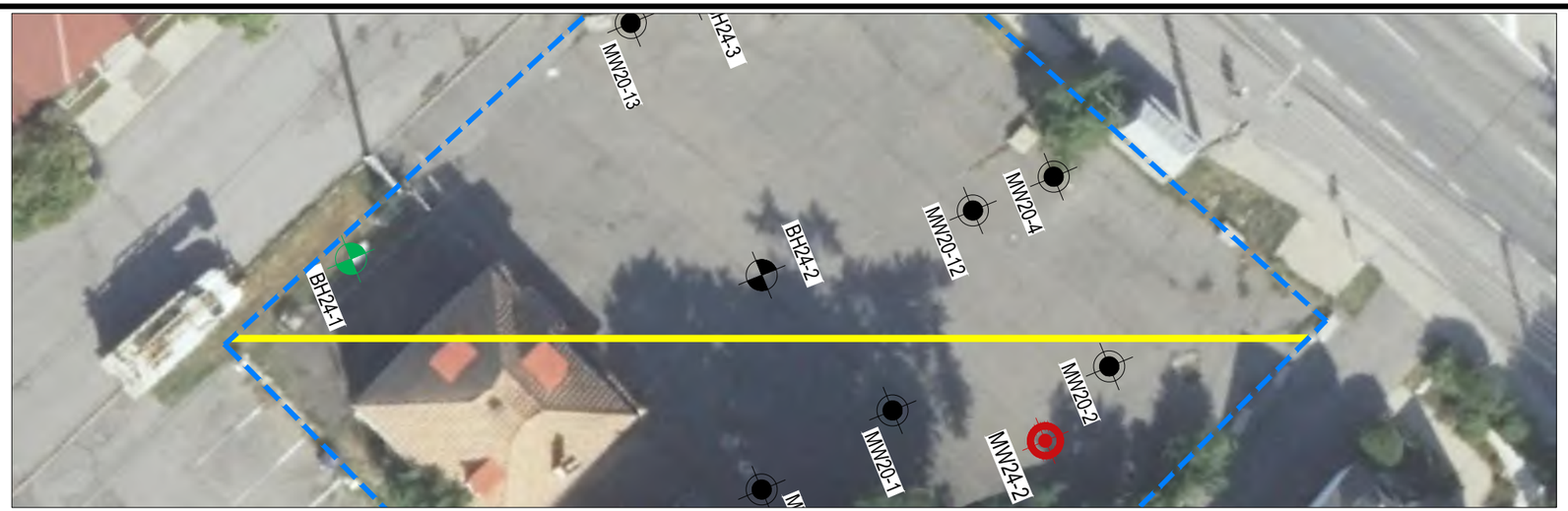

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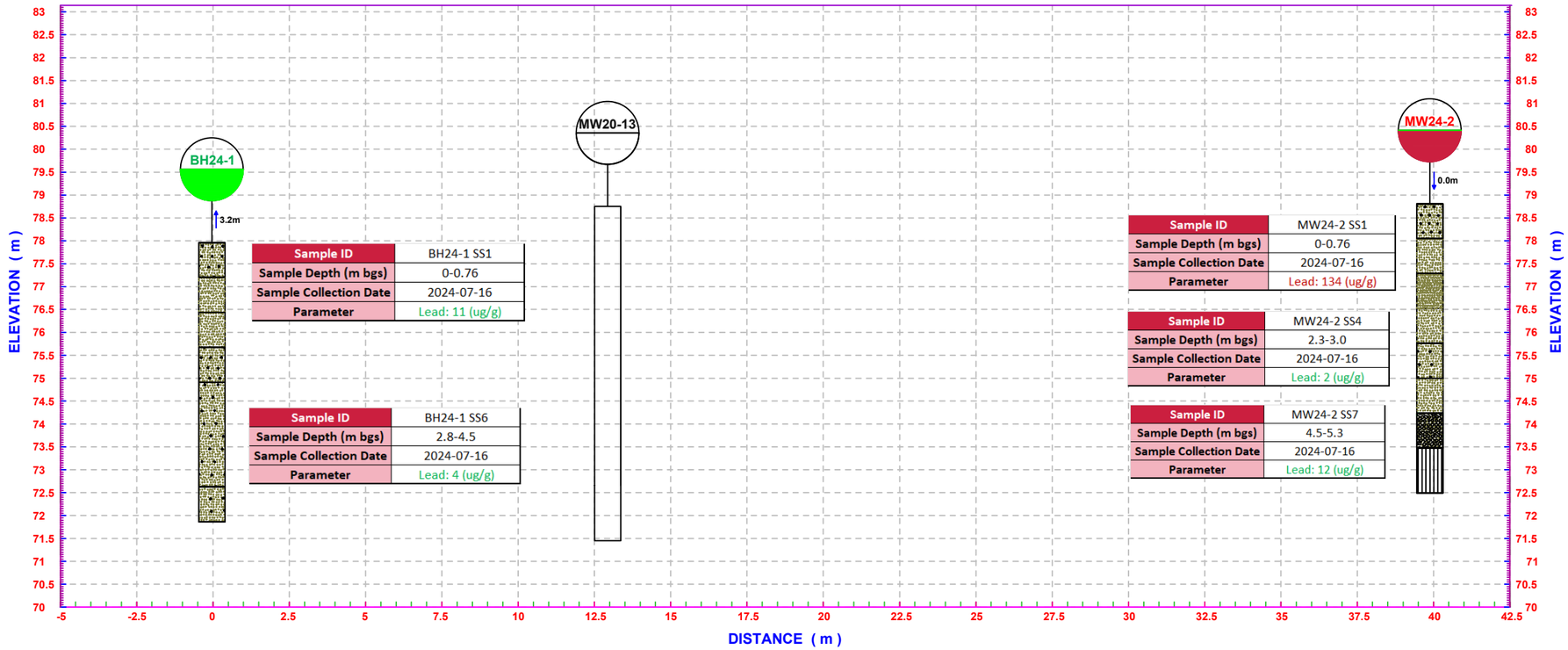

Legend

- Phase Two Property
- Cross BB'
- Monitoring wells installed by others in 2020
- Boreholes drilled by ABS in 2024
- Monitoring wells installed by ABS in 2024
- Sand and gravel
- Sand and cobbles
- Sand
- Bedrock
- Silt

Issue date of plan: December 2024

ABS
850 Industrial Avenue
Ottawa, ONTARIO K1G 4H3
Tel. : 450 454-5644

Drawn by: K. Si Moussa

Reviewed by: A. Babakhani, Ph.D., E.I.T.

Client : MB Canada Group Inc.

Title: Soil Quality (Metals and Inorganics) - Cross Section

Project: Phase Two Environmental Site Assessment

Location: 630 Montreal Road and 609 Borthwick Avenue Ottawa, Ontario

Scale: 1:2500 | Client code: GMBC100

F/N: EO-24-1324-00 | Drawing # Figure 4C | 3/3

Client ref.:

0 3m 6m 9m 12m 15m

Note : Toutes les informations présentes sur ce dessin sont localisées approximativement selon des images satellites et/ou des chaînages. Il est à noter que seuls les sondages relevés par l'arpenteur sont géoréférencés. Cette information sera indiquée dans la légende.
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Source: ©2024 Google

Legend

- Phase Two Property
- Monitoring wells installed by others in 2020
- Boreholes advanced by ABS in 2024
- Monitoring wells installed by ABS in 2024
- Soil sample exceeds Table 3 SCSs RPI
- Soil sample meets Table 3 SCSs RPI

Issue date of plan: December 2024

ABS
850 Industrial Avenue
Ottawa, ONTARIO K1G 4H3
Tel. : 450 454-5644

Drawn by: K. Si Moussa
Reviewed by: A. Babakhani, Ph.D., E.I.T.

Client: Group MB Canada Inc.

Title: Soil Quality (PAHs) - Plan View

Project: Phase Two Environmental Site Assessment

Location: 630 Montreal Road and 609 Borthwick Avenue Ottawa, Ontario

Scale: 1:300 | Client code: GMBC100
F/N: EO-24-1324-00 | Drawing # Figure 5 | 1/1
Client ref.:

0 3m 6m 9m 12m 15m

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Legend

- Phase Two Property
- Monitoring wells installed by others in 2020
- Boreholes advanced by ABS in 2024
- Monitoring wells installed by ABS in 2024
- Soil sample exceeds Table 3 SCSs RPI
- Soil sample meets Table 3 SCSs RPI

Issue date of plan: December 2024

ABS
850 Industrial Avenue
Ottawa, ONTARIO K1G 4H3
Tel. : 450 454-5644

Drawn by: K. Si Moussa
Reviewed by: A. Babakhani, Ph.D., E.I.T.

Client: Group MB Canada Inc.

Title: Soil Quality (PHCs+BTEX) - Plan View

Project: Phase Two Environmental Site Assessment

Location: 630 Montreal Road and 609 Borthwick Avenue Ottawa, Ontario

Scale: 1:300 | Client code: GMBC100
F/N: EO-24-1324-00 | Drawing # Figure 6 | 1/1
Client ref.:

0 3m 6m 9m 12m 15m

Dernière sauvegarde: 2024-10-17 10:15 | Format : ANSI full bleed B (11.00 x 17.00 Inches)
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Legend

- Phase Two Property
- Monitoring wells installed by others in 2020
- Boreholes advanced by ABS in 2024
- Monitoring wells installed by ABS in 2024
- Soil sample exceeds Table 3 SCSs RPI
- Soil sample meets Table 3 SCSs RPI

Issue date of plan: December 2024

ABS
850 Industrial Avenue
Ottawa, ONTARIO K1G 4H3
Tel. : 450 454-5644

Drawn by: K. Si Moussa
Reviewed by: A. Babakhani, Ph.D., E.I.T.

Client: Group MB Canada Inc.

Title: Soil Quality (VOCs) - Plan View

Project: Phase Two Environmental Site Assessment

Location: 630 Montreal Road and 609 Borthwick Avenue Ottawa, Ontario

Scale: 1:300 | Client code: GMBC100
F/N: EO-24-1324-00 | Drawing # Figure 7 | 1/1
Client ref.:

0 3m 6m 9m 12m 15m

Dernière sauvegarde: 2024-10-17 10:15 | Format : ANSI full bleed B (11.00 x 17.00 Inches)
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Source: ©2024 Google

Legend

- Phase Two Property
- Monitoring wells installed by others in 2020
- Boreholes advanced by ABS in 2024
- Monitoring wells installed by ABS in 2024
- Groundwater sample exceeds Table 3 SCSs
- Groundwater sample meets Table 3 SCSs

Issue date of plan: December 2024

ABS
850 Industrial Avenue
Ottawa, ONTARIO K1G 4H3
Tel. : 450 454-5644

Drawn by: K. Si Moussa
Reviewed by: A. Babakhani, Ph.D., E.I.T

Client: MB Canada Group Inc.

Title: Groundwater Quality (Metals and Inorganics) - Plan View

Project: Phase Two Environmental Site Assessment

Location: 630 Montreal Road and 609 Borthwick Avenue Ottawa, Ontario

Scale: 1:300
Client code: GMBC100
F/N: EO-24-1324-00
Drawing # Figure 8
Client ref.:
1 / 1

0 3m 6m 9m 12m 15m

Dernière sauvegarde: 2024-10-17 10:15 | Format : ANSI full bleed B (11.00 x 17.00 Inches)
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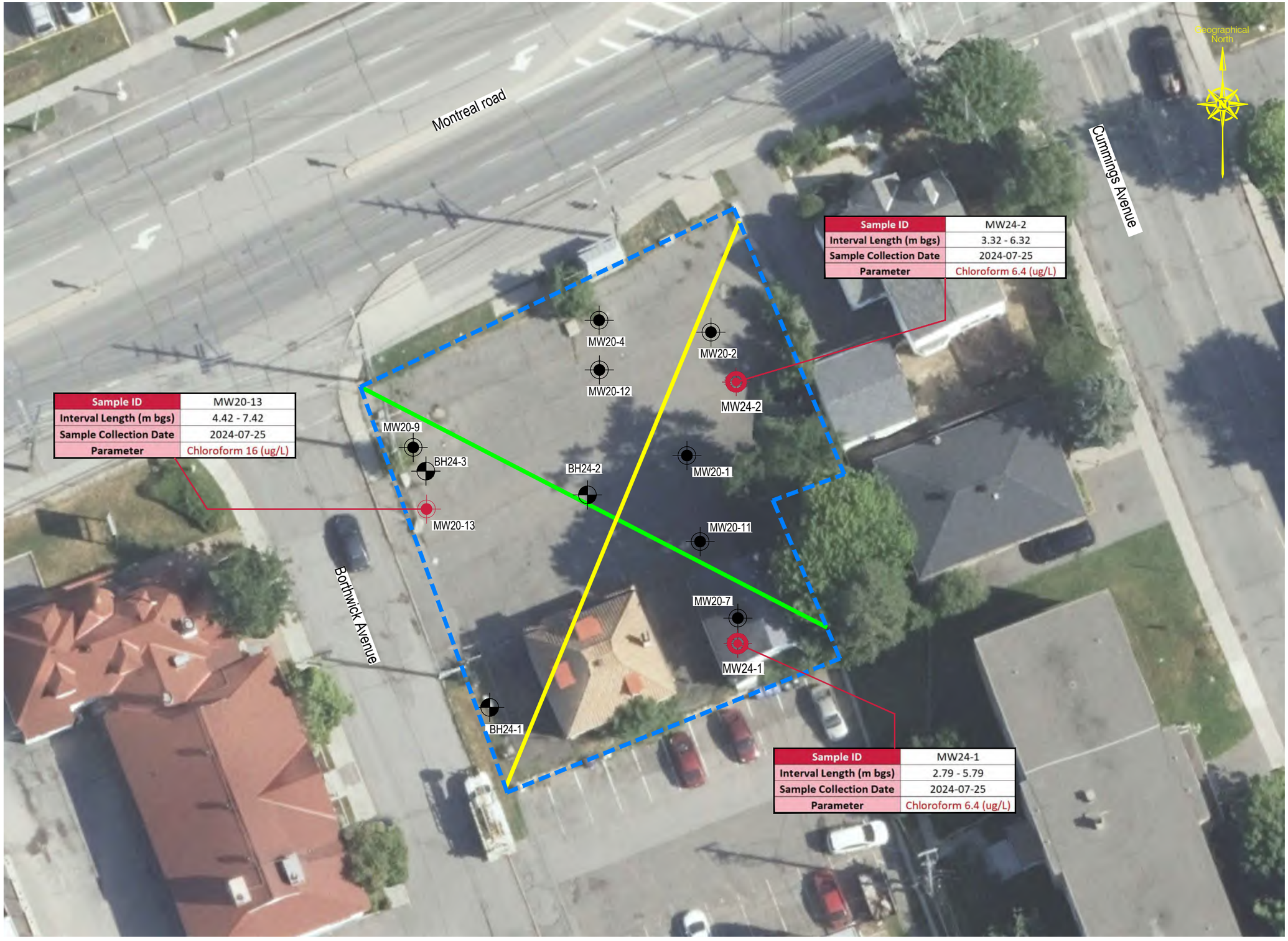

Source: ©2024 Google

Legend

- Phase Two Property
- Monitoring wells installed by others in 2020
- Boreholes advanced by ABS in 2024
- Monitoring wells installed by ABS in 2024
- Groundwater sample exceeds Table 3 SCSs
- Groundwater sample meets Table 3 SCSs

Issue date of plan: December 2024

ABS
850 Industrial Avenue
Ottawa, ONTARIO K1G 4H3
Tel. : 450 454-5644

Drawn by: K. Si Moussa
Reviewed by: A. Babakhani, Ph.D., E.I.T.

Client: MB Canada Group Inc.

Title: Groundwater Quality (VOCs) - Plan View

Project: Phase Two Environmental Site Assessment

Location: 630 Montreal Road and 609 Borthwick Avenue Ottawa, Ontario

Scale: 1:300 | Client code: GMBC100
F/N: EO-24-1324-00 | Drawing # Figure 9 | 1/1
Client ref.:

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This drawing should be read in accordance with the report that accompanies it.

APPENDIX A

SAMPLING AND ANALYSIS PLAN

FINAL REPORT

PHASE TWO ESA SAMPLING & ANALYSIS PLAN

609 Borthwick Avenue and 630 Montreal Road, Ottawa, Ontario

CLIENT: Groupe MB Canada Inc.

REPORT REF: EO- 24-1324-SAP

March 2025

Prepared by

Ata Babakhani, Ph.D., E.I.T.

Project Manager | Environmental

Verified by

Ahmed Lamrani, P.Eng., M.Eng.

Director | Ontario

CONFIDENTIAL

Report presented to

Max Mahi

Groupe MB Canada Inc.

657 Curé-Labelle Blvd., Suite 200

Laval, QC, H7V 2T8

TABLE OF CONTENTS

1.0 INTRODUCTION

Groupe ABS Inc. (ABS) has prepared this Phase Two ESA Sampling & Analysis Plan (SAP) to be performed at the property at 609 Borthwick Avenue and 630 Montreal Road, Ottawa, Ontario, herein referred to as the "Site" or "Phase One/Two Property." The Phase Two Property has historically been used as a commercial property; however, it is currently an unoccupied/abandoned auto-body garage and is planned to be redeveloped for residential use.

The Phase Two ESA is being conducted at the request of Groupe MB Canada Inc. (Client) for the proposed redevelopment of the Phase Two Property from its current commercial land use to residential land use. Due to a more sensitive land use change, a Record of Site Condition (RSC) submission to the Ontario Ministry of Environment, Conservation and Parks (MECP) is required, as such this Phase Two ESA will be conducted in accordance with the Ontario Regulation 153/04 (O.Reg. 153/04): Records of Site Condition – Part XV.1 of the Act, as amended.

This SAP provides the scope of work and procedures for completing the subsurface field program of the Phase Two ESA.

2.0 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

The objectives of this Phase Two ESA were to identify the concentration and distribution of Contaminants of Potential Concern (CoPCs) within six (6) Areas of Potential Environmental Concern (APECs) identified in a Phase One ESA completed by PGL Environmental Consultants (PGL) in accordance with O.Reg. 153/04.

The APECs and corresponding PCAs and CoPCs are summarized in Table 1.

Table 1. Areas of Potential Environmental Concern

Area of Potential Environmental Concern	APEC Location	Potentially Contaminating Activity*	PCA Location	Contaminants of Potential Concern	Media Potentially Impacted
APEC 1	Southeast quadrant of the Phase One Property	**PCA 10 – Commercial Autobody Shops** Use of onsite building for commercial autobody shop	On-site	PHCs, VOCs	Soil and groundwater
APEC 2	Southeast quadrant of the Phase One Property	**PCA 10 – Commercial Autobody Shops** Former waste-oil tank associated with autobody shop use	On-site	Metals, PAHs, PHCs, VOCs	Soil and groundwater
APEC 3	Southeast quadrant of the Phase One Property	**PCA 10 – Commercial Autobody Shops** Former oil/water separator associated with autobody shop use	On-site	Metals, PAHs, PHCs, VOCs	Soil and groundwater

Area of Potential Environmental Concern	APEC Location	Potentially Contaminating Activity*	PCA Location	Contaminants of Potential Concern	Media Potentially Impacted
APEC 4	Entire Phase One Property	**PCA 30 – Importation of Fill Material** The placement of fill of unknown quality in areas of former buildings to restore grade	On-site	Metals, PAHs	Soil
APEC 5	South portion of the Phase One Property	Undefined PCA Historical fire	On-site	Metals, PAHs	Soil
APEC 6	East property boundary of the Phase One Property	**PCA 28 – Gasoline and Associated Products Storage in Fixed Tanks** The current and past USTs and the distribution of gasoline	Off-site	Metals, PHCs, VOCs	Groundwater

Notes:
APEC – Area of Potential Environmental Concern
PCA – Potentially Contaminating Activity
PAHs – Polycyclic Aromatic Hydrocarbons
PHCs – Petroleum Hydrocarbons Fractions F1 to F4
VOCs – Volatile Organic Compounds
*Refers to Table 2 in Schedule D of O.Reg. 153/04

3.0 SCOPE OF WORK

The Phase Two ESA scope of work was developed based on the Phase One Conceptual Site Model (Phase One CSM) to determine the media (i.e., soil and/or groundwater) requiring investigation, the locations and depths for sample collection, and the CoCPs to be analyzed in order to thoroughly assess each APEC at the Phase Two Property.

An overview of the subsurface program will consist of:

- Boreholes and/or groundwater monitoring wells will be completed within each APEC and the CoPCs to be analyzed for samples collected within each APEC;
- Media to be sampled at each borehole and/or monitoring well locations, soil sampling depth intervals and sampling analysis plan, and monitoring well screen intervals as well as the sampling frequency; and
- Number of samples per borehole and/or monitoring locations to be collected and submitted for laboratory analysis of CoCPs.

Any deviations from this scope of work will be summarized in the Phase Two ESA report.

3.1 SUBSURFACE DRILLING PROGRAM

This subsurface investigation will consist of the advancement of five (5) boreholes, of which, two (2) will be completed as groundwater monitoring wells.

A summary of the subsurface drilling program to investigate each of the APECs is presented in Table 2.

Table 2. Proposed Borehole and Monitoring Well Locations and Rationale

Borehole No.	Location and Rationale	Proposed Depth and Rationale
BH24-1	Placed southwest to assess the soil and fill quality within APEC 4 and APEC 5	Advance up to 6 mbgs (or to refusal).
BH24-2	Placed centrally to assess the soil and fill quality within APEC 4	Advance up to 6 mbgs (or to refusal).
BH24-3	Placed northwest to assess the soil and fill quality within APEC 4	Advance up to 6 mbgs (or to refusal).
MW24-1	Placed on the southeastern side of the Site to assess the soil and groundwater quality within APEC 1, APEC 2, and APEC 3.	Advance up to 6 mbgs (or to refusal) to intercept the shallow groundwater table and to install a groundwater monitoring well in the overburden.
MW24-2	Placed on the eastern side of the Site to assess the soil and groundwater quality within APEC 6.	Advance up to 6 mbgs (or to refusal) to intercept the shallow groundwater table and to install a groundwater monitoring well in the overburden.
MW20-13	Placed on the northwestern side of the Site to assess the soil and groundwater quality within APEC 4.	This monitoring well was an existing monitoring well which was installed in 2020. The MECP well record is included in the appendix section of the SAP.

An MECP-licensed drilling contractor in accordance with O. Reg. 903, as amended, will be retained to undertake borehole drilling and/or well installation activities. Prior to the drilling activities, public and private utility locates will be completed.

3.2 ANALYTICAL TESTING PROGRAM

For this program, soil samples will be collected using a solid stem drill rig operated by an MECP-licensed operator. Soil sampling depth intervals (i.e., borehole depths), monitoring well screen intervals and sampling frequency will be determined, based on ABS's current knowledge of subsurface conditions, including the approximate depth of the groundwater table of approximately 5.0 metres below ground surface (mbgs), and may be revised based on the actual subsurface conditions encountered during the drilling program.

Soil samples are generally collected at approximately 0.76 metres intervals until refusal is encountered or terminated at a required borehole depth.

Additional items in this scope of work include the following:

- Submission of up to two (2) surface soil samples (0 to 1.5 mbgs) and up to two (2) subsurface soil samples (deeper than 1.5 mbgs) for pH analysis;
- Submission of up to two (2) soil samples representative of the Site for soil texture/grain size;
- Elevation surveying of the ground surface elevations of all boreholes and monitoring well locations;

- Depth to water measurements of all newly installed and/or any existing groundwater monitoring wells, including assessment for non-aqueous phase liquid.
- Well development of all newly installed and/or any existing groundwater monitoring wells prior to groundwater sampling; and
- Completion of groundwater monitoring and sampling.

A summary of the Phase Two ESA Analytical Testing Program for soil is provided in Table 3 and groundwater is provided in Table 4.

Table 3. Summary of the Phase Two ESA Soil Sampling and Analysis Program

BH ID	BH Location	Sample ID	Sample Depth (mbgs)	Sampling Date	Analysis Group				
					BTEX	M&I	PAHs	PHCs F1-F4	VOCs
BH24-1	APEC 4 APEC 5	BH24-1 SS1	0-0.76	2024-07-16	X	X	X	X	
		BH24-1 SS6	3.8-4.5	2024-07-16	X	X		X	X
BH24-2	APEC 4	BH24-2 SS3	1.5-2.3	2024-07-16		X	X		
		BH24-2 SS7	4.6-5.3	2024-07-16	X	X		X	X
BH24-3	APEC 4	BH24-3 SS2	0.76-1.5	2024-07-16	X	X	X	X	
		BH24-3 SS6	3.8-4.5	2024-07-16	X	X		X	X
MW24-1	APEC 1 APEC 2 APEC 3	MW24-1 SS2	0.76-1.5	2024-07-22	X	X	X	X	X
		MW24-1 SS10	5.5-6.1	2024-07-22	X	X	X	X	X
MW24-2	APEC 6	MW24-2 SS1	0-0.76	2024-07-16	X	X		X	X
		MW24-2 SS4	2.3-3.0	2024-07-16		X			
		MW24-2 SS7	4.5-5.3	2024-07-16	X	X	X	X	X

Notes:
BTEX – Benzene, Toluene, Ethylbenzene and Xylenes
M&Is – Metals and Inorganic Parameters
PAHs – Polycyclic Aromatic Hydrocarbons
PHCs – Petroleum Hydrocarbons Fractions F1 to F4
VOCs – Volatile Organic Compounds

Table 4. Summary of the Phase Two ESA Groundwater Sampling and Analysis Program

Sample ID	MW Location	Screen Interval (m)	Sampling Date	Analysis Group				
				BTEX	M&I	PHCs F1-F4	PAHs	VOCs
MW20-13	APEC 4	4.42 - 7.53	2024-07-25	X	X	X	X	X
MW24-1	APEC 6	2.79 - 5.79	2024-07-25	X	X	X	X	X

Sample ID	MW Location	Screen Interval (m)	Sampling Date	Analysis Group				
				BTEX	M&I	PHCs F1-F4	PAHs	VOCs
MW24-2	APEC 1	3.32 - 6.32	2024-07-25	X	X	X	X	X

Notes:
BTEX – Benzene, Toluene, Ethylbenzene and Xylenes
M&Is – Metals and Inorganic Parameters
PAHs – Polycyclic Aromatic Hydrocarbons
PHCs – Petroleum Hydrocarbons Fractions F1 to F4
VOCs – Volatile Organic Compounds

4.0 QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PROTOCOLS

QA/QC protocols taken throughout the completion of the Site investigation, include cleaning of non-dedicated sampling equipment cleaning, sample collection and containerizing, handling and labelling, and use of trip blanks and field duplicates, and calibrations and field equipment checks are discussed in order to meet the Quality Data Objectives (QDOs) of the Phase Two ESA.

4.1 NON-DEDICATED SAMPLING EQUIPMENT CLEANING

The following non-dedicated sampling and equipment cleaning procedures will be used during the completion of the subsurface program:

- Interface probe
- Water level tape
- Spatula for soil sampling
- Hollow-stem augers or Split-spoon samplers
- Submersible pump
- Flow-through cell for groundwater sampler

All non-dedicated/non-disposable sampling equipment will be decontaminated before and after each use to prevent cross-contamination between samples. The cleaning process includes washing the equipment with an Alconox™ solution (i.e. a non-phosphate detergent) followed by a deionized water rinse.

4.2 SAMPLE COLLECTION AND CONTAINERIZING, HANDLING AND LABELLING

Soil and groundwater samples were containerized within laboratory-prepared sample containers in accordance with the following MECP's document entitled, *"Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality,"* MECP, March 2004, amended as of February 2021, and the document entitled "*Guidance for Environmental Site Assessments under Ontario Regulation 153/04 (as amended),"* April 2011, by Association of Professional Geoscientists of Ontario.

All samples will be submitted to Eurofins Environment Testing Canada, Inc. (Eurofins) in Ottawa, Ontario. Formal Chain of Custody (CoC) records were maintained between ABS and the staff at Eurofins.

4.2.1 Sample Collections

Dedicated (single-use), disposable nitrile gloves will be used to prevent cross-contamination during soil sample collection. The following soil sample containers and preservatives are to be used:

- VOCs and PHCs F1: 40 millilitre (mL) glass vials with septum-lids, pre-charged with methanol preservative.
- PHCs F2-F4, PAHs, metals, inorganics, pH and grain size: 120 or 250 mL unpreserved clear glass wide-mouth jars with a TeflonTM–lined lid.

Disposable nitrile gloves and dedicated Wattera, foot-values, and polyethylene tubing will be used for the collection of groundwater samples. The following groundwater sample containers and preservatives are to be used:

- VOCs and PHCs F1: 40 mL clear glass vials with septum-lids, pre-charged with sodium bisulphate preservative.
- PHCs F2-F4: 250 mL amber glass bottles with TeflonTM–lined lids, pre-charged with sodium bisulphate preservative.
- PAHs: 250 mL unpreserved amber glass bottles with TeflonTM–lined lids. • Inorganics: 500 mL unpreserved high-density polyethylene (HDPE) bottles.
- Metals (excluding hexavalent chromium and mercury): 125 mL acid-rinsed HDPE bottles, pre-charged with nitric acid preservative.
- Hexavalent chromium: 125 mL acid-rinsed HDPE bottles, pre-charged with ammonium sulphate/ammonium hydroxide preservative.
- Mercury: 125 mL clear glass bottles with TeflonTM–lined lids, pre-charged with hydrochloric acid preservative.

Groundwater samples submitted for metals analyses (including hexavalent chromium and mercury) will be field-filtered using dedicated 0.45 micron filters.

Trip blank water samples for VOC parameter analysis will be provided by Eurofins in 40 mL clear glass vials filled with VOC-free water.

Each soil, groundwater, and QA/QC sample will be labelled with a unique sample identifier along with the company name, sampling date, ABS reference/project number and analysis required.

4.2.2 Sample Handling and Labelling

Single-use, disposable nitrile gloves are to be used to prevent contamination during sample collection, and indelible ink pens are to be used to label each sample container with the following information prior to sampling:

- Project name and number;
- Technician's name or initials;

- Date and time of collection; and
- Preservative used (if applicable).

Samples will be placed immediately into laboratory-supplied containers (pre-charged with preservatives where necessary) and stored in ice-packed coolers. Coolers are to be transported under the CoC protocol to Eurofins, following all standard procedures, with all of the following information:

- Date sampled;
- Technician's name;
- Sample matrix and analyses; and
- Number and type of containers.

Formal CoC records of the sample submissions will be maintained between ABS and the staff at Eurofins.

4.3 TRIP BLANKS

A trip blank is a set of VOC sample vials filled by the analytical laboratory with VOC-free distilled water and shipped with the groundwater sample containers. Trip blanks will be stored with the sample containers provided by the analytical laboratory during travel to the Phase Two Property, while on the Phase Two Property, and during travel from the Phase Two Property back to the analytical laboratory.

The sample containers comprising of a trip blank will not be opened in the field. One (1) trip blank will accompany each submission to the laboratory and submitted for the analysis of VOCs.

Based on the scope of work and anticipated field program for the Phase Two ESA, it is estimated that one (1) trip blank analysis will be required. Additional trip blanks will be submitted for any additional laboratory sample submissions.

4.4 FIELD DUPLICATE SAMPLES

Field duplicate soil samples and groundwater samples will be collected and submitted for laboratory analysis at a frequency of one (1) sample for every ten (10) samples submitted for laboratory analysis, with a minimum of one (1) sample per media sampled per the CoPC, as per O.Reg. 153/04.

Based on the scope of work and anticipated field program for the Phase Two ESA, it is estimated that a minimum of two (2) duplicate soil samples and one (1) duplicate groundwater sample will be required. The quality of the data is to be assessed by comparing field duplicates with original samples.

4.5 THE CALIBRATION CHECKS ON FIELD INSTRUMENTS

4.5.1 Field Screening Instruments

The photoionization detector (PID) and combustible gas indicator (CGI) used for the field screening of soil samples are pre-calibrated by Maxim Environmental. Calibration checks are generally made prior to use for each field program conducted by ABS. Records of the calibration and calibration checks of the PID and CGI instruments, including any calibration sheets provided by the equipment supplier, will be retained in ABS's project file.

4.5.2 Water Quality Measurement Instruments

Water quality instruments used to measure field parameters during groundwater sampling are pre-calibrated by Maxim Environmental. Calibration checks are generally made prior to use for each field program conducted by ABS. Records of the calibration and calibration checks of the probes/instruments used for water quality parameter measurements, including any calibration sheets provided by the equipment supplier, will be retained in ABS's project file.

5.0 STANDARD OPERATING PROCEDURES

Standard operating procedures (SOPs) will be adhered to during the completion of the Phase Two ESA to ensure the overall integrity of the field program and meet the overall objective of the Phase Two ESA, which is to assess the environmental quality of the Phase Two Property in relation to the identified APECs, as per Table 1.

The proposed field investigation for the Phase Two ESA will require the following procedures:

- Environmental Borehole drilling and Sampling;
- Field Screening;
- Monitoring Well Installation; and
- Monitoring well Development and Groundwater Sampling.

Note that any deviations from the SOPs during the completion of the Site investigation will be summarized in their respective reports (i.e., Phase Two ESA or Excess Soil Characterization).

5.1 ENVIRONMENTAL BOREHOLE DRILLING

Environmental borehole drilling is employed for Site investigations in order to identify and/or delineate contamination in soil and/or to install groundwater monitoring wells in order to identify and/or monitor contamination in groundwater.

A drill rig equipped with direct-push tooling, solid-stem augers and/or hollow-stem augers is the most common method used by ABS.

5.1.1 Planning Scope of Drilling Program

The following steps are taken to develop the scope of the environmental borehole drilling program:

- Identify any physical impediments (i.e., overhead wires, barriers, unsafe work areas, etc.), based on the Site visit conducted as part of the Phase One ESA.
- Proposed placement of borehole(s) and monitoring well installations determination is based on meeting the objectives of the Phase Two ESA: to investigate the soil and/or groundwater quality within each APEC identified in the Phase One ESA.
- Boreholes which are to receive monitoring well installations, if any, are based on the PCAs that result in APECs and their respective COPCs to potentially impact groundwater quality.

- Borehole depths and depths at which monitoring wells are to be installed are determined and estimated based on ABS's current knowledge of the hydrogeological conditions of the Site from past assessments, extrapolating well records for the Site and/or neighbouring properties and geological mapping from the Geological Survey of Canada.
- Obtain public and private underground utility clearance(s) for the proposed borehole locations and/or modify locations of any proposed borehole locations that may not meet utility locate requirements.
- If utility clearance(s) cannot be obtained, the use of hydro-vac may be required to either daylight/expose the buried utility or clear the borehole location to a depth in which drilling is deemed safe to complete the advancement of a borehole to receive a monitoring well.
- Select an appropriate drill rig and sampling method based on current knowledge of the Site.

Once the proposed location(s) of the borehole(s) have been finalized, provide drilling instructions to the field technician supervising the drilling program. These instructions contain the following information:

- Utility locates package (public and private clearance confirmation);
- Relevant contact information (i.e., Site contact, Project Manager, Client, emergency contact(s), etc.);
- Scope of subsurface program (i.e., advancement depths, well screen lengths, sampling intervals and field screening, etc.);
- Site Plan with the proposed borehole locations; and
- Summarized sampling and analysis plan (i.e., number of samples for submission and duplicate field samples).

5.1.2 Drill Rigs and Sampling Methods

Each borehole will be advanced incrementally to permit intermittent or continuous sampling as specified by the Project Manager. Typically, the sampling frequency is one sample for every 2.5 or 5 feet (0.75 or 1.5 metres) the borehole is advanced.

At the discretion of the Project Manager, soil samples may be collected at a lower frequency in homogeneous soil or at a higher frequency if changes in stratigraphy or other field observations warrant it.

Direct-Push Drilling and Sampling

Most common method used by ABS to obtain representative samples of the subsurface soil material at the Site. Direct-push drilling is achieved by driving a steel sampler into the subsurface at 1.5-meter intervals until the desired depth is achieved. Samplers are advanced by the drilling rig by means of a hydraulic hammer. For each soil sample run, a dedicated PVC sample liner is placed within the steel sampler which collects the soil as the sampler is advanced. After each sample run, a new sampler is assembled, and it is advanced deeper down the open borehole.

There are generally two methods of direct-push drilling which are used: Dual-tube sampling and Macro-core sampling. A dual-tube sampler consists of an 8.25 centimeter (cm) inner diameter steel tooling (outer tube), equipped with a steel cutting-shoe affixed to the advancing end. A smaller diameter steel tooling, consisting of a 5.75 cm inner diameter (inner tube), fits within the outer tube and contains a PVC sample liner. These two tubes form the completed dual-tube sampler. The completed dual-tube sampler has a length of 1.5 metres, while a macro-core sampler consists of the smaller inner tube (mentioned above) used independently. The macro-core sampler measures approximately 1.5 metres in length. The differences between these two methods depend on the expected soil conditions that will be encountered on-site.

Soil conditions consist of tight or dense soil types (e.g., silts or clays), the macro-core sampling method may be used as this method provides less resistance to advancing the sampler. In soil types that are less resistive (e.g., loose sands), the dual-tube sampler may be used.

Auger Drilling with Split-Spoon Sampler

The auger drilling method for borehole advancement and sampling involves using an auger drill rig to advance the borehole to the desired sampling depth and sampling with a split-spoon sampler. Borehole advancement with hollow stem augers is the preferred drilling method and split-spoon sampling as it minimizes the potential from sloughed material to reach the bottom of a borehole and possibly cross-contaminate samples when the split-spoon is driven beyond the bottom of the borehole.

Bedrock Drilling: In situations where auger drilling cannot be used to advance the borehole (i.e., bedrock or weathered shale), alternate drilling procedures are required. Bedrock drilling can be accomplished by advancing core barrels or tri-cone bits using air rotary (air-hammer) or water rotary drilling (bedrock coring) methods. The bedrock drilling method selected will depend in part on the type of bedrock, the borehole depth required, whether bedrock core logging is required, etc. The Project Manager, in consultation with the drilling contractor, will determine the best method for advancing boreholes in competent bedrock.

5.1.3 Borehole Drilling and Sample Collection Procedure

The following describes the methods for logging and collection of samples from either split-spoon or direct-push sampler:

- Continuous split spoon/discrete direct-push samples (every 0.6 m or 2 feet) or semi-continuous (every 0.76 m or 2.5 feet) are required.
- Dedicated, disposable nitrile gloves are worn during sampling and soil logging.
- Record description of soil at each sample interval (i.e., colour, texture, description and stratigraphy, observations, odours, signs of oxidation, etc.) for each borehole.
- Soil samples are to be collected and sealed in plastic bags, screened and kept cool but unfrozen. The sealed bags must be labelled with the corresponding field log sample ID, borehole location and project number.
- If sampling for VOCs, BTEX, or PHCs F1, a soil core from each soil sample, which may be analyzed, must be taken and placed in the laboratory-provided methanol vial.
- Note all and any odours or discolouration of samples.

- Split spoon samplers must be washed between samples for auger drilling.
- If obvious contamination is encountered, continue sampling until the vertical extent of contamination is delineated.
- Boreholes should be deep enough to intercept the groundwater table (unless this is impossible/impractical – call Project Manager to discuss).
- Soil samples should be submitted to a preliminary screening procedure on site, either using a RKI Eagle, PID, etc. depending on the type of suspected contamination. Further details are provided in Section 6.2.

If conditions on-site are not as suspected, and planned borehole locations cannot be drilled, call the Project Manager to discuss. Alternative borehole locations will be determined in conversation with the field technician and supervising engineer.

After drilling is completed the Site Plan with the proposed borehole locations must be updated to represent Site Conditions upon completion of the drilling program and recorded.

5.2 FIELD SCREENING

5.2.1 Headspace Vapour Measurement

Head space vapour screening consists of using either the RKI Eagle 2 GasTech or the Tiger PID. The RKI Eagle is used to screen most soil samples, particularly where petroleum hydrocarbon contamination is suspected. The Tiger is used when VOCs are suspected. However, it also can be useful for detecting petroleum. These tools are for screening purposes only and cannot be used in place of laboratory testing. Vapour results obtained from the RKI Eagle and the PID are relative and must be interpreted. Screening equipment should be calibrated on an approximately monthly basis, more frequently if heavily used.

Measurement of the headspace vapour reading is to be performed as follows:

1. Samples must be brought to room temperature; this is specifically important in colder weather. Soil must not be frozen;
2. Turn the instrument on and allow it to come to zero - calibrate if necessary;
3. If using RKI Eagle 2 GasTech, ensure the instrument is in methane elimination mode unless otherwise directed;
4. Ensure measurement units are ppm (parts per million) initially;
5. Break up large lumps of soil in the sample bag, taking care not to puncture bag;
6. Insert the probe into soil bag, creating a seal with your hand around the opening;
7. Gently manipulate soil in the bag while observing instrument readings;
8. Record the highest value obtained in the first 15 to 25 seconds;
9. Make sure to indicate scale (ppm or LEL); also note which instrument was used (RKI Eagle 2, or Tiger); and,

10. Containerize samples and refrigerate them as per the Section 4.2.

5.2.2 Visual Screening

Visual screening consists of examining the soil sample for potential indicators of contamination as per the following:

1. Visually examine the soil sample, including breaking apart a portion of the sample;
2. Note any indications of a mottled appearance, dark discolouration or staining, free-phase product, signs of oxidation, or unusual colour;
3. Note any indications of non-soil constituents, such as brick, asphalt, wood or concrete fragments, coal fragments, coal ash, etc.; and
4. Record the findings of the visual screening in the field log. If there is no visual evidence of impacts this should be noted.

5.2.3 Olfactory Screening

Record in the field log used to record the soil description, any presence of any odours noted during sample collection and visual screening. Field staff are not expected to directly smell soil samples to assess the presence/absence of odours.

If it is possible to identify the likely type of odour (e.g., PHC-like, solvent-like, etc.) then this information should be recorded along with a comment on the severity of the odour (e.g., slight, strong, etc.). If the odour cannot be readily identified, a description of what the odours are noted “like” is to be recorded. If no odours are observed, this information should also be recorded in the field log.

5.3 MONITORING WELL INSTALLATION

5.3.1 Well Diameters

Borehole diameter and annular space surrounding the monitoring well must meet the requirements of O.Reg. 903. Wherever possible, 2-inch (5.1 cm) interior diameter monitoring wells should be installed as they permit the use of most sampling and monitoring devices, and will generally provide greater water volume for sampling, especially in low permeability soils. Monitoring wells with interior diameters between 1-inch (2.5 cm) and 1.5-inches (3.8cm) are also considered acceptable.

5.3.2 Screen Length and Depth

Well screens typically range in length from 5-ft to 10-ft (1.5 to 3.0 metres). The installation of well screens must not straddle more than one hydrostratigraphic unit and should not be placed such that a preferential pathway for contaminant migration is created between two different units. A well screen must not straddle the overburden/bedrock interface, and the well screen, sand pack and seal must be situated entirely within either the overburden or the bedrock.

The following should be considered to determine the appropriate well screen length and depth of well:

- When assessing for the presence of light non-aqueous phase liquid (LNAPL) at the water table, longer well screens are preferred due to seasonal fluctuations in the water table and the well screen should intersect the water table whenever possible;
- When assessing for the presence of dense non-aqueous phase liquid (DNAPL), the well screen should be positioned at the bottom of the aquifer immediately above the aquitard;
- When assessing geochemical parameters, shorter well screens may be preferable to reduce the potential for mixing of water from distinct vertical geochemical zones;
- The use of long well screens within the saturated zone may result in the mixing of impacted and unimpacted groundwater from different depths within the aquifer, with the resulting dilution effect biasing the groundwater concentrations low; and,
- Nested wells can be used to determine contaminant stratification within an aquifer or assess multiple aquifers, as long as the wells and individual aquifers are properly sealed off from each other within the borehole.

Note if the borehole is deeper than the required monitoring well installation, backfilling with bentonite chips is required to achieve a specific depth. This should only be done on wells where contamination is not suspected, in order to prevent downward migration of contamination.

5.3.3 Monitoring Well Installation

Once the installation depth has been determined, the monitoring well is installed by a licensed and MECP approved contractor. ABS typically uses a No. 10 slot PVC screen and #1 silica sand to form the sand pack around the well screen and 2 feet above the well screen. The annular space above the sand pack is then filled with bentonite to create a seal above the sand pack to isolate groundwater within its hydrostratigraphic unit of interest (i.e., to prevent other water bearing zones and surface water infiltration). Once the well has been installed, a protective steel casing and lockable cap are to be installed at each well to protect the well and prevent tampering. Protective casings come in two varieties: aboveground casings and flush-mount casings.

Aboveground casings have the advantage of having better visibility and can be located more easily, especially during winter, are less likely to need repair, and have fewer problems related to water intrusion and frost heave of the casing. Flush-mount casings are usually the only available option for wells installed in areas of high vehicular or pedestrian traffic. Flush-mount casings are generally preferred for aesthetic reasons as they are less obtrusive.

5.4 WELL DEVELOPMENT AND GROUNDWATER SAMPLING

Well development is required prior to sampling to remove any disturbances caused by the drilling operations/to restore the groundwater properties to an undisturbed state and to enhance hydraulic connectivity between the monitoring wells and the surrounding materials. All monitoring wells are left undisturbed for at least 24 hours after installation to allow the bentonite seals to be set prior to development.

All newly installed monitoring wells and/or existing monitoring wells are developed as follows:

- Presence/absence of NAPL is assessed using the interface probe**,** water level tape and/or dedicated bailers. If present, the depth of NAPL from the top of casing (TOC) and relative to the ground surface will be measured;
- Depth of the phreatic surface (water table) from TOC and relative to the ground surface is measured using a water tape, as well as the end of the borehole, followed by decontamination, as per Section 4.1); and
- Dedicated inertia pumps consisting of Wattera polyethylene tubing are to be used to draw out groundwater to purge, at minimum, three (3) well casing volumes into 20-L pails.

Groundwater monitoring wells are sampled at a minimum of 24 hours after the completion of well development using the following low flow, flow throw-in cell, and hybrid sampling methods:

- Water quality parameters using a Horiba U-22 water quality meter (pre-calibrated by Maxim Environmental), is used to monitor and measure groundwater quality parameters (i.e., pH, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (ORP), temperature, and turbidity) until stabilization is met prior to the collection of groundwater samples;
- Low flow sampling using a dedicated inertia pump and disposable PVC bailers will be used to sample for volatiles (i.e., BTEX, VOCs and PHC-F1);
- Peristaltic pump and dedicated polyethylene tubing will be used to sample for semi-volatiles (i.e., PHCs(F2-F4), PAHs, and metals);
- Dedicated 0.45-micron in-line filters will be used with the peristaltic pump to collect groundwater samples for metals analysis; and
- Groundwater samples are to be stored in a cooler with ice packs during the sampling event, labelled and recorded.

6.0 PHYSICAL IMPEDIMENTS

ABS does not anticipate any physical impediments that will limit access to the Phase Two Property during the completion of the Phase Two ESA.

Any impediments and/or deviations from this SAP will be presented in Section 3.4 of the Phase Two ESA report.

MECP WELL RECORDS

Ontario

Ministry of the Environment, Conservation and Parks

Well Record for Well Cluster – Part 1 of 3

(Only for Multiple Test Holes or Dewatering Wells)

Regulation 903 Ontario Water Resources Act

Page 1 of 11

All measurements recorded in: ☒ Metric ☐ Imperial

Follow instructions on the front and back of this form. Print or Type

Well Tag No. of Deepest Well: *(Print Well Tag No.)* A267687

Well No. on Drawing of Deepest Well: 20-#12

☐ Dewatering wells

☑ Test holes

No. of wells reported 7

Well Cluster Location Information

Address of Well Location (Street Number(s)/Name(s), RR, if available)	Lot(s)	Concession(s)	Geographic Township	County/District/Upper Tier Municipality
630 MONTREAL ROAD				

City, Town, Village or Hamlet	Province	GPS Unit Make	Model	Unit Mode of Operation
OTTAWA	Ontario	GARMIN	ETREX	☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify:

Mandatory Attachments/Additional Information

☒ Land Owner Consent Form must be attached.

☒ Detailed Drawing of All Well Locations must be attached.

I, the person constructing the well, will promptly submit to the Director, on request, any additional information in my custody or control related to any well in the well cluster that I have constructed.

Signature of Technician/Contractor — Date (yyyy/mm/dd): 2020/04/24

Well Details

Well # on Drawing	UTM Coordinates Zone	Easting	Northing	Hole Depth (m/ft)	Hole Diameter (cm/in)	Method of Construction	Casing Material; Diameter (cm/in)	Casing (m/ft) From	Casing (m/ft) To	Screen Interval (m/ft) From	Screen Interval (m/ft) To	Annular Space Material (m/ft) From	Annular Space Material (m/ft) To	Annular Space Material: Material:	Overburden/Bedrock or Abandonment Filing Material Intervals (m/ft)	Static Water Level (m/ft)	Date of Completion (yyyy/mm/dd)
20-1	18	449852	5032324	4.3	8.89	DIRECT PUSH	3.18	0.15	1.35	1.35	4.3	0.3	1.07	BENTONITE	PAVEMENT, SAND, SAND & GRAVEL	DRY	2020/03/02
20-4	18	449846	5032336	4.65	8.89	DIRECT PUSH	3.18	0.15	1.6	1.6	4.65	0.3	1.07	BENTONITE	FILL, SAND W. GRAVEL, SAND W. COBBLES	DRY	2020/03/03
20-7	18	449852	5032311	4.64	8.89	DIRECT PUSH	3.18	0.15	1.37	1.37	3.81	0.3	0.76	BENTONITE	PAVEMENT, SAND W. ORGANICS, SAND	DRY	2020/03/03
20-9	18	449831	5032328	4.6	8.89	DIRECT PUSH	3.18	0.15	1.37	1.37	4.6	0.3	0.76	BENTONITE	FILL, SILTY SAND & GRAVEL, SAND	DRY	2020/03/03
20-11	18	449854	5032319	8.84 5.18	10.16 20.3	DIAMOND HOW HSA	5.08	0.15	5.8	5.8	8.84	0.3	5.49	BENTONITE	SAND, GRAVEL, SHALE	3.87	2020/03/17
20-12	18	449846	5032332	9.35 5.79	10.16 20.3	DIAMOND HOW HSA	5.08	0.15	6.3	6.3	9.35	0.3	5.9	BENTONITE	SAND, GRAVEL, SHALE	5.51	2020/03/17
20-13	18	449833	5032327	7.5 3.9	10.16 20.3	DIAMOND HOW HSA	5.08	0.15	4.42	4.42	7.53	0.3	3.96	BENTONITE	SAND, SANDSTONE	4.58	2020/03/17

Well Contractor and Well Technician Information

Business Name of Well Contractor	Business Address (Street Number/Name, RR)	Municipality	Province
GEORGE DOWNING ESTATE DRILLING	410 RUE PRINCIPALE	GRENVILLE-SUR-LA-ROUGE	QC

Postal Code	Bus. Telephone No.	Well Contractor's Licence No.	Business E-mail Address
J0V1B0	(819) 242-6469	1844	info@forage downing drilling.com

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Signature of Well Technician	Date Submitted (yyyy/mm/dd)
STEPHEN DOWNING	33246		2020/04/24

Date First Well in Cluster Constructed or Abandoned (yyyy/mm/dd)	Date Last Well in Cluster Completed (yyyy/mm/dd)
2020/03/02	2020/03/17

Well Abandonment

Person Abandoning the Wells:

Name NA

(Print or Type) - See instruction 11 on the back of this form

Ministry Use Only

Date Received (yyyy/mm/dd)	Audit No.
MAY 07 2020	C 47021

Comments:

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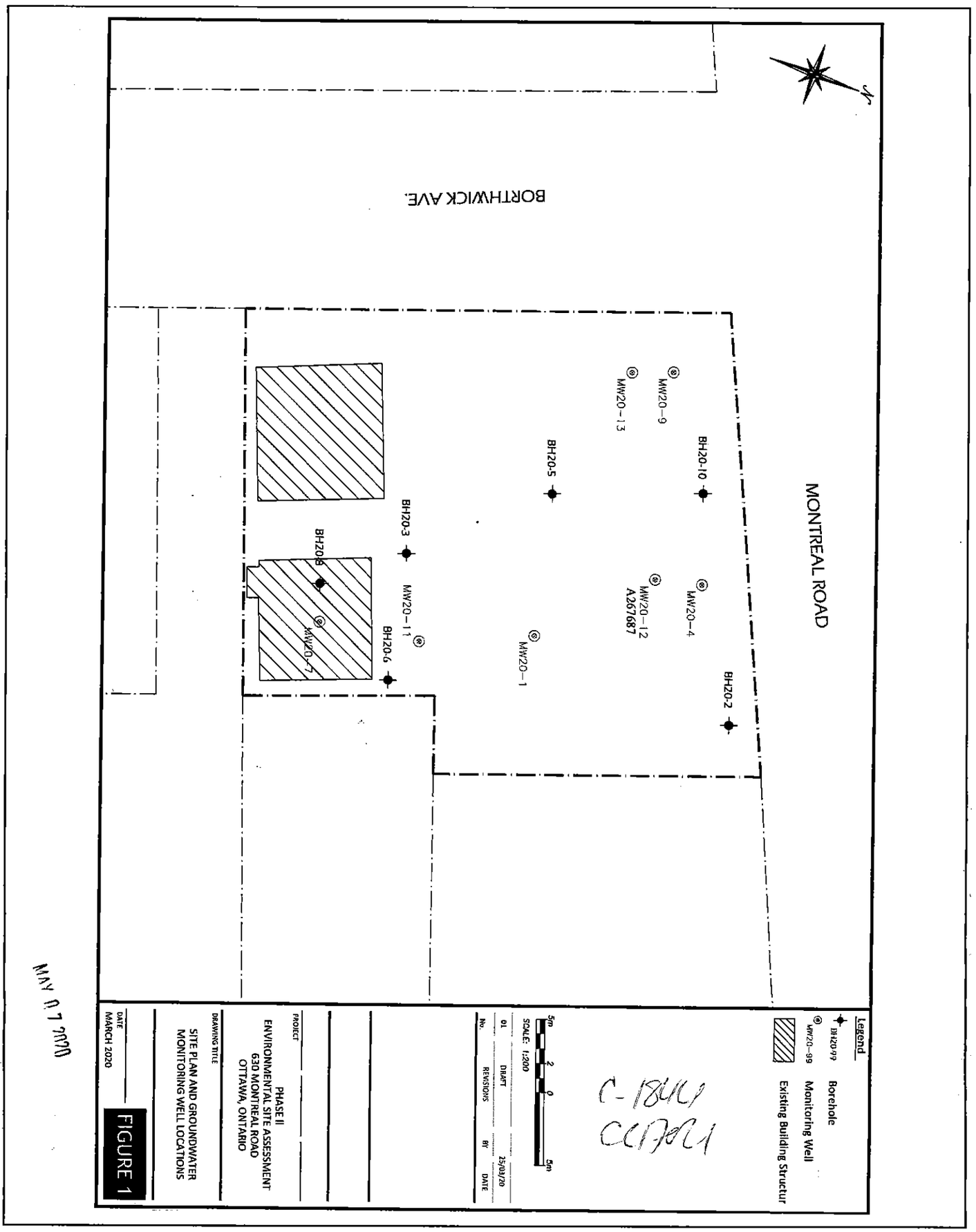
Ontario Ministry of the Environment

Well Record for Well Cluster - Part 3 of 3
Detailed Drawing of All Well Locations

Note: This **Well Record for Well Cluster Part 3 - Detailed Drawing of all Well Locations**, must be attached to Parts 1 and 2. The drawing must include all property boundaries, an arrow indicating the North direction, all named roads and sufficient measurements to locate all wells in the cluster in relation to fixed points. The drawing must show the location of each well and each well must be numbered on the drawing to match number used for that well on the **Well Record for Well Cluster Parts 1 and 2.** The well with the well tag must be clearly identified on the Drawing.
UTM coordinates should appear beside each well, if space permits. Additional comments on wells can be included on the drawing

Well Tag Number: # A267 687

"Well Record for Well Cluster" Form Audit Number: # C47021



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C47021

MAY 07 2020

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APPENDIX B

BOREHOLE LOG REPORTS

BOREHOLE LOG

Borehole N°
BH24-1

Project Name: **Phase Two Environmental Site Assessment**

Client: **Groupe MB Canada Inc.**

Location: **630 Montreal Road and 609 Borthwick Avenue in Ottawa, Ontario**

Contractor: **Strata drilling**

Drilling Method **Direct Push**

Equipment **GeoProbe** Core Diameter:

Field Technician: **J. Brooks, Tech.** Prepared by: **K. Si Moussa, Drafter**

CRN: **GMBC100** F/N: **EO-24-1324-00**

Geodesic Coordinates (NAD83 SCOPQ SCRS) Zone: 9
X : **372017.0**
Y : **5033999.4**
Z : **77.96**

Plan Number:

Date of Borehole: **2024-07-16**

Depth of Borehole (m) : **6.10**

SAMPLE STATE
- Disturbed
- Intact (thin wall sampler)
- Lost
- Diamond core

TERMINOLOGY

"traces"	1-10 %
"some"	10-20 %
adjective (sandy...)	20-35 %
"and"	35-50 %

CLASSIFICATION

Clay	< 0,002 mm
Silt	0.002 to 0.08 mm
Sand	0.08 to 5 mm
Gravel	5 to 80 mm
Cobbles	80 to 300 mm
Blocks	> 300 mm

COMPACTION INDEX "N"

Very Loose	0-4
Loose	4-10
Compact	10-30
Dense	30-50
Very Dense	>50

CONSISTENCY "Cu" (kPa)

Very Soft	< 12
Soft	12 - 25
Firm	25 - 50
Stiff	50 - 100
Very Stiff	100 - 200
Hard	> 200

ROCK QUALITY DESIGNATION

QUALIFIER	% RQD
Very Poor	<25
Poor	25-50
Fair	50-75
Good	75-90
Excellent	90-100

VISUAL CONTAMINATION (hydrocarbons)
A : Absent
D : Disseminated
P : Pervasive

DEGREE OF PLASTICITY

	"W_L"	S_t = Cu/Cu_r
Low	< 30 %	< 2
Medium	30 - 50 %	2 - 4
High	> 50 %	4 - 8
Very high		8 - 16
Sensitive		> 16

CALIBER
P : 148 mm
N : 64 mm
B : 51 mm

WATER LEVEL
Date:
Depth(m) :
Water Infiltration
Groundwater table

DEPTH (m)	DEPTH - ft	ELEVATION (m)	STRATIGRAPHIC DESCRIPTION	SYMBOL	TYPE NO	SUB-SAMPLE	CALIBER	STATE	RECOVERY	N, R or RQD	BLOW COUNTS /15 cm Fragmentation (mm)	VOC (ppm)	VISUAL CONTAMINATION (hydrocarbons) A	D	P	GRAPHIC	WATER LEVELS	LAB TESTS
		77.96	Level															
		0.00	Sand, some gravel, reddish brown, damp.		SS-1		N		18			0						CA
		77.20																
1		0.76	Sand, reddish, brown, damp.		SS-2		N		18			0						
	5																	
2					SS-3		N		4			0						
		75.67																
		2.29	Sand, some gravel, brown, damp.		SS-4		N		4			0						
3		74.91																
	10	3.05	Sand, trace gravel, brown, damp.		SS-5		N		12			0						
4					SS-6		N		12			0						CA
	15																	
5					SS-7		N		18			0						
		72.63																
		5.33	Sand, traces of gravel, light brown, wet.		SS-8		N		18			0						
6		71.86																
	20	6.10	END OF THE BOREHOLE															

GRAPHIC
▲ : N (standard pen.)
△ : Nc (dynamic pen.)
▼ : Cu (laboratory)
▽ : Cur (laboratory)
× : Cu (field)
+ : Cur (field)
W_p W_n W_l
20 40 60 80

LAB TESTS
G : grain size analysis
H : hydrometer test
CA : chemical analysis
LI : liquid limit
PI : plastic limit
w : water content
Qu : rock comp. strength
Cur : disturbed shear strength
Cu : undrained shear strength
Cc : consolidation coefficient
k : permeability
Dup : duplicate

Remark(s) :

Verified by: **A. Babakhani, Ph.D., E.I.T.** Approved by: **A. Lamrani, P.Eng., M.Eng.** Date of report 2025-03-10

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BOREHOLE LOG

Borehole N°
BH24-2

Project Name: **Phase Two Environmental Site Assessment**

Client: **Groupe MB Canada Inc.**

Location: **630 Montreal Road and 609 Borthwick Avenue in Ottawa, Ontario**

Contractor: **Strata drilling**

Drilling Method **Direct Push**

Equipment **GeoProbe** Core Diameter:

Field Technician: **J. Brooks, Tech.** Prepared by: **K. Si Moussa, Drafter**

CRN: **GMBC100** F/N: **EO-24-1324-00**

Geodesic Coordinates (NAD83 SCOPQ SCRS) Zone: 9
X : **372025.0**
Y : **5034016.9**
Z : **78.54**

Plan Number:

Date of Borehole: **2024-07-16**

Depth of Borehole (m) : **6.10**

SAMPLE STATE
Disturbed
Intact (thin wall sampler)
Lost
Diamond core

TERMINOLOGY

"traces"	1-10 %
"some"	10-20 %
adjective (sandy...)	20-35 %
"and"	35-50 %

CLASSIFICATION

Clay	< 0,002 mm
Silt	0.002 to 0.08 mm
Sand	0.08 to 5 mm
Gravel	5 to 80 mm
Cobbles	80 to 300 mm
Blocks	> 300 mm

COMPACTION INDEX "N"

Very Loose	0-4
Loose	4-10
Compact	10-30
Dense	30-50
Very Dense	>50

CONSISTENCY "Cu" (kPa)

Very Soft	< 12
Soft	12 - 25
Firm	25 - 50
Stiff	50 - 100
Very Stiff	100 - 200
Hard	> 200

ROCK QUALITY DESIGNATION

QUALIFIER	% RQD
Very Poor	<25
Poor	25-50
Fair	50-75
Good	75-90
Excellent	90-100

VISUAL CONTAMINATION (hydrocarbons)
A : Absent
D : Disseminated
P : Pervasive

DEGREE OF PLASTICITY

	"W_L"	$S_t = Cu/Cu_r$
Low	< 30 %	< 2
Medium	30 - 50 %	2 - 4
High	> 50 %	4 - 8
Very high		8 - 16
Sensitive		> 16

CALIBER
P : 148 mm
N : 64 mm
B : 51 mm

WATER LEVEL
Date:
Depth(m) :
Water Infiltration
Groundwater table

DEPTH (m)	DEPTH - ft	ELEVATION (m)	STRATIGRAPHIC DESCRIPTION	SYMBOL	TYPE NO	SUB-SAMPLE	CALIBER	STATE	RECOVERY	N, R or RQD	BLOW COUNTS /15 cm Fragmentation (mm)	VOC (ppm)	VISUAL CONTAMINATION (hydrocarbons) A	D	P	GRAPHIC	WATER LEVELS	LAB TESTS
		78.54	Level															
		0.00	Sand, some gravel, dark brown, damp.		SS-1		N		56			0						
		77.78																
1		0.76	Sand, reddish, brown, damp.		SS-2		N		56			0						
	5	77.02																
		1.52	Sand, some cobbles, brown, damp.		SS-3		N		70			0						CA
2		76.25																
		2.29	Sand, trace cobbles, brown, damp.		SS-4		N		70			0						
		75.49																
3	10	3.05	Sand, some cobbles, brown, damp.		SS-5		N		53			0						
		74.73																
		3.81	Sand, some cobbles, light brown, damp.		SS-6		N		53			0						
4		73.97																
	15	4.57	Coarse sand, some cobbles, brown, wet.		SS-7		N		100			0						CA
5		73.21																
		5.33	Bed rock - fractured shale		SS-8		N		100			0						
6		72.44																
	20	6.10	END OF THE BOREHOLE															

GRAPHIC: ▲ : N (standard pen.) △ : Nc (dynamic pen.) ▼ : Cu (laboratory) ▽ : Cur (laboratory) × : Cu (field) + : Cur (field) — W_p W_n W_l — 20 40 60 80

LAB TESTS
G : grain size analysis
H : hydrometer test
CA : chemical analysis
LI : liquid limit
PI : plastic limit
w : water content
Qu : rock comp. strength
Cur : disturbed shear strength
Cu : undrained shear strength
Cc : consolidation coefficient
k : permeability
Dup : duplicate

Remark(s) :

Verified by: **A. Babakhani, Ph.D., E.I.T.** Approved by: **A. Lamrani, P.Eng., M.Eng.** Date of report 2025-03-10

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BOREHOLE LOG

Borehole N°
BH24-3

Project Name: **Phase Two Environmental Site Assessment**

Client: **Groupe MB Canada Inc.**

Location: **630 Montreal Road and 609 Borthwick Avenue in Ottawa, Ontario**

Contractor: **Strata drilling**

Drilling Method **Direct Push**

Equipment **GeoProbe** Core Diameter:

Field Technician: **J. Brooks, Tech.** Prepared by: **K. Si Moussa, Drafter**

CRN: **GMBC100** F/N: **EO-24-1324-00**

Geodesic Coordinates (NAD83 SCOPQ SCRS) Zone: 9
X : **372011.7**
Y : **5034018.5**
Z : **78.95**

Plan Number:

Date of Borehole: **2024-07-16**

Depth of Borehole (m) : **6.10**

SAMPLE STATE
- Disturbed
- Intact (thin wall sampler)
- Lost
- Diamond core

TERMINOLOGY

"traces"	1-10 %
"some"	10-20 %
adjective (sandy...)	20-35 %
"and"	35-50 %

CLASSIFICATION

Clay	< 0,002 mm
Silt	0.002 to 0.08 mm
Sand	0.08 to 5 mm
Gravel	5 to 80 mm
Cobbles	80 to 300 mm
Blocks	> 300 mm

COMPACTION INDEX "N"

Very Loose	0-4
Loose	4-10
Compact	10-30
Dense	30-50
Very Dense	>50

CONSISTENCY "Cu" (kPa)

Very Soft	< 12
Soft	12 - 25
Firm	25 - 50
Stiff	50 - 100
Very Stiff	100 - 200
Hard	> 200

ROCK QUALITY DESIGNATION

QUALIFIER	% RQD
Very Poor	<25
Poor	25-50
Fair	50-75
Good	75-90
Excellent	90-100

VISUAL CONTAMINATION (hydrocarbons)
A : Absent
D : Disseminated
P : Pervasive

DEGREE OF PLASTICITY

	"W_L"	S_t = Cu/Cu_r
Low	< 30 %	< 2
Medium	30 - 50 %	2 - 4
High	> 50 %	4 - 8
Very high		8 - 16
Sensitive		> 16

CALIBER
P : 148 mm
N : 64 mm
B : 51 mm

WATER LEVEL
Date:
Depth(m) :
Water Infiltration
Groundwater table

DEPTH (m)	DEPTH - ft	ELEVATION (m)	STRATIGRAPHIC DESCRIPTION	SYMBOL	TYPE NO	SUB-SAMPLE	CALIBER	STATE	RECOVERY	N, R or RQD	BLOW COUNTS /15 cm Fragmentation (mm)	VOC (ppm)	VISUAL CONTAMINATION (hydrocarbons) A	D	P	GRAPHIC	WATER LEVELS	LAB TESTS
		78.95	Level															
		0.00	Sandy gravel, grey, damp.		SS-1		N		60			0						
		78.19																
1		0.76	Cobbly sand, brownish grey, damp.		SS-2		N		60			0						CA
	5	77.43																
		1.52	Sand, some gravel, greyish brown, damp.		SS-3		N		66			0						
2		76.66																
		2.29	Sand, traces of gravel, brown, damp.		SS-4		N		66			0						
3	10	75.90																
		3.05	Sand and gravel, brown and grey, damp.		SS-5		N		60			0						
		75.14																
4		3.81	Sand with trace cobble, brown, damp.		SS-6		N		60			0						CA
	15																	
5					SS-7		N		66			0						
					SS-8		N		66			0						
6	20	72.85																
		6.10	END OF THE BOREHOLE															

GRAPHIC
▲ : N (standard pen.)
△ : Nc (dynamic pen.)
▼ : Cu (laboratory)
▽ : Cur (laboratory)
× : Cu (field)
+ : Cur (field)
W_p W_n W_l
20 40 60 80

LAB TESTS
G : grain size analysis
H : hydrometer test
CA : chemical analysis
LI : liquid limit
PI : plastic limit
w : water content
Qu : rock comp. strength
Cur : disturbed shear strength
Cu : undrained shear strength
Cc : consolidation coefficient
k : permeability
Dup : duplicate

Remark(s) :

Verified by: **A. Babakhani, Ph.D., E.I.T.** Approved by: **A. Lamrani, P.Eng., M.Eng.** Date of report 2025-03-10

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BOREHOLE LOG

Borehole N°
MW24-1

Project Name: **Phase Two Environmental Site Assessment**

CRN: **GMBC100** F/N: **EO-24-1324-00**

Client: **Groupe MB Canada Inc.**

Location: **630 Montreal Road and 609 Borthwick Avenue in Ottawa, Ontario**

Geodesic Coordinates (NAD83 SCOPQ SCRS) Zone: 9
X : **372037.7**
Y : **5034004.7**
Z : **78.81**

Contractor: **Strata drilling**

Drilling Method **Direct Push**

Plan Number:

Equipment **GeoProbe** Core Diameter:

Date of Borehole: **2024-07-22**

Field Technician: **J. Brooks, Tech.** Prepared by: **K. Si Moussa, Drafter**

Depth of Borehole (m) : **5.79**

SAMPLE STATE
Disturbed
Intact (thin wall sampler)
Lost
Diamond core

TERMINOLOGY

"traces"	1-10 %
"some"	10-20 %
adjective (sandy...)	20-35 %
"and"	35-50 %

CLASSIFICATION

Clay	< 0,002 mm
Silt	0.002 to 0.08 mm
Sand	0.08 to 5 mm
Gravel	5 to 80 mm
Cobbles	80 to 300 mm
Blocks	> 300 mm

COMPACTION INDEX "N"

Very Loose	0-4
Loose	4-10
Compact	10-30
Dense	30-50
Very Dense	>50

CONSISTENCY "Cu" (kPa)

Very Soft	< 12
Soft	12 - 25
Firm	25 - 50
Stiff	50 - 100
Very Stiff	100 - 200
Hard	> 200

ROCK QUALITY DESIGNATION

QUALIFIER	% RQD
Very Poor	<25
Poor	25-50
Fair	50-75
Good	75-90
Excellent	90-100

VISUAL CONTAMINATION (hydrocarbons)
A : Absent
D : Disseminated
P : Pervasive

DEGREE OF PLASTICITY "W_L" $S_t = Cu/Cu_r$

Low	< 30 %	< 2
Medium	30 - 50 %	2 - 4
High	> 50 %	4 - 8
Very high		8 - 16
Sensitive		> 16

CALIBER
P : 148 mm
N : 64 mm
B : 51 mm

WATER LEVEL
Date:
Depth(m) :
Water Infiltration
Groundwater table

DEPTH (m)	DEPTH - ft	ELEVATION (m)	STRATIGRAPHIC DESCRIPTION	SYMBOL	TYPE NO	SUB-SAMPLE	CALIBER	STATE	RECOVERY	N, R or RQD	BLOW COUNTS /15 cm Fragmentation (mm)	VOC (ppm)	VISUAL CONTAMINATION (hydrocarbons) A	D	P	GRAPHIC	WATER LEVELS	LAB TESTS
		79.05	Level															
0		0.00	Cement slap.															
		78.92	Gravel sub-base fill.															
		0.13	Sand, trace cobble, trace		SS-1		N		88			10						
		78.44	organics, dark brown,															
		0.61	damp.		SS-2		N		88			10						CA
1			Sand, traces of cobbles, light brown, damp.															
	5				SS-3		N		75			15						
		77.22																
2		1.83	Sand, light brown, damp		SS-4		N		75			10						
					SS-5		N		83			10						
3	10				SS-6		N		83			10						
		75.39																
		2.44	Sand, brown, damp.		SS-7		N		100			5						
4		74.78																
		4.27	Sand, trace gravel, whiteish brown, moist.		SS-8		N		100			5						
	15	74.17																
5		4.88	Sand, trace gravel, light brown, damp		SS-9		N		100			310						
		73.56																
		5.49	Sand, tracegravel,		SS-10													CA
		73.26	whiteish brown, wet.															
6		5.79	END OF THE BOHOLE															
	20		-Bedrock refusal															

GRAPHIC: ▲ : N (standard pen.) △ : Nc (dynamic pen.) ▼ : Cu (laboratory) ▽ : Cur (laboratory) × : Cu (field) + : Cur (field)
W_p W_n W_l
20 40 60 80

LAB TESTS
G : grain size analysis
H : hydrometer test
CA : chemical analysis
LI : liquid limit
PI : plastic limit
w : water content
Qu : rock comp. strength
Cur : disturbed shear strength
Cu : undrained shear strength
Cc : consolidation coefficient
k : permeability
Dup : duplicate

Remark(s) :

Verified by: **A. Babakhani, Ph.D., E.I.T.** Approved by: **A. Lamrani, P.Eng., M.Eng.** Date of report 2025-03-10

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BOREHOLE LOG

Borehole N°
MW24-2

Project Name: **Phase Two Environmental Site Assessment**

Client: **Groupe MB Canada Inc.**

Location: **630 Montreal Road and 609 Borthwick Avenue in Ottawa, Ontario**

Contractor: **Strata drilling**

Drilling Method **Direct Push**

Equipment **GeoProbe** Core Diameter:

Field Technician: **J. Brooks, Tech.** Prepared by: **K. Si Moussa, Drafter**

CRN: **GMBC100** F/N: **EO-24-1324-00**

Geodesic Coordinates (NAD83 SCOPQ SCRS) Zone: 9
X : **372035.1**
Y : **5034034.9**
Z : **78.81**

Plan Number:

Date of Borehole: **2024-07-16**

Depth of Borehole (m) : **6.32**

SAMPLE STATE
- Disturbed
- Intact (thin wall sampler)
- Lost
- Diamond core

TERMINOLOGY

"traces"	1-10 %
"some"	10-20 %
adjective (sandy...)	20-35 %
"and"	35-50 %

CLASSIFICATION

Clay	< 0.002 mm
Silt	0.002 to 0.08 mm
Sand	0.08 to 5 mm
Gravel	5 to 80 mm
Cobbles	80 to 300 mm
Blocks	> 300 mm

COMPACTION INDEX "N"

Very Loose	0-4
Loose	4-10
Compact	10-30
Dense	30-50
Very Dense	>50

CONSISTENCY "Cu" (kPa)

Very Soft	< 12
Soft	12 - 25
Firm	25 - 50
Stiff	50 - 100
Very Stiff	100 - 200
Hard	> 200

ROCK QUALITY DESIGNATION

QUALIFIER	% RQD
Very Poor	<25
Poor	25-50
Fair	50-75
Good	75-90
Excellent	90-100

VISUAL CONTAMINATION (hydrocarbons)
A : Absent
D : Disseminated
P : Pervasive

DEGREE OF PLASTICITY

	"W_L"	S_t = Cu/Cu_r
Low	< 30 %	< 2
Medium	30 - 50 %	2 - 4
High	> 50 %	4 - 8
Very high		8 - 16
Sensitive		> 16

CALIBER
P : 148 mm
N : 64 mm
B : 51 mm

WATER LEVEL
Date:
Depth(m) :
Water Infiltration
Groundwater table

DEPTH (m)	DEPTH - ft	ELEVATION (m)	STRATIGRAPHIC DESCRIPTION	SYMBOL	TYPE NO	SUB-SAMPLE	CALIBER	STATE	RECOVERY	N, R or RQD	BLOW COUNTS /15 cm Fragmentation (mm)	VOC (ppm)	VISUAL CONTAMINATION (hydrocarbons) A	D	P	GRAPHIC	WATER LEVELS	LAB TESTS
		78.81	Level															
		0.00	Sand, some gravel, darrk brown, damp.		SS-1		N		66			0						CA
		78.05																
1		0.76	Sand, brown, damp.		SS-2		N		66			0						
	5				SS-3		N		66			0						
2		76.52																
		2.29	Sand, light brown, moist.		SS-4		N		66			0						CA
3	10	75.76																
		3.05	Sand, trace gravel, reddish light brown, damp.		SS-5		N		76			0						
		75.00																
4		3.81	Cobbly sand, reddish brown, damp.		SS-6		N		76			0						
	15	74.24																
		4.57	Sand with some cobbles, reddish brown, damp.		SS-7		N		86			0						CA
5		73.48																
		5.33	Sand with some cobbles, brown, wet.		SS-8		N		86			0						
		72.71																
6	20	6.10																
		72.49	Silt, grey, wet		SS-9		N		100			0						
		6.32	END OF THE BOREHOLE -Bedrock refusal															

GRAPHIC
▲ : N (standard pen.)
△ : Nc (dynamic pen.)
▼ : Cu (laboratory)
▽ : Cur (laboratory)
× : Cu (field)
+ : Cur (field)
W_p W_n W_l
20 40 60 80

LAB TESTS
G : grain size analysis
H : hydrometer test
CA : chemical analysis
LI : liquid limit
PI : plastic limit
w : water content
Qu : rock comp. strength
Cur : disturbed shear strength
Cu : undrained shear strength
Cc : consolidation coefficient
k : permeability
Dup : duplicate

Remark(s) :

Verified by: **A. Babakhani, Ph.D., E.I.T.** Approved by: **A. Lamrani, P.Eng., M.Eng.** Date of report 2024-03-10

\\COLOMTLFS01\Partage-ABS\11-Geotec\Fichier de style\Corrigés\Logs anglais\6-Forage_Élévation_ENG_OBSVIS.sty

APPENDIX C

LABORATORY CERTIFICATES OF ANALYSIS

Certificate of Analysis

eurofins | Environment Testing

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
Invoice to: Groupe ABS
PO#:

Report Number:	3009469
Date Submitted:	2024-07-18
Date Reported:	2024-07-25
Project:	241324
COC #:	228918
Temperature (C):	8
Custody Seal:	

Dear Ata Babakhani:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Sample Comment Summary

Sample ID: 1736262 BH24-1 SS1 For all samples in this report, the metals spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte. (F2-F4) MRLs elevated due to matrix interferences (dilution done).

Report Comments:

Emma-Dawn Ferguson, Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated
.
Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at https://directory.cala.ca/

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

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Date Reported: 2024-07-25
Project: 241324
COC #: 228918

O.Reg 153-T1-All Other Soils

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria
Hydrocarbons				
BH24-1 SS1	Petroleum Hydrocarbons F2	<20	ug/g	STD 10
BH24-1 SS1	Petroleum Hydrocarbons F4	<200	ug/g	STD 120
Inorganics				
BH24-1 SS6	Sodium Adsorption Ratio	2.74		STD 2.4
BH24-2 SS7	Sodium Adsorption Ratio	3.29		STD 2.4
Metals				
BH24-2 SS3	Uranium	3.3	ug/g	STD 2.5
BH24-2 SS7	Molybdenum	4	ug/g	STD 2
MW24-2 SS1	Lead	134	ug/g	STD 120
MW24-2 SS7	Molybdenum	3	ug/g	STD 2

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

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COC #: 228918

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736262 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-1 SS1	Lab I.D. 1736263 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-1 SS6	Lab I.D. 1736265 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-2 SS7	Lab I.D. 1736266 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-3 SS2
PHC's F1	463416	10	ug/g	STD 25	<10	<10	<10	<10
PHC's F1-BTEX	463426	10	ug/g		<10	<10	<10	<10
PHC's F2	463293	20	ug/g	STD 10	<20*			
	463366	2	ug/g	STD 10			<2	
	463409	2	ug/g	STD 10				<2
	463534	2	ug/g	STD 10		<2		
PHC's F2-Napth	463497	2	ug/g					<2
		20	ug/g		<20			
PHC's F3	463293	200	ug/g	STD 240	200			
	463366	20	ug/g	STD 240			50	
	463409	20	ug/g	STD 240				<20
	463534	20	ug/g	STD 240		<20		
PHC's F3-PAH	463501	20	ug/g					<20
		200	ug/g		<200			
PHC's F4	463293	200	ug/g	STD 120	<200*			
	463366	20	ug/g	STD 120			110	
	463409	20	ug/g	STD 120				<20
	463534	20	ug/g	STD 120		<20		

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Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736267	1736268	1736269	1736270
					Sample Matrix Soil153	Soil153	Soil153	Soil153
					Sample Type			
					Sample Date 2024-07-16	2024-07-16	2024-07-16	2024-07-16
					Sampling Time			
					Sample I.D. BH24-3 SS6	MW24-2 SS1	MW24-2 SS7	BH24-12 SS7
PHC's F1	463416	10	ug/g	STD 25	<10	<10	<10	<10
PHC's F1-BTEX	463426	10	ug/g		<10	<10	<10	<10
PHC's F2	463366	2	ug/g	STD 10	<2			
	463406	2	ug/g	STD 10			<2	
	463470	2	ug/g	STD 10		2		<2
PHC's F2-Napth	463497	2	ug/g				<2	
PHC's F3	463366	20	ug/g	STD 240	<20			
	463406	20	ug/g	STD 240			40	
	463470	20	ug/g	STD 240		70		<20
PHC's F3-PAH	463501	20	ug/g				40	
PHC's F4	463366	20	ug/g	STD 120	<20			
	463406	20	ug/g	STD 120			80	
	463470	20	ug/g	STD 120		90		30

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736272
					Sample Matrix Soil153
					Sample Type
					Sample Date 2024-07-16
					Sampling Time
					Sample I.D. MW24-12 SS7
PHC's F1	463416	10	ug/g	STD 25	<10
PHC's F1-BTEX	463426	10	ug/g		<10
PHC's F2	463409	2	ug/g	STD 10	<2
PHC's F2-Napth	463497	2	ug/g		<2
PHC's F3	463409	20	ug/g	STD 240	60
PHC's F3-PAH	463501	20	ug/g		60

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Project: 241324
COC #: 228918

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736272	Sample Matrix Soil153	Sample Type	Sample Date 2024-07-16	Sampling Time	Sample I.D. MW24-12 SS7
PHC's F4	463409	20	ug/g	STD 120	120					

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736262	1736263	1736264	1736265	1736266
					Sample Matrix Soil153	Soil153	Soil153	Soil153	Soil153
					Sample Type				
					Sample Date 2024-07-16	2024-07-16	2024-07-16	2024-07-16	2024-07-16
					Sampling Time				
					Sample I.D. BH24-1 SS1	BH24-1 SS6	BH24-2 SS3	BH24-2 SS7	BH24-3 SS2
Antimony	463413	1	ug/g	STD 1.3	<1				
	463492	1	ug/g	STD 1.3		<1	<1	<1	<1
Arsenic	463413	1	ug/g	STD 18	1				
	463492	1	ug/g	STD 18		1	4	2	3
Barium	463413	1	ug/g	STD 220	33				
	463492	1	ug/g	STD 220		27	54	66	93
Beryllium	463413	1	ug/g	STD 2.5	<1				
	463492	1	ug/g	STD 2.5		<1	<1	<1	<1
Boron (Hot Water Soluble)	463389	0.5	ug/g		<0.5	<0.5	<0.5	<0.5	<0.5
Boron (total)	463413	5	ug/g	STD 36	<5				
	463492	5	ug/g	STD 36		<5	<5	5	<5
Cadmium	463413	0.4	ug/g	STD 1.2	<0.4				
	463492	0.4	ug/g	STD 1.2		<0.4	<0.4	<0.4	<0.4
Chromium Total	463413	1	ug/g	STD 70	10				
	463492	1	ug/g	STD 70		16	24	30	28
Cobalt	463413	1	ug/g	STD 21	2				
	463492	1	ug/g	STD 21		5	9	7	6
Copper	463413	1	ug/g	STD 92	5				

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Date Reported: 2024-07-25
Project: 241324
COC #: 228918

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736262	1736263	1736264	1736265	1736266
					Sample Matrix Soil153	Soil153	Soil153	Soil153	Soil153
					Sample Type				
					Sample Date 2024-07-16	2024-07-16	2024-07-16	2024-07-16	2024-07-16
					Sampling Time				
					Sample I.D. BH24-1 SS1	BH24-1 SS6	BH24-2 SS3	BH24-2 SS7	BH24-3 SS2
Copper	463492	1	ug/g	STD 92		11	21	18	20
Lead	463413	1	ug/g	STD 120	11				
	463492	1	ug/g	STD 120		4	20	9	26
Mercury	463413	0.1	ug/g	STD 0.27	<0.1				
	463492	0.1	ug/g	STD 0.27		<0.1	<0.1	<0.1	<0.1
Molybdenum	463413	1	ug/g	STD 2	<1				
	463492	1	ug/g	STD 2		<1	1	4*	2
Nickel	463413	1	ug/g	STD 82	6				
	463492	1	ug/g	STD 82		8	15	18	21
Selenium	463413	0.5	ug/g	STD 1.5	<0.5				
	463492	0.5	ug/g	STD 1.5		<0.5	<0.5	<0.5	<0.5
Silver	463413	0.2	ug/g	STD 0.5	<0.2				
	463492	0.2	ug/g	STD 0.5		<0.2	<0.2	<0.2	<0.2
Thallium	463413	1	ug/g	STD 1	<1				
	463492	1	ug/g	STD 1		<1	<1	<1	<1
Uranium	463413	0.5	ug/g	STD 2.5	<0.5				
	463492	0.5	ug/g	STD 2.5		<0.5	3.3*	0.6	1.2
Vanadium	463413	2	ug/g	STD 86	12				
	463492	2	ug/g	STD 86		20	31	21	20
Zinc	463413	2	ug/g	STD 290	26				
	463492	2	ug/g	STD 290		15	32	24	41

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Report Number: 3009469
Date Submitted: 2024-07-18
Date Reported: 2024-07-25
Project: 241324
COC #: 228918

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736267	1736268	1736269	1736270	1736271
					Sample Matrix Soil153	Soil153	Soil153	Soil153	Soil153
					Sample Type				
					Sample Date 2024-07-16	2024-07-16	2024-07-16	2024-07-16	2024-07-16
					Sampling Time				
					Sample I.D. BH24-3 SS6	MW24-2 SS1	MW24-2 SS7	BH24-12 SS7	BH24-13 SS2
Antimony	463413	1	ug/g	STD 1.3				<1	<1
	463492	1	ug/g	STD 1.3	<1	<1	<1		
Arsenic	463413	1	ug/g	STD 18				2	3
	463492	1	ug/g	STD 18	2	5	4		
Barium	463413	1	ug/g	STD 220				36	69
	463492	1	ug/g	STD 220	24	142	72		
Beryllium	463413	1	ug/g	STD 2.5				<1	<1
	463492	1	ug/g	STD 2.5	<1	<1	<1		
Boron (Hot Water Soluble)	463389	0.5	ug/g		<0.5	<0.5	<0.5	<0.5	<0.5
Boron (total)	463413	5	ug/g	STD 36				<5	5
	463492	5	ug/g	STD 36	<5	7	<5		
Cadmium	463413	0.4	ug/g	STD 1.2				<0.4	<0.4
	463492	0.4	ug/g	STD 1.2	<0.4	0.6	<0.4		
Chromium Total	463413	1	ug/g	STD 70				20	17
	463492	1	ug/g	STD 70	17	28	32		
Cobalt	463413	1	ug/g	STD 21				6	5
	463492	1	ug/g	STD 21	5	6	10		
Copper	463413	1	ug/g	STD 92				11	13
	463492	1	ug/g	STD 92	15	25	25		
Lead	463413	1	ug/g	STD 120				5	16
	463492	1	ug/g	STD 120	4	134*	12		
Mercury	463413	0.1	ug/g	STD 0.27				<0.1	<0.1
	463492	0.1	ug/g	STD 0.27	<0.1	0.1	<0.1		

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Certificate of Analysis

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Report Number: 3009469
Date Submitted: 2024-07-18
Date Reported: 2024-07-25
Project: 241324
COC #: 228918

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736267	Sample Matrix Soil153	Sample Type	Sample Date 2024-07-16	Sampling Time	Sample I.D. BH24-3 SS6	Lab I.D. 1736268	Sample Matrix Soil153	Sample Type	Sample Date 2024-07-16	Sampling Time	Sample I.D. MW24-2 SS1	Lab I.D. 1736269	Sample Matrix Soil153	Sample Type	Sample Date 2024-07-16	Sampling Time	Sample I.D. MW24-2 SS7	Lab I.D. 1736270	Sample Matrix Soil153	Sample Type	Sample Date 2024-07-16	Sampling Time	Sample I.D. BH24-12 SS7	Lab I.D. 1736271	Sample Matrix Soil153	Sample Type	Sample Date 2024-07-16	Sampling Time	Sample I.D. BH24-13 SS2
Molybdenum	463413	1	ug/g	STD 2																			2						1					
	463492	1	ug/g	STD 2	<1						1						3*																	
Nickel	463413	1	ug/g	STD 82																			12						15					
	463492	1	ug/g	STD 82	9						17						24																	
Selenium	463413	0.5	ug/g	STD 1.5																			<0.5						<0.5					
	463492	0.5	ug/g	STD 1.5	<0.5						<0.5						<0.5																	
Silver	463413	0.2	ug/g	STD 0.5																			<0.2						<0.2					
	463492	0.2	ug/g	STD 0.5	<0.2						<0.2						<0.2																	
Thallium	463413	1	ug/g	STD 1																			<1						<1					
	463492	1	ug/g	STD 1	<1						<1						<1																	
Uranium	463413	0.5	ug/g	STD 2.5																			0.5						0.8					
	463492	0.5	ug/g	STD 2.5	0.5						0.5						0.8																	
Vanadium	463413	2	ug/g	STD 86																			22						18					
	463492	2	ug/g	STD 86	23						23						29																	
Zinc	463413	2	ug/g	STD 290																			18						29					
	463492	2	ug/g	STD 290	18						132						31																	

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Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Others

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1736262	Soil153		2024-07-16		BH24-1 SS1
					1736263	Soil153		2024-07-16		BH24-1 SS6
					1736264	Soil153		2024-07-16		BH24-2 SS3
					1736265	Soil153		2024-07-16		BH24-2 SS7
					1736266	Soil153		2024-07-16		BH24-3 SS2
Chromium VI	463461	0.2	ug/g	STD 0.66	<0.2					
					0.3					
					0.3					
					0.5					
					<0.2					

Others

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1736267	Soil153		2024-07-16		BH24-3 SS6
					1736268	Soil153		2024-07-16		MW24-2 SS1
					1736269	Soil153		2024-07-16		MW24-2 SS7
					1736270	Soil153		2024-07-16		BH24-12 SS7
					1736271	Soil153		2024-07-16		BH24-13 SS2
Chromium VI	463461	0.2	ug/g	STD 0.66	0.3					
					<0.2					
					0.4					
					0.4					
					<0.2					

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Client: Groupe ABS
850 Industrial Ave (Suite B)
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Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009469
Date Submitted: 2024-07-18
Date Reported: 2024-07-25
Project: 241324
COC #: 228918

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736262 Soil153 2024-07-16 BH24-1 SS1	Lab I.D. 1736264 Soil153 2024-07-16 BH24-2 SS3	Lab I.D. 1736266 Soil153 2024-07-16 BH24-3 SS2
1+2-methylnaphthalene	463259	0.05	ug/g	STD 0.59	<0.05	<0.05	
	463407	0.05	ug/g	STD 0.59			<0.05
Acenaphthene	463254	0.05	ug/g	STD 0.072	<0.05	<0.05	
	463396	0.05	ug/g	STD 0.072			<0.05
Acenaphthylene	463254	0.05	ug/g	STD 0.093	<0.05	<0.05	
	463396	0.05	ug/g	STD 0.093			<0.05
Anthracene	463254	0.05	ug/g	STD 0.16	<0.05	<0.05	
	463396	0.05	ug/g	STD 0.16			<0.05
Benz[a]anthracene	463254	0.05	ug/g	STD 0.36	0.08	<0.05	
	463396	0.05	ug/g	STD 0.36			<0.05
Benzo[a]pyrene	463254	0.05	ug/g	STD 0.3	0.12	<0.05	
	463396	0.05	ug/g	STD 0.3			<0.05
Benzo[b]fluoranthene	463254	0.05	ug/g	STD 0.47	0.11	<0.05	
	463396	0.05	ug/g	STD 0.47			<0.05
Benzo[ghi]perylene	463254	0.05	ug/g	STD 0.68	<0.05	<0.05	
	463396	0.05	ug/g	STD 0.68			<0.05
Benzo[k]fluoranthene	463254	0.05	ug/g	STD 0.48	0.08	<0.05	
	463396	0.05	ug/g	STD 0.48			<0.05
Chrysene	463254	0.05	ug/g	STD 2.8	0.11	<0.05	
	463396	0.05	ug/g	STD 2.8			<0.05
Dibenz[a h]anthracene	463254	0.05	ug/g	STD 0.1	<0.05	<0.05	
	463396	0.05	ug/g	STD 0.1			<0.05
Fluoranthene	463254	0.05	ug/g	STD 0.56	0.21	0.08	

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COC #: 228918

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736262 Soil153 2024-07-16 BH24-1 SS1	Lab I.D. 1736264 Soil153 2024-07-16 BH24-2 SS3	Lab I.D. 1736266 Soil153 2024-07-16 BH24-3 SS2
Fluoranthene	463396	0.05	ug/g	STD 0.56			<0.05
Fluorene	463254	0.05	ug/g	STD 0.12	<0.05	<0.05	
	463396	0.05	ug/g	STD 0.12			<0.05
Indeno[1 2 3-cd]pyrene	463254	0.05	ug/g	STD 0.23	0.05	<0.05	
	463396	0.05	ug/g	STD 0.23			<0.05
Methlynaphthalene, 1-	463254	0.05	ug/g	STD 0.59	<0.05	<0.05	
	463396	0.05	ug/g	STD 0.59			<0.05
Methlynaphthalene, 2-	463254	0.05	ug/g	STD 0.59	<0.05	<0.05	
	463396	0.05	ug/g	STD 0.59			<0.05
Naphthalene	463254	0.013	ug/g	STD 0.09	<0.013	<0.013	
	463396	0.013	ug/g	STD 0.09			<0.013
Phenanthrene	463254	0.05	ug/g	STD 0.69	0.06	<0.05	
	463396	0.05	ug/g	STD 0.69			<0.05
Pyrene	463254	0.05	ug/g	STD 1	0.19	0.07	
	463396	0.05	ug/g	STD 1			<0.05

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PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736269 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. MW24-2 SS7
1+2-methylnaphthalene	463407	0.05	ug/g	STD 0.59	<0.05
Acenaphthene	463396	0.05	ug/g	STD 0.072	<0.05
Acenaphthylene	463396	0.05	ug/g	STD 0.093	<0.05
Anthracene	463396	0.05	ug/g	STD 0.16	<0.05
Benz[a]anthracene	463396	0.05	ug/g	STD 0.36	<0.05
Benzo[a]pyrene	463396	0.05	ug/g	STD 0.3	<0.05
Benzo[b]fluoranthene	463396	0.05	ug/g	STD 0.47	<0.05
Benzo[ghi]perylene	463396	0.05	ug/g	STD 0.68	<0.05
Benzo[k]fluoranthene	463396	0.05	ug/g	STD 0.48	<0.05
Chrysene	463396	0.05	ug/g	STD 2.8	<0.05
Dibenz[a h]anthracene	463396	0.05	ug/g	STD 0.1	<0.05
Fluoranthene	463396	0.05	ug/g	STD 0.56	<0.05
Fluorene	463396	0.05	ug/g	STD 0.12	<0.05
Indeno[1 2 3-cd]pyrene	463396	0.05	ug/g	STD 0.23	<0.05
Methlynaphthalene, 1-	463396	0.05	ug/g	STD 0.59	<0.05
Methlynaphthalene, 2-	463396	0.05	ug/g	STD 0.59	<0.05
Naphthalene	463396	0.013	ug/g	STD 0.09	<0.013
Phenanthrene	463396	0.05	ug/g	STD 0.69	0.05
Pyrene	463396	0.05	ug/g	STD 1	<0.05

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PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736272 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. MW24-12 SS7	Lab I.D. 1736273 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-12 SS3
1+2-methylnaphthalene	463407	0.05	ug/g	STD 0.59	<0.05	
	463471	0.05	ug/g	STD 0.59		<0.05
Acenaphthene	463396	0.05	ug/g	STD 0.072	<0.05	<0.05
Acenaphthylene	463396	0.05	ug/g	STD 0.093	<0.05	<0.05
Anthracene	463396	0.05	ug/g	STD 0.16	<0.05	<0.05
Benz[a]anthracene	463396	0.05	ug/g	STD 0.36	<0.05	<0.05
Benzo[a]pyrene	463396	0.05	ug/g	STD 0.3	<0.05	<0.05
Benzo[b]fluoranthene	463396	0.05	ug/g	STD 0.47	<0.05	<0.05
Benzo[ghi]perylene	463396	0.05	ug/g	STD 0.68	<0.05	<0.05
Benzo[k]fluoranthene	463396	0.05	ug/g	STD 0.48	<0.05	<0.05
Chrysene	463396	0.05	ug/g	STD 2.8	<0.05	<0.05
Dibenz[a h]anthracene	463396	0.05	ug/g	STD 0.1	<0.05	<0.05
Fluoranthene	463396	0.05	ug/g	STD 0.56	<0.05	0.07
Fluorene	463396	0.05	ug/g	STD 0.12	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	463396	0.05	ug/g	STD 0.23	<0.05	<0.05
Methlynaphthalene, 1-	463396	0.05	ug/g	STD 0.59	<0.05	<0.05
Methlynaphthalene, 2-	463396	0.05	ug/g	STD 0.59	<0.05	<0.05
Naphthalene	463396	0.013	ug/g	STD 0.09	<0.013	<0.013
Phenanthrene	463396	0.05	ug/g	STD 0.69	<0.05	<0.05
Pyrene	463396	0.05	ug/g	STD 1	<0.05	0.06

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Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Particle Size

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736265
					Sample Matrix Soil153
					Sample Type
					Sample Date 2024-07-16
					Sampling Time
					Sample I.D. BH24-2 SS7
Soil < 75um	463433	0.1	%		4.5
Soil > 75um	463433	0.1	%		95.5
Texture - Coarse Med/Fine	463433		%		coarse

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736262	1736263	1736265	1736266
					Sample Matrix Soil153	Soil153	Soil153	Soil153
					Sample Type			
					Sample Date 2024-07-16	2024-07-16	2024-07-16	2024-07-16
					Sampling Time			
					Sample I.D. BH24-1 SS1	BH24-1 SS6	BH24-2 SS7	BH24-3 SS2
Acetone	463415	0.50	ug/g	STD 0.5		<0.50	<0.50	
Benzene	463415	0.0068	ug/g	STD 0.02	<0.0068	<0.0068	<0.0068	<0.0068
Bromodichloromethane	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Bromoform	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Bromomethane	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Carbon Tetrachloride	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Chlorobenzene	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Chloroform	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Dibromochloromethane	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Dichlorobenzene, 1,2-	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Dichlorobenzene, 1,3-	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Dichlorobenzene, 1,4-	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Dichlorodifluoromethane	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736262	1736263	1736265	1736266
					Sample Matrix Soil153	Soil153	Soil153	Soil153
					Sample Type			
					Sample Date 2024-07-16	2024-07-16	2024-07-16	2024-07-16
					Sampling Time			
					Sample I.D. BH24-1 SS1	BH24-1 SS6	BH24-2 SS7	BH24-3 SS2
Dichloroethane, 1,1-	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Dichloroethane, 1,2-	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Dichloroethylene, 1,1-	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Dichloroethylene, 1,2-cis-	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Dichloroethylene, 1,2-trans-	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Dichloropropane, 1,2-	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Dichloropropene,1,3-	463425	0.05	ug/g	STD 0.05		<0.05	<0.05	
Dichloropropene,1,3-cis-	463415	0.05	ug/g			<0.05	<0.05	
Dichloropropene,1,3-trans-	463415	0.05	ug/g			<0.05	<0.05	
Ethylbenzene	463415	0.018	ug/g	STD 0.05	<0.018	<0.018	<0.018	<0.018
Ethylene dibromide	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Hexane (n)	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Methyl Ethyl Ketone	463415	0.50	ug/g	STD 0.5		<0.50	<0.50	
Methyl Isobutyl Ketone	463415	0.50	ug/g	STD 0.5		<0.50	<0.50	
Methyl tert-Butyl Ether (MTBE)	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Methylene Chloride	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Styrene	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Tetrachloroethane, 1,1,1,2-	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Tetrachloroethane, 1,1,2,2-	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Tetrachloroethylene	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Toluene	463415	0.08	ug/g	STD 0.2	<0.08	<0.08	<0.08	<0.08
Trichloroethane, 1,1,1-	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	
Trichloroethane, 1,1,2-	463415	0.05	ug/g	STD 0.05		<0.05	<0.05	

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Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736262	1736263	1736265	1736266
					Sample Matrix Soil153	Soil153	Soil153	Soil153
					Sample Type			
					Sample Date 2024-07-16	2024-07-16	2024-07-16	2024-07-16
					Sampling Time			
					Sample I.D. BH24-1 SS1	BH24-1 SS6	BH24-2 SS7	BH24-3 SS2
Trichloroethylene	463415	0.01	ug/g	STD 0.05		<0.01	<0.01	
Trichlorofluoromethane	463415	0.05	ug/g	STD 0.25		<0.05	<0.05	
Vinyl Chloride	463415	0.02	ug/g	STD 0.02		<0.02	<0.02	
Xylene Mixture	463423	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Xylene, m/p-	463415	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
Xylene, o-	463415	0.05	ug/g		<0.05	<0.05	<0.05	<0.05

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736267	1736268	1736269	1736270
					Sample Matrix Soil153	Soil153	Soil153	Soil153
					Sample Type			
					Sample Date 2024-07-16	2024-07-16	2024-07-16	2024-07-16
					Sampling Time			
					Sample I.D. BH24-3 SS6	MW24-2 SS1	MW24-2 SS7	BH24-12 SS7
Acetone	463415	0.50	ug/g	STD 0.5	<0.50	<0.50	<0.50	<0.50
Benzene	463415	0.0068	ug/g	STD 0.02	<0.0068	<0.0068	<0.0068	<0.0068
Bromodichloromethane	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736267 Soil153 2024-07-16 BH24-3 SS6	Lab I.D. 1736268 Soil153 2024-07-16 MW24-2 SS1	Lab I.D. 1736269 Soil153 2024-07-16 MW24-2 SS7	Lab I.D. 1736270 Soil153 2024-07-16 BH24-12 SS7
Dichloroethane, 1,1-	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethane, 1,2-	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,1-	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,2-cis-	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,2-trans-	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropane, 1,2-	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropene,1,3-	463425	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropene,1,3-cis-	463415	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
Dichloropropene,1,3-trans-	463415	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
Ethylbenzene	463415	0.018	ug/g	STD 0.05	<0.018	<0.018	<0.018	<0.018
Ethylene dibromide	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Hexane (n)	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	463415	0.50	ug/g	STD 0.5	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	463415	0.50	ug/g	STD 0.5	<0.50	<0.50	<0.50	<0.50
Methyl tert-Butyl Ether (MTBE)	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Styrene	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,2,2-	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Toluene	463415	0.08	ug/g	STD 0.2	<0.08	<0.08	<0.08	<0.08
Trichloroethane, 1,1,1-	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,2-	463415	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05

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Client: Groupe ABS
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K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009469
Date Submitted: 2024-07-18
Date Reported: 2024-07-25
Project: 241324
COC #: 228918

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736267 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-3 SS6	1736268 Soil153 2024-07-16 MW24-2 SS1	1736269 Soil153 2024-07-16 MW24-2 SS7	1736270 Soil153 2024-07-16 BH24-12 SS7
Trichloroethylene	463415	0.01	ug/g	STD 0.05	<0.01	<0.01	<0.01	<0.01
Trichlorofluoromethane	463415	0.05	ug/g	STD 0.25	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	463415	0.02	ug/g	STD 0.02	<0.02	<0.02	<0.02	<0.02
Xylene Mixture	463423	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Xylene, m/p-	463415	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
Xylene, o-	463415	0.05	ug/g		<0.05	<0.05	<0.05	<0.05

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736272 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. MW24-12 SS7
Acetone	463415	0.50	ug/g	STD 0.5	<0.50
Benzene	463415	0.0068	ug/g	STD 0.02	<0.0068
Bromodichloromethane	463415	0.05	ug/g	STD 0.05	<0.05
Bromoform	463415	0.05	ug/g	STD 0.05	<0.05
Bromomethane	463415	0.05	ug/g	STD 0.05	<0.05
Carbon Tetrachloride	463415	0.05	ug/g	STD 0.05	<0.05
Chlorobenzene	463415	0.05	ug/g	STD 0.05	<0.05
Chloroform	463415	0.05	ug/g	STD 0.05	<0.05
Dibromochloromethane	463415	0.05	ug/g	STD 0.05	<0.05
Dichlorobenzene, 1,2-	463415	0.05	ug/g	STD 0.05	<0.05
Dichlorobenzene, 1,3-	463415	0.05	ug/g	STD 0.05	<0.05
Dichlorobenzene, 1,4-	463415	0.05	ug/g	STD 0.05	<0.05
Dichlorodifluoromethane	463415	0.05	ug/g	STD 0.05	<0.05

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COC #: 228918

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736272 / Sample Matrix Soil153 / Sample Type / Sample Date 2024-07-16 / Sampling Time / Sample I.D. MW24-12 SS7
Dichloroethane, 1,1-	463415	0.05	ug/g	STD 0.05	<0.05
Dichloroethane, 1,2-	463415	0.05	ug/g	STD 0.05	<0.05
Dichloroethylene, 1,1-	463415	0.05	ug/g	STD 0.05	<0.05
Dichloroethylene, 1,2-cis-	463415	0.05	ug/g	STD 0.05	<0.05
Dichloroethylene, 1,2-trans-	463415	0.05	ug/g	STD 0.05	<0.05
Dichloropropane, 1,2-	463415	0.05	ug/g	STD 0.05	<0.05
Dichloropropene,1,3-	463425	0.05	ug/g	STD 0.05	<0.05
Dichloropropene,1,3-cis-	463415	0.05	ug/g		<0.05
Dichloropropene,1,3-trans-	463415	0.05	ug/g		<0.05
Ethylbenzene	463415	0.018	ug/g	STD 0.05	<0.018
Ethylene dibromide	463415	0.05	ug/g	STD 0.05	<0.05
Hexane (n)	463415	0.05	ug/g	STD 0.05	<0.05
Methyl Ethyl Ketone	463415	0.50	ug/g	STD 0.5	<0.50
Methyl Isobutyl Ketone	463415	0.50	ug/g	STD 0.5	<0.50
Methyl tert-Butyl Ether (MTBE)	463415	0.05	ug/g	STD 0.05	<0.05
Methylene Chloride	463415	0.05	ug/g	STD 0.05	<0.05
Styrene	463415	0.05	ug/g	STD 0.05	<0.05
Tetrachloroethane, 1,1,1,2-	463415	0.05	ug/g	STD 0.05	<0.05
Tetrachloroethane, 1,1,2,2-	463415	0.05	ug/g	STD 0.05	<0.05
Tetrachloroethylene	463415	0.05	ug/g	STD 0.05	<0.05
Toluene	463415	0.08	ug/g	STD 0.2	<0.08
Trichloroethane, 1,1,1-	463415	0.05	ug/g	STD 0.05	<0.05
Trichloroethane, 1,1,2-	463415	0.05	ug/g	STD 0.05	<0.05

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Certificate of Analysis

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Project: 241324
COC #: 228918

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736272 Soil153 2024-07-16 MW24-12 SS7
Trichloroethylene	463415	0.01	ug/g	STD 0.05	<0.01
Trichlorofluoromethane	463415	0.05	ug/g	STD 0.25	<0.05
Vinyl Chloride	463415	0.02	ug/g	STD 0.02	<0.02
Xylene Mixture	463423	0.05	ug/g	STD 0.05	<0.05
Xylene, m/p-	463415	0.05	ug/g		<0.05
Xylene, o-	463415	0.05	ug/g		<0.05

Inorganics

Analyte	Batch No	MRL	Units	Guideline	1736262 Soil153 2024-07-16 BH24-1 SS1	1736263 Soil153 2024-07-16 BH24-1 SS6	1736264 Soil153 2024-07-16 BH24-2 SS3	1736265 Soil153 2024-07-16 BH24-2 SS7	1736266 Soil153 2024-07-16 BH24-3 SS2
Cyanide (CN-)	463378	0.005	ug/g	STD 0.051	<0.005	<0.005	<0.005		
	463464	0.005	ug/g	STD 0.051				<0.005	<0.005
Electrical Conductivity	463435	0.05	mS/cm	STD 0.57	0.14	0.13	0.12	0.18	0.17
pH - CaCl2	463363	2.00			7.86	7.78	7.78	7.82	7.82
Sodium Adsorption Ratio	463436	0.01		STD 2.4	0.17	2.74*	0.49	3.29*	0.30

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Inorganics

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1736267 Soil153 2024-07-16 BH24-3 SS6	1736268 Soil153 2024-07-16 MW24-2 SS1	1736269 Soil153 2024-07-16 MW24-2 SS7	1736270 Soil153 2024-07-16 BH24-12 SS7	1736271 Soil153 2024-07-16 BH24-13 SS2
Cyanide (CN-)	463464	0.005	ug/g	STD 0.051	<0.005	<0.005	<0.005	<0.005	<0.005
Electrical Conductivity	463435	0.05	mS/cm	STD 0.57	0.11	0.20	0.18	0.19	0.17
pH - CaCl2	463363	2.00			7.76	7.81	7.81	7.83	7.81
Sodium Adsorption Ratio	463436	0.01		STD 2.4	0.27	0.63	1.56	1.85	0.26

Moisture

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.			
					1736262 Soil153 2024-07-16 BH24-1 SS1	1736263 Soil153 2024-07-16 BH24-1 SS6	1736265 Soil153 2024-07-16 BH24-2 SS7	1736266 Soil153 2024-07-16 BH24-3 SS2
Moisture-Humidite	463293	0.1	%		7.0			
	463366	0.1	%				4.0	
	463409	0.1	%					5.5
	463534	0.1	%			5.4		

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Moisture

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736267	1736268	1736269	1736270
					Sample Matrix Soil153	Soil153	Soil153	Soil153
					Sample Type			
					Sample Date 2024-07-16	2024-07-16	2024-07-16	2024-07-16
					Sampling Time			
					Sample I.D. BH24-3 SS6	MW24-2 SS1	MW24-2 SS7	BH24-12 SS7
Moisture-Humidite	463366	0.1	%		4.7			
	463406	0.1	%				4.4	
	463470	0.1	%			6.2		5.1

Moisture

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736272
					Sample Matrix Soil153
					Sample Type
					Sample Date 2024-07-16
					Sampling Time
					Sample I.D. MW24-12 SS7
Moisture-Humidite	463409	0.1	%		3.4

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PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736262 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-1 SS1	Lab I.D. 1736263 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-1 SS6	Lab I.D. 1736265 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-2 SS7	Lab I.D. 1736266 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-3 SS2
Alpha-androstrane	463293	0	%		60			
	463366	0	%				88	
	463409	0	%					81
	463534	0	%			85		

PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736267 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-3 SS6	Lab I.D. 1736268 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. MW24-2 SS1	Lab I.D. 1736269 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. MW24-2 SS7	Lab I.D. 1736270 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-12 SS7
Alpha-androstrane	463366	0	%		88			
	463406	0	%				99	
	463470	0	%			105		94

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PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736272 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. MW24-12 SS7
Alpha-androstrane	463409	0	%		70

VOCs Surrogates

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736262 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-1 SS1	1736263 Soil153 2024-07-16 BH24-1 SS6	1736265 Soil153 2024-07-16 BH24-2 SS7	1736266 Soil153 2024-07-16 BH24-3 SS2
1,2-dichloroethane-d4	463415	0	%			101	109	
4-bromofluorobenzene	463415	0	%			93	91	
Toluene-d8	463415	0	%		96	88	87	90

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VOCs Surrogates

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736267 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-3 SS6	Lab I.D. 1736268 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. MW24-2 SS1	Lab I.D. 1736269 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. MW24-2 SS7	Lab I.D. 1736270 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. BH24-12 SS7
1,2-dichloroethane-d4	463415	0	%		115	113	117	106
4-bromofluorobenzene	463415	0	%		84	88	100	97
Toluene-d8	463415	0	%		97	98	101	87

VOCs Surrogates

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736272 Sample Matrix Soil153 Sample Type Sample Date 2024-07-16 Sampling Time Sample I.D. MW24-12 SS7
1,2-dichloroethane-d4	463415	0	%		114
4-bromofluorobenzene	463415	0	%		79
Toluene-d8	463415	0	%		103

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463254	Methlynaphthalene, 1-	<0.05 ug/g	74	50-140	66	50-140	0	0-40
463254	Methlynaphthalene, 2-	<0.05 ug/g	75	50-140	68	50-140	0	0-40
463254	Acenaphthene	<0.05 ug/g	73	50-140	67	50-140	0	0-40
463254	Acenaphthylene	<0.05 ug/g	77	50-140	69	50-140	0	0-40
463254	Anthracene	<0.05 ug/g	67	50-140	62	50-140	0	0-40
463254	Benz[a]anthracene	<0.05 ug/g	63	50-140	62	50-140	0	0-40
463254	Benzo[a]pyrene	<0.05 ug/g	61	50-140	67	50-140	0	0-40
463254	Benzo[b]fluoranthene	<0.05 ug/g	79	50-140	71	50-140	0	0-40
463254	Benzo[ghi]perylene	<0.05 ug/g	53	50-140	64	50-140	0	0-40
463254	Benzo[k]fluoranthene	<0.05 ug/g	74	50-140	69		0	0-40
463254	Chrysene	<0.05 ug/g	71	50-140	95	50-140	0	0-40
463254	Dibenz[a h]anthracene	<0.05 ug/g	58	50-140	55	50-140	0	0-40
463254	Fluoranthene	<0.05 ug/g	70	50-140	67	50-140	0	0-40
463254	Fluorene	<0.05 ug/g	66	50-140	60	50-140	0	0-40
463254	Indeno[1 2 3-cd]pyrene	<0.05 ug/g	58	50-140	54	50-140	0	0-40
463254	Naphthalene	<0.013 ug/g	66	50-140	61	50-140	0	0-40
463254	Phenanthrene	<0.05 ug/g	66	50-140	63	50-140	0	0-40
463254	Pyrene	<0.05 ug/g	72	50-140	71	50-140	0	0-40
463259	1+2-methylnaphthalene							
463293	PHC's F2	<20 ug/g	98	80-120	87	60-140	0	0-30
463293	PHC's F3	<200 ug/g	98	80-120	87	60-140	0	0-30
463293	PHC's F4	<200 ug/g	98	80-120	87	60-140	0	0-30
463293	Moisture-Humidite	<0.1 %	100	80-120			5	
463363	pH - CaCl2	5.39	98	90-110			0	
463366	PHC's F2	<2 ug/g	87	80-120	90	60-140	0	0-30
463366	PHC's F3	<20 ug/g	87	80-120	90	60-140	0	0-30
463366	PHC's F4	<20 ug/g	87	80-120	90	60-140	0	0-30
463366	Moisture-Humidite	<0.1 %	100	80-120			20	
463378	Cyanide (CN-)	<0.005 ug/g	91	75-125	103	70-130	0	0-20
463389	Boron (Hot Water Soluble)	<0.5 ug/g	106	70-130	110	60-140	0	0-30
463396	Methlynaphthalene, 1-	<0.05 ug/g	73	50-140	75	50-140	0	0-40
463396	Methlynaphthalene, 2-	<0.05 ug/g	67	50-140	69	50-140	0	0-40

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Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009469
Date Submitted: 2024-07-18
Date Reported: 2024-07-25
Project: 241324
COC #: 228918

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463396	Acenaphthene	<0.05 ug/g	70	50-140	67	50-140	0	0-40
463396	Acenaphthylene	<0.05 ug/g	72	50-140	71	50-140	0	0-40
463396	Anthracene	<0.05 ug/g	67	50-140	66	50-140	0	0-40
463396	Benz[a]anthracene	<0.05 ug/g	63	50-140	62	50-140	0	0-40
463396	Benzo[a]pyrene	<0.05 ug/g	62	50-140	64	50-140	0	0-40
463396	Benzo[b]fluoranthene	<0.05 ug/g	57	50-140	67	50-140	0	0-40
463396	Benzo[ghi]perylene	<0.05 ug/g	52	50-140	51	50-140	0	0-40
463396	Benzo[k]fluoranthene	<0.05 ug/g	69	50-140	73		0	0-40
463396	Chrysene	<0.05 ug/g	77	50-140	76	50-140	0	0-40
463396	Dibenz[a h]anthracene	<0.05 ug/g	51	50-140	51	50-140	0	0-40
463396	Fluoranthene	<0.05 ug/g	66	50-140	73	50-140	0	0-40
463396	Fluorene	<0.05 ug/g	61	50-140	60	50-140	0	0-40
463396	Indeno[1 2 3-cd]pyrene	<0.05 ug/g	50	50-140	50	50-140	0	0-40
463396	Naphthalene	<0.013 ug/g	66	50-140	64	50-140	0	0-40
463396	Phenanthrene	<0.05 ug/g	60	50-140	70	50-140	0	0-40
463396	Pyrene	<0.05 ug/g	66	50-140	73	50-140	0	0-40
463406	PHC's F2	<2 ug/g	104	80-120	103	60-140	0	0-30
463406	PHC's F3	<20 ug/g	104	80-120	103	60-140	0	0-30
463406	PHC's F4	<20 ug/g	104	80-120	103	60-140	0	0-30
463406	Moisture-Humidite	<0.1 %	100	80-120			20	
463407	1+2-methylnaphthalene							
463409	PHC's F2	<2 ug/g	81	80-120	90	60-140	0	0-30
463409	PHC's F3	<20 ug/g	81	80-120	90	60-140	0	0-30
463409	PHC's F4	<20 ug/g	81	80-120	90	60-140	0	0-30
463409	Moisture-Humidite	<0.1 %	100	80-120			20	
463413	Silver	<0.2 ug/g	102	70-130	94	70-130	0	0-20
463413	Arsenic	<1 ug/g	97	70-130	90	70-130	0	0-20
463413	Boron (total)	<5 ug/g	93	70-130	93	70-130	0	0-20
463413	Barium	<1 ug/g	99	70-130	152	70-130	1	0-20
463413	Beryllium	<1 ug/g	98	70-130	85	70-130	0	0-20
463413	Cadmium	<0.4 ug/g	102	70-130	94	70-130	0	0-20
463413	Cobalt	<1 ug/g	105	70-130	88	70-130	0	0-20
463413	Chromium Total	<1 ug/g	105	70-130	156	70-130	7	0-20

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Client: Groupe ABS
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PO#:
Invoice to: Groupe ABS

Report Number: 3009469
Date Submitted: 2024-07-18
Date Reported: 2024-07-25
Project: 241324
COC #: 228918

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463413	Copper	<1 ug/g	107	70-130	88	70-130	0	0-20
463413	Mercury	<0.1 ug/g	90	70-130	85	70-130	0	0-20
463413	Molybdenum	<1 ug/g	111	70-130	85	70-130	0	0-20
463413	Nickel	<1 ug/g	106	70-130	111	70-130	7	0-20
463413	Lead	<1 ug/g	104	70-130	98	70-130	2	0-20
463413	Antimony	<1 ug/g	111	70-130	92	70-130	0	0-20
463413	Selenium	<0.5 ug/g	103	70-130	94	70-130	0	0-20
463413	Thallium	<1 ug/g	106	70-130	87	70-130	0	0-20
463413	Uranium	<0.5 ug/g	91	70-130	85	70-130	0	0-20
463413	Vanadium	<2 ug/g	101	70-130	105	70-130	1	0-20
463413	Zinc	<2 ug/g	106	70-130	112	70-130	10	0-20
463415	Tetrachloroethane, 1,1,1,2-	<0.05 ug/g	91	60-130	107	50-140	0	0-50
463415	Trichloroethane, 1,1,1-	<0.05 ug/g	101	60-130	111	50-140	0	0-50
463415	Tetrachloroethane, 1,1,2,2-	<0.05 ug/g	92	60-130	91	50-140	0	0-30
463415	Trichloroethane, 1,1,2-	<0.05 ug/g	94	60-130	115	50-140	0	0-50
463415	Dichloroethane, 1,1-	<0.05 ug/g	99	60-130	112	50-140	0	0-50
463415	Dichloroethylene, 1,1-	<0.05 ug/g	100	60-130	87	50-140	0	0-50
463415	Dichlorobenzene, 1,2-	<0.05 ug/g	95	60-130	111	50-140	0	0-50
463415	Dichloroethane, 1,2-	<0.05 ug/g	105	60-130	114	50-140	0	0-50
463415	Dichloropropane, 1,2-	<0.05 ug/g	91	60-130	119	50-140	0	0-50
463415	Dichlorobenzene, 1,3-	<0.05 ug/g	93	60-130	112	50-140	0	0-50
463415	Dichlorobenzene, 1,4-	<0.05 ug/g	93	60-130	112	50-140	0	0-50
463415	Acetone	<0.50 ug/g	99	60-130	112	50-140	0	0-50
463415	Benzene	<0.0068	96	60-130	114	50-140	0	0-50
463415	Bromodichloromethane	<0.05 ug/g	94	60-130	110	50-140	0	0-50
463415	Bromoform	<0.05 ug/g	86	60-130	109	50-140	0	0-50
463415	Bromomethane	<0.05 ug/g	107	60-130	105	50-140	0	0-50
463415	Dichloroethylene, 1,2-cis-	<0.05 ug/g	92	60-130	115	50-140	0	0-50
463415	Dichloropropene,1,3-cis-	<0.05 ug/g	92	60-130	115	50-140	0	0-50
463415	Carbon Tetrachloride	<0.05 ug/g	100	60-130	107	50-140	0	0-50
463415	Chloroform	<0.05 ug/g	102	60-130	115	50-140	0	0-50
463415	Dibromochloromethane	<0.05 ug/g	93	60-130	101	50-140	0	0-50
463415	Dichlorodifluoromethane	<0.05 ug/g	91	60-130	106	50-140	0	0-50

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Report Number: 3009469
Date Submitted: 2024-07-18
Date Reported: 2024-07-25
Project: 241324
COC #: 228918

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463415	Methylene Chloride	<0.05 ug/g	106	60-130	95	50-140	0	0-50
463415	Ethylbenzene	<0.018 ug/g	92	60-130	121	50-140	0	0-50
463415	Ethylene dibromide	<0.05 ug/g	92	60-130	113	50-140	0	0-50
463415	Hexane (n)	<0.05 ug/g	91	60-130	112	50-140	0	0-50
463415	Xylene, m/p-	<0.05 ug/g	98	60-130	112	50-140	0	0-50
463415	Methyl Ethyl Ketone	<0.50 ug/g	97	60-130	116	50-140	0	0-50
463415	Methyl Isobutyl Ketone	<0.50 ug/g	97	60-130	114	50-140	0	0-50
463415	Methyl tert-Butyl Ether (MTBE)	<0.05 ug/g	93	60-130	114	50-140	0	0-50
463415	Chlorobenzene	<0.05 ug/g	94	60-130	115	50-140	0	0-50
463415	Xylene, o-	<0.05 ug/g	92	60-130	118	50-140	0	0-50
463415	Styrene	<0.05 ug/g	95	60-130	117	50-140	0	0-50
463415	Dichloroethylene, 1,2-trans-	<0.05 ug/g	95	60-130	110	50-140	0	0-50
463415	Dichloropropene,1,3-trans-	<0.05 ug/g	93	60-130	115	50-140	0	0-50
463415	Tetrachloroethylene	<0.05 ug/g	97	60-130	119	50-140	0	0-50
463415	Toluene	<0.08 ug/g	94	60-130	114	50-140	0	0-50
463415	Trichloroethylene	<0.01 ug/g	91	60-130	115	50-140	0	0-50
463415	Trichlorofluoromethane	<0.05 ug/g	92	60-130	98	50-140	0	0-50
463415	Vinyl Chloride	<0.02 ug/g	97	60-130	92	50-140	0	0-50
463416	PHC's F1	<10 ug/g	85	80-120	106	60-140	0	0-30
463423	Xylene Mixture							
463425	Dichloropropene,1,3-							
463426	PHC's F1-BTEX							
463433	Soil < 75um							
463433	Soil > 75um							
463433	Texture - Coarse Med/Fine							
463435	Electrical Conductivity	<0.05	96	90-110			0	0-10
463436	Sodium Adsorption Ratio	<0.01					3	
463461	Chromium VI	<0.2 ug/g	110	70-130	109	70-130	0	0-35
463464	Cyanide (CN-)	<0.005 ug/g	90	75-125	107	70-130	0	0-20
463470	PHC's F2	<2 ug/g	90	80-120	80	60-140	0	0-30
463470	PHC's F3	<20 ug/g	90	80-120	80	60-140	0	0-30
463470	PHC's F4	<20 ug/g	90	80-120	80	60-140	0	0-30
463470	Moisture-Humidite	<0.1 %	100	80-120			31	

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Report Number: 3009469
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Date Reported: 2024-07-25
Project: 241324
COC #: 228918

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463471	1+2-methylnaphthalene							
463492	Silver	<0.2 ug/g	120	70-130	106	70-130	0	0-20
463492	Arsenic	<1 ug/g	101	70-130	98	70-130	0	0-20
463492	Boron (total)	<5 ug/g	97	70-130	118	70-130	0	0-20
463492	Barium	<1 ug/g	103	70-130	102	70-130	6	0-20
463492	Beryllium	<1 ug/g	99	70-130	91	70-130	0	0-20
463492	Cadmium	<0.4 ug/g	104	70-130	100	70-130	0	0-20
463492	Cobalt	<1 ug/g	109	70-130	100	70-130	0	0-20
463492	Chromium Total	<1 ug/g	106	70-130	105	70-130	30	0-20
463492	Copper	<1 ug/g	110	70-130	107	70-130	24	0-20
463492	Mercury	<0.1 ug/g	90	70-130	92	70-130	0	0-20
463492	Molybdenum	<1 ug/g	108	70-130	93	70-130	0	0-20
463492	Nickel	<1 ug/g	102	70-130	96	70-130	0	0-20
463492	Lead	<1 ug/g	105	70-130	94	70-130	2	0-20
463492	Antimony	<1 ug/g	97	70-130	107	70-130	0	0-20
463492	Selenium	<0.5 ug/g	103	70-130	101	70-130	0	0-20
463492	Thallium	<1 ug/g	104	70-130	93	70-130	0	0-20
463492	Uranium	<0.5 ug/g	90	70-130	91	70-130	0	0-20
463492	Vanadium	<2 ug/g	105	70-130	105	70-130	7	0-20
463492	Zinc	<2 ug/g	106	70-130	113	70-130	14	0-20
463497	PHC's F2-Napth							
463501	PHC's F3-PAH							
463534	PHC's F2	<2 ug/g	90	80-120	80	60-140	0	0-30
463534	PHC's F3	<20 ug/g	90	80-120	80	60-140	0	0-30
463534	PHC's F4	<20 ug/g	90	80-120	80	60-140	0	0-30
463534	Moisture-Humidite	<0.1 %	100	80-120			31	

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Certificate of Analysis

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Report Number: 3009469
Date Submitted: 2024-07-18
Date Reported: 2024-07-25
Project: 241324
COC #: 228918

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463254	Methlynaphthalene, 1-	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Methlynaphthalene, 2-	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Acenaphthene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Acenaphthylene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Anthracene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Benz[a]anthracene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Benzo[a]pyrene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Benzo[b]fluoranthene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Benzo[ghi]perylene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Benzo[k]fluoranthene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Chrysene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Dibenz[a h]anthracene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Fluoranthene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Fluorene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Indeno[1 2 3-cd]pyrene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Naphthalene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Phenanthrene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463254	Pyrene	GC-MS	2024-07-20	2024-07-21	C_M	P 8270
463259	1+2-methylnaphthalene	GC-MS	2024-07-22	2024-07-22	C_M	P 8270
463293	PHC's F2	GC/FID	2024-07-22	2024-07-22	H_S	CCME
463293	PHC's F3	GC/FID	2024-07-22	2024-07-22	H_S	CCME
463293	PHC's F4	GC/FID	2024-07-22	2024-07-22	H_S	CCME
463293	Moisture-Humidite	Oven	2024-07-22	2024-07-22	H_S	ASTM 2216
463363	pH - CaCl2	pH Meter	2024-07-23	2024-07-23	IP	AG Soil
463366	PHC's F2	GC/FID	2024-07-23	2024-07-23	H_S	CCME
463366	PHC's F3	GC/FID	2024-07-23	2024-07-23	H_S	CCME
463366	PHC's F4	GC/FID	2024-07-23	2024-07-23	H_S	CCME
463366	Moisture-Humidite	Oven	2024-07-23	2024-07-23	H_S	ASTM 2216
463378	Cyanide (CN-)	Skalar CN Analyzer	2024-07-23	2024-07-23	IP	MOECC E3015
463389	Boron (Hot Water Soluble)	iCAP OES	2024-07-23	2024-07-23	Z_S	MOECC E3470
463396	Methlynaphthalene, 1-	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Methlynaphthalene, 2-	GC-MS	2024-07-22	2024-07-23	C_M	P 8270

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Report Number: 3009469
Date Submitted: 2024-07-18
Date Reported: 2024-07-25
Project: 241324
COC #: 228918

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463396	Acenaphthene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Acenaphthylene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Anthracene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Benz[a]anthracene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Benzo[a]pyrene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Benzo[b]fluoranthene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Benzo[ghi]perylene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Benzo[k]fluoranthene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Chrysene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Dibenz[a h]anthracene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Fluoranthene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Fluorene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Indeno[1 2 3-cd]pyrene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Naphthalene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Phenanthrene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463396	Pyrene	GC-MS	2024-07-22	2024-07-23	C_M	P 8270
463406	PHC's F2	GC/FID	2024-07-24	2024-07-24	H_S	CCME
463406	PHC's F3	GC/FID	2024-07-24	2024-07-24	H_S	CCME
463406	PHC's F4	GC/FID	2024-07-24	2024-07-24	H_S	CCME
463406	Moisture-Humidite	Oven	2024-07-24	2024-07-24	H_S	ASTM 2216
463407	1+2-methylnaphthalene	GC-MS	2024-07-24	2024-07-24	C_M	P 8270
463409	PHC's F2	GC/FID	2024-07-24	2024-07-24	H_S	CCME
463409	PHC's F3	GC/FID	2024-07-24	2024-07-24	H_S	CCME
463409	PHC's F4	GC/FID	2024-07-24	2024-07-24	H_S	CCME
463409	Moisture-Humidite	Oven	2024-07-24	2024-07-24	H_S	ASTM 2216
463413	Silver	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Arsenic	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Boron (total)	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Barium	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Beryllium	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Cadmium	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Cobalt	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Chromium Total	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009469
Date Submitted: 2024-07-18
Date Reported: 2024-07-25
Project: 241324
COC #: 228918

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463413	Copper	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Mercury	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Molybdenum	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Nickel	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Lead	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Antimony	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Selenium	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Thallium	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Uranium	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Vanadium	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463413	Zinc	ICAPQ-MS	2024-07-24	2024-07-24	AaN	EPA 200.8/6020
463415	Tetrachloroethane, 1,1,1,2-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Trichloroethane, 1,1,1-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Tetrachloroethane, 1,1,2,2-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Trichloroethane, 1,1,2-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Dichloroethane, 1,1-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Dichloroethylene, 1,1-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Dichlorobenzene, 1,2-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Dichloroethane, 1,2-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Dichloropropane, 1,2-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Dichlorobenzene, 1,3-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Dichlorobenzene, 1,4-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Acetone	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Benzene	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Bromodichloromethane	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Bromoform	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Bromomethane	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Dichloroethylene, 1,2-cis-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Dichloropropene,1,3-cis-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Carbon Tetrachloride	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Chloroform	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Dibromochloromethane	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Dichlorodifluoromethane	GC-MS	2024-07-23	2024-07-23	SS	V 8260B

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009469
Date Submitted: 2024-07-18
Date Reported: 2024-07-25
Project: 241324
COC #: 228918

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463415	Methylene Chloride	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Ethylbenzene	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Ethylene dibromide	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Hexane (n)	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Xylene, m/p-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Methyl Ethyl Ketone	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Methyl Isobutyl Ketone	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Methyl tert-Butyl Ether (MTBE)	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Chlorobenzene	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Xylene, o-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Styrene	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Dichloroethylene, 1,2-trans-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Dichloropropene,1,3-trans-	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Tetrachloroethylene	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Toluene	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Trichloroethylene	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Trichlorofluoromethane	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463415	Vinyl Chloride	GC-MS	2024-07-23	2024-07-23	SS	V 8260B
463416	PHC's F1	GC/FID	2024-07-23	2024-07-24	SS	CCME
463423	Xylene Mixture	GC-MS	2024-07-24	2024-07-24	SS	V 8260B
463425	Dichloropropene,1,3-	GC-MS	2024-07-24	2024-07-24	SS	V 8260B
463426	PHC's F1-BTEX	GC/FID	2024-07-24	2024-07-24	SS	CCME
463433	Soil < 75um	Manual	2024-07-24	2024-07-24	IP	C Ag Particle
463433	Soil > 75um	Manual	2024-07-24	2024-07-24	IP	C Ag Particle
463433	Texture - Coarse Med/Fine	Manual	2024-07-24	2024-07-24	IP	C Ag Particle
463435	Electrical Conductivity	Electrical Conductivity Mete	2024-07-24	2024-07-24	IP	Cond-Soil
463436	Sodium Adsorption Ratio	iCAP OES	2024-07-24	2024-07-24	Z_S	Ag Soil
463461	Chromium VI	Ion Chromatography	2024-07-24	2024-07-24	AET	SM3500-CR C,EPA 3060
463464	Cyanide (CN-)	Skalar CN Analyzer	2024-07-24	2024-07-24	Z_S	MOECC E3015
463470	PHC's F2	GC/FID	2024-07-25	2024-07-25	H_S	CCME
463470	PHC's F3	GC/FID	2024-07-25	2024-07-25	H_S	CCME
463470	PHC's F4	GC/FID	2024-07-25	2024-07-25	H_S	CCME
463470	Moisture-Humidite	Oven	2024-07-25	2024-07-25	H_S	ASTM 2216

Results relate only to the parameters tested on the samples submitted.
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Certificate of Analysis

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009469
Date Submitted: 2024-07-18
Date Reported: 2024-07-25
Project: 241324
COC #: 228918

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463471	1+2-methylnaphthalene	GC-MS	2024-07-25	2024-07-25	C_M	P 8270
463492	Silver	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Arsenic	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Boron (total)	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Barium	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Beryllium	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Cadmium	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Cobalt	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Chromium Total	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Copper	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Mercury	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Molybdenum	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Nickel	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Lead	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Antimony	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Selenium	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Thallium	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Uranium	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Vanadium	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463492	Zinc	ICAPQ-MS	2024-07-25	2024-07-25	AaN	EPA 200.8/6020
463497	PHC's F2-Napth	GC/FID	2024-07-25	2024-07-25	H_S	CCME
463501	PHC's F3-PAH	GC/FID	2024-07-25	2024-07-25	H_S	CCME
463534	PHC's F2	GC/FID	2024-07-25	2024-07-25	H_S	CCME
463534	PHC's F3	GC/FID	2024-07-25	2024-07-25	H_S	CCME
463534	PHC's F4	GC/FID	2024-07-25	2024-07-25	H_S	CCME
463534	Moisture-Humidite	Oven	2024-07-25	2024-07-25	H_S	ASTM 2216

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009469
Date Submitted: 2024-07-18
Date Reported: 2024-07-25
Project: 241324
COC #: 228918

CWS for Petroleum Hydrocarbons in Soil - Tier 1

Notes:

1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:

   - nC6 and nC10 response factors within 30% of response factor for toluene;
   - nC10, nC16, and nC34 response factors within 10% of each other;
   - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
   - Linearity is within 15%.

7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

eurofins 228918

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

1 of 4

Eurofins Workorder #: 300014469

CLIENT INFORMATION

Company: ABS

Contact: Ata Baba Khani

Address: 750 Industrial Rd

Telephone: Cell:

Email: #1: ABabaKhani@groupeABS.com

Email: #2: JBrooks@groupeABS.com

Project: 241324 Quote #: 192463

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☒ NO ☐)

Company: Fax:

Contact: Email: #1:

Address: Email: #2:

Telephone: PO #:

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☒ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.

*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.

**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City:

☐ Storm Sewer, City:

☐ ODWSOG (Use DW CoC if analyzing drinking water)

☐ PWQO

☐ O.Reg 347

☐ Other:

☒ O. Reg 153

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full paramter list only Yes ☐ No ☐

Table # 1 (Coarse) Fine, Surface / subsurface

Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment

☐ O. Reg 406 Excess Soils

Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate

Type: Com-Ind /Res-Park /Agri/All Other

Category: Surface /Subsurface

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a $25 surcharge if required information is missing (required fields are shaded in grey).

Sample Details

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only	Grain Size Analysis	RN# (Lab Use Only)
BH24-1 SS1 ✓	2024.07.16	S	4	X	X		X		X			17360262
BH24-1 SS6 ✓		S	4	X		X	X		X			63 Hold PAHs
BH24-1 SS8 ✓		S	5	X		X	X		X			66 Hold All analyses
BH24-1 SS2 ✓		S	5	X	X		X		X			Hold All analyses
BH24-2 SS1 ✓		S	5	X	X		X		X			Hold ALL analyses
BH24-2 SS3 ✓		S	4	X			X		X			64 Hold PHC&BTEX
BH24-2 SS7 ✓		S	4	X		X	X		X		X	65 Hold PAH
BH24-3 SS2 ✓		S	5	X	X		X		X			66
BH24-3 SS4 ✓		S	5	X	X		X		X			Hold ALL analyses
BH24-3 SS6 ✓		S	5	X		X	X		X			67 Hold PAH

	PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:	Jim Brooks		2024 07 16	
Relinquished By:	Jim Brooks		2024 07 18 1045	8
Received By:			24/07/18 @ 1045	

COMMENTS: Hold all extra 30days

CUSTODY SEAL: ☐ YES ☐ NO Ice packs submit ☐ Yes ☐ No

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 • 380 Vansickle Road, Unit #630, St. Catharines, ON, L2S 0B5 - Telephone: 905-680-8887 • 608 Norris Court, Kingston, ON, K7P 2R9 - Telephone: 613-634-9307

eurofins 228917

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 30094469

CLIENT INFORMATION

Company:

Contact:

Address:

Telephone: Cell:

Email: #1: ABabaKhani@groupeABS.com

Email: #2:

Project: 241324 Quote #:

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)

Company: Fax:

Contact: Email: #1:

Address: Email: #2:

Telephone: PO #:

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☐ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.

*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.

**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City:

☐ Storm Sewer, City:

☐ ODWSOG (Use DW CoC if analyzing drinking water)

☐ PWQO

☐ O.Reg 347

☐ Other:

☐ O. Reg 153

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full paramter list only Yes ☐ No ☐

Table # ___ Coarse / Fine, Surface / subsurface

Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment

☐ O. Reg 406 Excess Soils

Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate

Type: Com-Ind /Res-Park /Agri/All Other

Category: Surface /Subsurface

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a $25 surcharge if required information is missing (required fields are shaded in grey).

Sample Details

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only	RN# (Lab Use Only)	Notes
MW24-2 S57 ✓	2024.07.16	S	4	X		X	X		X		17360268	Hold PAH
MW24-2 S54 ✓		S	5	X		X	X		X			Hold ALL Analyses
MW24-2 S57 ✓		S	4	X		X	X		X		69	
MW24-2 S58 ✓		S	5	X		X	X		X			Hold ALL analyses.
BH24-12 S57 ✓		S	4	X		X			X		70	
BH24-13 S52 ✓		S	1						X		71	
MW24-12 S57 ✓		S	4	X		X	X				72	
BH24-12 S53		S	1				X				73	

	PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:	Jim Brocks		2024 07 16	
Relinquished By:	Jim Brocks		2024 07 16 10:45	8
Received By:			24/07/18 @10:45	

COMMENTS: Hold all extra 30 days

CUSTODY SEAL: ☐ YES ☐ NO Ice packs submit ☐ Yes ☐ No

eurofins

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 3009470

CLIENT INFORMATION

Company:

Contact:

Address:

Telephone: Cell:

Email: #1: Ababakhani@grouprabs.com

Email: #2:

Project: 241324 Quote #:

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)

Company: Fax:

Contact: Email: #1:

Address: Email: #2:

Telephone: PO #:

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☐ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City:
☐ Storm Sewer, City:
☐ ODWSOG (Use DW CoC if analyzing drinking water)
☐ PWQO
☐ O.Reg 347
☐ Other:

☐ O. Reg 153

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full paramter list only Yes ☐ No ☐

Table # ___, Coarse / Fine, Surface / subsurface
Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment

☐ O. Reg 406 Excess Soils

Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate
Type: Com-Ind /Res-Park /Agri/All Other
Category: Surface /Subsurface

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a $25 surcharge if required information is missing (required fields are shaded in grey).

Sample Details

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only	RN# (Lab Use Only)
BH24-3 SS1	2024 07 16	S	1								173628
BH24-3 SS3		S	1								83
BH24-3 SS5		S	1								84
BH24-3 SS7		S	1								85
BH24-3 SS8		S	1								86
BH24-1 SS3		S	1								87
BH24-1 SS4		S	1								88
BH24-1 SS5		S	1								89
BH24-1 SS7		S	1								90
MW24-2 SS2		S	1								91

	PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:	Jim Brooks	JB	2024 07 16	
Relinquished By:	Jim Brooks		2024 07 16 1645	
Received By:			16/07/24 1645	8

COMMENTS: Hold Samples 30 days

CUSTODY SEAL: ☐ YES ☐ NO Ice packs submit ☐ Yes ☐ No

eurofins

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 3009470

CLIENT INFORMATION

Company:

Contact:

Address:

Telephone: Cell:

Email: #1: AbabaKhan@groupeABS.com

Email: #2:

Project: 24134 Quote #:

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)

Company: Fax:

Contact: Email: #1:

Address: Email: #2:

Telephone: PO #:

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☐ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.

*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.

**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City:

☐ Storm Sewer, City:

☐ ODWSOG (Use DW CoC if analyzing drinking water)

☐ PWQO

☐ O.Reg 347

☐ Other:

☐ O. Reg 153

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full parameter list only Yes ☐ No ☐

Table # ___ Coarse / Fine, Surface / subsurface

Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment

☐ O. Reg 406 Excess Soils

Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate

Type: Com-Ind /Res-Park /Agri/All Other

Category: Surface /Subsurface

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a $25 surcharge if required information is missing (required fields are shaded in grey).

Sample Details

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only	RN# (Lab Use Only)
MW24-2 553	2024 07 16	S	1								1736292
MW24-2 555		S	1								93
MW24-2 556		S	1								94
MW24-2 559		S	1								95
BH24-2 SS 2		S	1								96
BH24-2 SS 4		S	1								97
BH24-2 SS 5		S	1								98
BH24-2 SS 6		S	1								99
BH24-2 SS 8		S	1								300
		S	1								

	PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:	Jim Brooks		2024 07 18 1045	
Relinquished By:	Jim Brooks		2024 07 18 1045	
Received By:			24/07/18 @ 1045	8

COMMENTS: Hold samples 30 days

CUSTODY SEAL: ☐ YES ☐ NO Ice packs submit ☐ Yes ☐ No

Certificate of Analysis

eurofins | Environment Testing

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
Invoice to: Groupe ABS
PO#:

Report Number:	3009581
Date Submitted:	2024-07-22
Date Reported:	2024-07-29
Project:	241324
COC #:	228919
Temperature (C):	25
Custody Seal:	

Dear Ata Babakhani:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Sample Comment Summary

Sample ID: 1736941 MW24-1 SS2 For samples in this report, the metals spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

Report Comments:

Emma-Dawn Ferguson, Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated
.
Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at https://directory.cala.ca/

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

O.Reg 153-T1-All Other Soils

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria
Inorganics				
MW24-1 SS10	Sodium Adsorption Ratio	2.81		STD 2.4
Metals				
MW24-1 SS2	Antimony	2	ug/g	STD 1.3

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

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Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736941	Lab I.D. 1736942
					Sample Matrix: Soil153	Sample Matrix: Soil153
					Sample Type:	Sample Type:
					Sample Date: 2024-07-22	Sample Date: 2024-07-22
					Sampling Time:	Sampling Time:
					Sample I.D.: MW24-1 SS2	Sample I.D.: MW24-1 SS10
PHC's F1	463651	10	ug/g	STD 25	<10	<10
PHC's F1-BTEX	463664	10	ug/g		<10	<10
PHC's F2	463606	2	ug/g	STD 10	<2	<2
PHC's F2-Napth	463681	2	ug/g		<2	<2
PHC's F3	463606	20	ug/g	STD 240	30	<20
PHC's F3-PAH	463682	20	ug/g		30	<20
PHC's F4	463606	20	ug/g	STD 120	<20	40

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736941	Lab I.D. 1736942
					Sample Matrix: Soil153	Sample Matrix: Soil153
					Sample Type:	Sample Type:
					Sample Date: 2024-07-22	Sample Date: 2024-07-22
					Sampling Time:	Sampling Time:
					Sample I.D.: MW24-1 SS2	Sample I.D.: MW24-1 SS10
Antimony	463637	1	ug/g	STD 1.3	2*	<1
Arsenic	463637	1	ug/g	STD 18	2	1
Barium	463637	1	ug/g	STD 220	27	21
Beryllium	463637	1	ug/g	STD 2.5	<1	<1
Boron (Hot Water Soluble)	463683	0.5	ug/g		<0.5	<0.5
Boron (total)	463637	5	ug/g	STD 36	<5	<5
Cadmium	463637	0.4	ug/g	STD 1.2	<0.4	<0.4
Chromium Total	463637	1	ug/g	STD 70	14	13
Chromium VI	463626	0.20	ug/g	STD 0.66	<0.20	0.27
Cobalt	463637	1	ug/g	STD 21	5	3
Copper	463637	1	ug/g	STD 92	9	10
Lead	463637	1	ug/g	STD 120	4	2

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Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736941	Lab I.D. 1736942
					Sample Matrix: Soil153	Sample Matrix: Soil153
					Sample Type:	Sample Type:
					Sample Date: 2024-07-22	Sample Date: 2024-07-22
					Sampling Time:	Sampling Time:
					Sample I.D.: MW24-1 SS2	Sample I.D.: MW24-1 SS10
Mercury	463637	0.1	ug/g	STD 0.27	0.1	<0.1
Molybdenum	463637	1	ug/g	STD 2	2	1
Nickel	463637	1	ug/g	STD 82	9	6
Selenium	463637	0.5	ug/g	STD 1.5	0.9	<0.5
Silver	463637	0.2	ug/g	STD 0.5	<0.2	<0.2
Thallium	463637	1	ug/g	STD 1	<1	<1
Uranium	463637	0.5	ug/g	STD 2.5	0.9	0.6
Vanadium	463637	2	ug/g	STD 86	24	16
Zinc	463637	2	ug/g	STD 290	19	12

PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736941	Lab I.D. 1736942
					Sample Matrix: Soil153	Sample Matrix: Soil153
					Sample Type:	Sample Type:
					Sample Date: 2024-07-22	Sample Date: 2024-07-22
					Sampling Time:	Sampling Time:
					Sample I.D.: MW24-1 SS2	Sample I.D.: MW24-1 SS10
1+2-methylnaphthalene	463629	0.05	ug/g	STD 0.59	<0.05	<0.05
Acenaphthene	463624	0.05	ug/g	STD 0.072	<0.05	<0.05
Acenaphthylene	463624	0.05	ug/g	STD 0.093	<0.05	<0.05
Anthracene	463624	0.05	ug/g	STD 0.16	<0.05	<0.05
Benz[a]anthracene	463624	0.05	ug/g	STD 0.36	<0.05	<0.05
Benzo[a]pyrene	463624	0.05	ug/g	STD 0.3	<0.05	<0.05
Benzo[b]fluoranthene	463624	0.05	ug/g	STD 0.47	<0.05	<0.05
Benzo[ghi]perylene	463624	0.05	ug/g	STD 0.68	<0.05	<0.05
Benzo[k]fluoranthene	463624	0.05	ug/g	STD 0.48	<0.05	<0.05
Chrysene	463624	0.05	ug/g	STD 2.8	<0.05	<0.05

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Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736941 Soil153 2024-07-22 MW24-1 SS2	Lab I.D. 1736942 Soil153 2024-07-22 MW24-1 SS10
Dibenz[a h]anthracene	463624	0.05	ug/g	STD 0.1	<0.05	<0.05
Fluoranthene	463624	0.05	ug/g	STD 0.56	<0.05	<0.05
Fluorene	463624	0.05	ug/g	STD 0.12	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	463624	0.05	ug/g	STD 0.23	<0.05	<0.05
Methlynaphthalene, 1-	463624	0.05	ug/g	STD 0.59	<0.05	<0.05
Methlynaphthalene, 2-	463624	0.05	ug/g	STD 0.59	<0.05	<0.05
Naphthalene	463624	0.013	ug/g	STD 0.09	<0.013	<0.013
Phenanthrene	463624	0.05	ug/g	STD 0.69	<0.05	<0.05
Pyrene	463624	0.05	ug/g	STD 1	<0.05	<0.05

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736941 Soil153 2024-07-22 MW24-1 SS2	Lab I.D. 1736942 Soil153 2024-07-22 MW24-1 SS10
Acetone	463646	0.50	ug/g	STD 0.5	<0.50	
	463648	0.50	ug/g	STD 0.5		<0.50
Benzene	463646	0.0068	ug/g	STD 0.02	<0.0068	
	463648	0.0068	ug/g	STD 0.02		<0.0068
Bromodichloromethane	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Bromoform	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Bromomethane	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05

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Client: Groupe ABS
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Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736941 Sample Matrix Soil153 Sample Type Sample Date 2024-07-22 Sampling Time Sample I.D. MW24-1 SS2	Lab I.D. 1736942 Sample Matrix Soil153 Sample Type Sample Date 2024-07-22 Sampling Time Sample I.D. MW24-1 SS10
Carbon Tetrachloride	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Chlorobenzene	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Chloroform	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Dibromochloromethane	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Dichlorobenzene, 1,2-	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Dichlorobenzene, 1,3-	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Dichlorobenzene, 1,4-	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Dichlorodifluoromethane	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Dichloroethane, 1,1-	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Dichloroethane, 1,2-	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Dichloroethylene, 1,1-	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Dichloroethylene, 1,2-cis-	463646	0.05	ug/g	STD 0.05	<0.05	

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: Groupe ABS
850 Industrial Ave (Suite B)
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Attention: Mr. Ata Babakhani
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Invoice to: Groupe ABS

Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736941 Sample Matrix Soil153 Sample Type Sample Date 2024-07-22 Sampling Time Sample I.D. MW24-1 SS2	Lab I.D. 1736942 Sample Matrix Soil153 Sample Type Sample Date 2024-07-22 Sampling Time Sample I.D. MW24-1 SS10
Dichloroethylene, 1,2-cis-	463648	0.05	ug/g	STD 0.05		<0.05
Dichloroethylene, 1,2-trans-	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Dichloropropane, 1,2-	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Dichloropropene,1,3-	463663	0.05	ug/g	STD 0.05	<0.05	<0.05
Dichloropropene,1,3-cis-	463646	0.05	ug/g		<0.05	
	463648	0.05	ug/g			<0.05
Dichloropropene,1,3-trans-	463646	0.05	ug/g		<0.05	
	463648	0.05	ug/g			<0.05
Ethylbenzene	463646	0.018	ug/g	STD 0.05	<0.018	
	463648	0.018	ug/g	STD 0.05		<0.018
Ethylene dibromide	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Hexane (n)	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Methyl Ethyl Ketone	463646	0.50	ug/g	STD 0.5	<0.50	
	463648	0.50	ug/g	STD 0.5		<0.50
Methyl Isobutyl Ketone	463646	0.50	ug/g	STD 0.5	<0.50	
	463648	0.50	ug/g	STD 0.5		<0.50
Methyl tert-Butyl Ether (MTBE)	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Methylene Chloride	463646	0.05	ug/g	STD 0.05	<0.05	

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Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736941 Sample Matrix Soil153 Sample Type Sample Date 2024-07-22 Sampling Time Sample I.D. MW24-1 SS2	Lab I.D. 1736942 Sample Matrix Soil153 Sample Type Sample Date 2024-07-22 Sampling Time Sample I.D. MW24-1 SS10
Methylene Chloride	463648	0.05	ug/g	STD 0.05		<0.05
Styrene	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Tetrachloroethane, 1,1,1,2-	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Tetrachloroethane, 1,1,2,2-	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Tetrachloroethylene	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Toluene	463646	0.08	ug/g	STD 0.2	<0.08	
	463648	0.08	ug/g	STD 0.2		<0.08
Trichloroethane, 1,1,1-	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Trichloroethane, 1,1,2-	463646	0.05	ug/g	STD 0.05	<0.05	
	463648	0.05	ug/g	STD 0.05		<0.05
Trichloroethylene	463646	0.01	ug/g	STD 0.05	<0.01	
	463648	0.01	ug/g	STD 0.05		<0.01
Trichlorofluoromethane	463646	0.05	ug/g	STD 0.25	<0.05	
	463648	0.05	ug/g	STD 0.25		<0.05
Vinyl Chloride	463646	0.02	ug/g	STD 0.02	<0.02	
	463648	0.02	ug/g	STD 0.02		<0.02
Xylene Mixture	463662	0.05	ug/g	STD 0.05	<0.05	<0.05
Xylene, m/p-	463646	0.05	ug/g		<0.05	

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

eurofins | Environment Testing

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736941 / Sample Matrix Soil153 / Sample Type / Sample Date 2024-07-22 / Sampling Time / Sample I.D. MW24-1 SS2	Lab I.D. 1736942 / Sample Matrix Soil153 / Sample Type / Sample Date 2024-07-22 / Sampling Time / Sample I.D. MW24-1 SS10
Xylene, m/p-	463648	0.05	ug/g			<0.05
Xylene, o-	463646	0.05	ug/g		<0.05	
	463648	0.05	ug/g			<0.05

Inorganics

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736941 / Sample Matrix Soil153 / Sample Type / Sample Date 2024-07-22 / Sampling Time / Sample I.D. MW24-1 SS2	Lab I.D. 1736942 / Sample Matrix Soil153 / Sample Type / Sample Date 2024-07-22 / Sampling Time / Sample I.D. MW24-1 SS10
Cyanide (CN-)	463680	0.005	ug/g	STD 0.051	<0.005	<0.005
Electrical Conductivity	463671	0.05	mS/cm	STD 0.57	0.41	0.31
pH - CaCl2	463556	2.00			7.50	7.65
Sodium Adsorption Ratio	463676	0.01		STD 2.4	0.40	2.81*

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COC #: 228919

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Moisture

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736941 / Sample Matrix Soil153 / Sample Type / Sample Date 2024-07-22 / Sampling Time / Sample I.D. MW24-1 SS2	Lab I.D. 1736942 / Sample Matrix Soil153 / Sample Type / Sample Date 2024-07-22 / Sampling Time / Sample I.D. MW24-1 SS10
Moisture-Humidite	463606	0.1	%		3.4	7.5

PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736941 / Sample Matrix Soil153 / Sample Type / Sample Date 2024-07-22 / Sampling Time / Sample I.D. MW24-1 SS2	Lab I.D. 1736942 / Sample Matrix Soil153 / Sample Type / Sample Date 2024-07-22 / Sampling Time / Sample I.D. MW24-1 SS10
Alpha-androstrane	463606	0	%		72	71

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Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

VOCs Surrogates

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736941 Sample Matrix Soil153 Sample Type Sample Date 2024-07-22 Sampling Time Sample I.D. MW24-1 SS2	Lab I.D. 1736942 Sample Matrix Soil153 Sample Type Sample Date 2024-07-22 Sampling Time Sample I.D. MW24-1 SS10
1,2-dichloroethane-d4	463646	0	%		124	
	463648	0	%			103
4-bromofluorobenzene	463646	0	%		78	
	463648	0	%			88
Toluene-d8	463646	0	%		104	
	463648	0	%			101

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463556	pH - CaCl2	5.26	98	90-110			0	
463606	PHC's F2	<2 ug/g	82	80-120	94	60-140	0	0-30
463606	PHC's F3	<20 ug/g	82	80-120	94	60-140	0	0-30
463606	PHC's F4	<20 ug/g	82	80-120	94	60-140	0	0-30
463606	Moisture-Humidite	<0.1 %	100	80-120			3	
463624	Methlynaphthalene, 1-	<0.05 ug/g	68	50-140	58	50-140	0	0-40
463624	Methlynaphthalene, 2-	<0.05 ug/g	55	50-140	54	50-140	0	0-40
463624	Acenaphthene	<0.05 ug/g	66	50-140	56	50-140	0	0-40
463624	Acenaphthylene	<0.05 ug/g	67	50-140	57	50-140	0	0-40
463624	Anthracene	<0.05 ug/g	68	50-140	59	50-140	0	0-40
463624	Benz[a]anthracene	<0.05 ug/g	54	50-140	53	50-140	0	0-40
463624	Benzo[a]pyrene	<0.05 ug/g	60	50-140	78	50-140	0	0-40
463624	Benzo[b]fluoranthene	<0.05 ug/g	60	50-140	79	50-140	0	0-40
463624	Benzo[ghi]perylene	<0.05 ug/g	56	50-140	56	50-140	0	0-40
463624	Benzo[k]fluoranthene	<0.05 ug/g	56	50-140	86		0	0-40
463624	Chrysene	<0.05 ug/g	63	50-140	62	50-140	0	0-40
463624	Dibenz[a h]anthracene	<0.05 ug/g	59	50-140	65	50-140	0	0-40
463624	Fluoranthene	<0.05 ug/g	62	50-140	63	50-140	0	0-40
463624	Fluorene	<0.05 ug/g	62	50-140	52	50-140	0	0-40
463624	Indeno[1 2 3-cd]pyrene	<0.05 ug/g	60	50-140	60	50-140	0	0-40
463624	Naphthalene	<0.013 ug/g	61	50-140	51	50-140	0	0-40
463624	Phenanthrene	<0.05 ug/g	66	50-140	57	50-140	0	0-40
463624	Pyrene	<0.05 ug/g	64	50-140	65	50-140	0	0-40
463626	Chromium VI	<0.20 ug/g	98	70-130	97	70-130	0	0-35
463629	1+2-methylnaphthalene							
463637	Silver	<0.2 ug/g	123	70-130	146	70-130	0	0-20
463637	Arsenic	<1 ug/g	100	70-130	128	70-130	0	0-20
463637	Boron (total)	<5 ug/g	100	70-130	170	70-130	0	0-20
463637	Barium	<1 ug/g	102	70-130	286	70-130	2	0-20
463637	Beryllium	<1 ug/g	97	70-130	123	70-130	0	0-20
463637	Cadmium	<0.4 ug/g	102	70-130	126	70-130	0	0-20
463637	Cobalt	<1 ug/g	103	70-130	138	70-130	8	0-20

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Invoice to: Groupe ABS

Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463637	Chromium Total	<1 ug/g	103	70-130	192	70-130	6	0-20
463637	Copper	<1 ug/g	104	70-130	148	70-130	11	0-20
463637	Mercury	<0.1 ug/g	90	70-130	117	70-130	0	0-20
463637	Molybdenum	<1 ug/g	96	70-130	122	70-130	0	0-20
463637	Nickel	<1 ug/g	100	70-130	151	70-130	8	0-20
463637	Lead	<1 ug/g	99	70-130	126	70-130	5	0-20
463637	Antimony	<1 ug/g	84	70-130	119	70-130	0	0-20
463637	Selenium	<0.5 ug/g	109	70-130	129	70-130	0	0-20
463637	Thallium	<1 ug/g	98	70-130	114	70-130	0	0-20
463637	Uranium	<0.5 ug/g	87	70-130	114	70-130	0	0-20
463637	Vanadium	<2 ug/g	99	70-130	236	70-130	7	0-20
463637	Zinc	<2 ug/g	107	70-130	206	70-130	8	0-20
463646	Tetrachloroethane, 1,1,1,2-	<0.05 ug/g	103	60-130	107	50-140	0	0-50
463646	Trichloroethane, 1,1,1-	<0.05 ug/g	100	60-130	111	50-140	0	0-50
463646	Tetrachloroethane, 1,1,2,2-	<0.05 ug/g	91	60-130	91	50-140	0	0-30
463646	Trichloroethane, 1,1,2-	<0.05 ug/g	89	60-130	115	50-140	0	0-50
463646	Dichloroethane, 1,1-	<0.05 ug/g	108	60-130	112	50-140	0	0-50
463646	Dichloroethylene, 1,1-	<0.05 ug/g	114	60-130	87	50-140	0	0-50
463646	Dichlorobenzene, 1,2-	<0.05 ug/g	105	60-130	111	50-140	0	0-50
463646	Dichloroethane, 1,2-	<0.05 ug/g	114	60-130	114	50-140	0	0-50
463646	Dichloropropane, 1,2-	<0.05 ug/g	96	60-130	119	50-140	0	0-50
463646	Dichlorobenzene, 1,3-	<0.05 ug/g	96	60-130	112	50-140	0	0-50
463646	Dichlorobenzene, 1,4-	<0.05 ug/g	99	60-130	112	50-140	0	0-50
463646	Acetone	<0.50 ug/g	124	60-130	112	50-140	0	0-50
463646	Benzene	<0.0068	92	60-130	114	50-140	0	0-50
463646	Bromodichloromethane	<0.05 ug/g	94	60-130	110	50-140	0	0-50
463646	Bromoform	<0.05 ug/g	83	60-130	109	50-140	0	0-50
463646	Bromomethane	<0.05 ug/g	118	60-130	105	50-140	0	0-50
463646	Dichloroethylene, 1,2-cis-	<0.05 ug/g	92	60-130	115	50-140	0	0-50
463646	Dichloropropene,1,3-cis-	<0.05 ug/g	85	60-130	115	50-140	0	0-50
463646	Carbon Tetrachloride	<0.05 ug/g	102	60-130	107	50-140	0	0-50
463646	Chloroform	<0.05 ug/g	99	60-130	115	50-140	0	0-50
463646	Dibromochloromethane	<0.05 ug/g	97	60-130	101	50-140	0	0-50

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Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463646	Dichlorodifluoromethane	<0.05 ug/g	118	60-130	106	50-140	0	0-50
463646	Methylene Chloride	<0.05 ug/g	117	60-130	95	50-140	0	0-50
463646	Ethylbenzene	<0.018 ug/g	104	60-130	121	50-140	0	0-50
463646	Ethylene dibromide	<0.05 ug/g	86	60-130	113	50-140	0	0-50
463646	Hexane (n)	<0.05 ug/g	94	60-130	112	50-140	0	0-50
463646	Xylene, m/p-	<0.05 ug/g	114	60-130	112	50-140	0	0-50
463646	Methyl Ethyl Ketone	<0.50 ug/g	105	60-130	116	50-140	0	0-50
463646	Methyl Isobutyl Ketone	<0.50 ug/g	90	60-130	114	50-140	0	0-50
463646	Methyl tert-Butyl Ether (MTBE)	<0.05 ug/g	94	60-130	114	50-140	0	0-50
463646	Chlorobenzene	<0.05 ug/g	95	60-130	115	50-140	0	0-50
463646	Xylene, o-	<0.05 ug/g	103	60-130	118	50-140	0	0-50
463646	Styrene	<0.05 ug/g	100	60-130	117	50-140	0	0-50
463646	Dichloroethylene, 1,2-trans-	<0.05 ug/g	94	60-130	110	50-140	0	0-50
463646	Dichloropropene,1,3-trans-	<0.05 ug/g	92	60-130	115	50-140	0	0-50
463646	Tetrachloroethylene	<0.05 ug/g	87	60-130	119	50-140	0	0-50
463646	Toluene	<0.08 ug/g	93	60-130	114	50-140	0	0-50
463646	Trichloroethylene	<0.01 ug/g	88	60-130	115	50-140	0	0-50
463646	Trichlorofluoromethane	<0.05 ug/g	120	60-130	98	50-140	0	0-50
463646	Vinyl Chloride	<0.02 ug/g	110	60-130	92	50-140	0	0-50
463648	Tetrachloroethane, 1,1,1,2-	<0.05 ug/g	103	60-130	107	50-140	0	0-50
463648	Trichloroethane, 1,1,1-	<0.05 ug/g	100	60-130	111	50-140	0	0-50
463648	Tetrachloroethane, 1,1,2,2-	<0.05 ug/g	91	60-130	91	50-140	0	0-30
463648	Trichloroethane, 1,1,2-	<0.05 ug/g	89	60-130	115	50-140	0	0-50
463648	Dichloroethane, 1,1-	<0.05 ug/g	108	60-130	112	50-140	0	0-50
463648	Dichloroethylene, 1,1-	<0.05 ug/g	114	60-130	87	50-140	0	0-50
463648	Dichlorobenzene, 1,2-	<0.05 ug/g	105	60-130	111	50-140	0	0-50
463648	Dichloroethane, 1,2-	<0.05 ug/g	114	60-130	114	50-140	0	0-50
463648	Dichloropropane, 1,2-	<0.05 ug/g	96	60-130	119	50-140	0	0-50
463648	Dichlorobenzene, 1,3-	<0.05 ug/g	96	60-130	112	50-140	0	0-50
463648	Dichlorobenzene, 1,4-	<0.05 ug/g	99	60-130	112	50-140	0	0-50
463648	Acetone	<0.50 ug/g	124	60-130	112	50-140	0	0-50
463648	Benzene	<0.0068	92	60-130	114	50-140	0	0-50
463648	Bromodichloromethane	<0.05 ug/g	94	60-130	110	50-140	0	0-50

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Report Number: 3009581
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Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463648	Bromoform	<0.05 ug/g	83	60-130	109	50-140	0	0-50
463648	Bromomethane	<0.05 ug/g	118	60-130	105	50-140	0	0-50
463648	Dichloroethylene, 1,2-cis-	<0.05 ug/g	92	60-130	115	50-140	0	0-50
463648	Dichloropropene,1,3-cis-	<0.05 ug/g	85	60-130	115	50-140	0	0-50
463648	Carbon Tetrachloride	<0.05 ug/g	102	60-130	107	50-140	0	0-50
463648	Chloroform	<0.05 ug/g	99	60-130	115	50-140	0	0-50
463648	Dibromochloromethane	<0.05 ug/g	97	60-130	101	50-140	0	0-50
463648	Dichlorodifluoromethane	<0.05 ug/g	118	60-130	106	50-140	0	0-50
463648	Methylene Chloride	<0.05 ug/g	117	60-130	95	50-140	0	0-50
463648	Ethylbenzene	<0.018 ug/g	104	60-130	121	50-140	0	0-50
463648	Ethylene dibromide	<0.05 ug/g	86	60-130	113	50-140	0	0-50
463648	Hexane (n)	<0.05 ug/g	94	60-130	112	50-140	0	0-50
463648	Xylene, m/p-	<0.05 ug/g	114	60-130	112	50-140	0	0-50
463648	Methyl Ethyl Ketone	<0.50 ug/g	105	60-130	116	50-140	0	0-50
463648	Methyl Isobutyl Ketone	<0.50 ug/g	90	60-130	114	50-140	0	0-50
463648	Methyl tert-Butyl Ether (MTBE)	<0.05 ug/g	94	60-130	114	50-140	0	0-50
463648	Chlorobenzene	<0.05 ug/g	95	60-130	115	50-140	0	0-50
463648	Xylene, o-	<0.05 ug/g	103	60-130	118	50-140	0	0-50
463648	Styrene	<0.05 ug/g	100	60-130	117	50-140	0	0-50
463648	Dichloroethylene, 1,2-trans-	<0.05 ug/g	94	60-130	110	50-140	0	0-50
463648	Dichloropropene,1,3-trans-	<0.05 ug/g	92	60-130	115	50-140	0	0-50
463648	Tetrachloroethylene	<0.05 ug/g	87	60-130	119	50-140	0	0-50
463648	Toluene	<0.08 ug/g	93	60-130	114	50-140	0	0-50
463648	Trichloroethylene	<0.01 ug/g	88	60-130	115	50-140	0	0-50
463648	Trichlorofluoromethane	<0.05 ug/g	120	60-130	98	50-140	0	0-50
463648	Vinyl Chloride	<0.02 ug/g	110	60-130	92	50-140	0	0-50
463651	PHC's F1	<10 ug/g	104	80-120	96	60-140	0	0-30
463662	Xylene Mixture							
463663	Dichloropropene,1,3-							
463664	PHC's F1-BTEX							
463671	Electrical Conductivity	<0.05	99	90-110			1	0-10
463676	Sodium Adsorption Ratio	<0.01					3	
463680	Cyanide (CN-)	<0.005 ug/g	86	75-125	105	70-130	0	0-20

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Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463681	PHC's F2-Napth							
463682	PHC's F3-PAH							
463683	Boron (Hot Water Soluble)	<0.5 ug/g	104	70-130	114	60-140	0	0-30

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Certificate of Analysis

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463556	pH - CaCl2	pH Meter	2024-07-26	2024-07-26	IP	AG Soil
463606	PHC's F2	GC/FID	2024-07-26	2024-07-26	H_S	CCME
463606	PHC's F3	GC/FID	2024-07-26	2024-07-26	H_S	CCME
463606	PHC's F4	GC/FID	2024-07-26	2024-07-26	H_S	CCME
463606	Moisture-Humidite	Oven	2024-07-26	2024-07-26	H_S	ASTM 2216
463624	Methlynaphthalene, 1-	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Methlynaphthalene, 2-	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Acenaphthene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Acenaphthylene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Anthracene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Benz[a]anthracene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Benzo[a]pyrene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Benzo[b]fluoranthene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Benzo[ghi]perylene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Benzo[k]fluoranthene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Chrysene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Dibenz[a h]anthracene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Fluoranthene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Fluorene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Indeno[1 2 3-cd]pyrene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Naphthalene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Phenanthrene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463624	Pyrene	GC-MS	2024-07-26	2024-07-26	C_M	P 8270
463626	Chromium VI	FAA	2024-07-29	2024-07-29	MW	M US EPA 3060A
463629	1+2-methylnaphthalene	GC-MS	2024-07-29	2024-07-29	C_M	P 8270
463637	Silver	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Arsenic	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Boron (total)	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Barium	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Beryllium	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Cadmium	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Cobalt	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020

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Certificate of Analysis

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Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463637	Chromium Total	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Copper	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Mercury	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Molybdenum	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Nickel	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Lead	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Antimony	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Selenium	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Thallium	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Uranium	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Vanadium	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463637	Zinc	ICAPQ-MS	2024-07-28	2024-07-28	AaN	EPA 200.8/6020
463646	Tetrachloroethane, 1,1,1,2-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Trichloroethane, 1,1,1-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Tetrachloroethane, 1,1,2,2-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Trichloroethane, 1,1,2-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Dichloroethane, 1,1-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Dichloroethylene, 1,1-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Dichlorobenzene, 1,2-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Dichloroethane, 1,2-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Dichloropropane, 1,2-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Dichlorobenzene, 1,3-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Dichlorobenzene, 1,4-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Acetone	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Benzene	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Bromodichloromethane	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Bromoform	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Bromomethane	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Dichloroethylene, 1,2-cis-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Dichloropropene,1,3-cis-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Carbon Tetrachloride	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Chloroform	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Dibromochloromethane	GC-MS	2024-07-26	2024-07-27	SS	V 8260B

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Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463646	Dichlorodifluoromethane	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Methylene Chloride	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Ethylbenzene	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Ethylene dibromide	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Hexane (n)	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Xylene, m/p-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Methyl Ethyl Ketone	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Methyl Isobutyl Ketone	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Methyl tert-Butyl Ether (MTBE)	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Chlorobenzene	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Xylene, o-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Styrene	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Dichloroethylene, 1,2-trans-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Dichloropropene,1,3-trans-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Tetrachloroethylene	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Toluene	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Trichloroethylene	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Trichlorofluoromethane	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463646	Vinyl Chloride	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Tetrachloroethane, 1,1,1,2-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Trichloroethane, 1,1,1-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Tetrachloroethane, 1,1,2,2-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Trichloroethane, 1,1,2-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Dichloroethane, 1,1-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Dichloroethylene, 1,1-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Dichlorobenzene, 1,2-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Dichloroethane, 1,2-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Dichloropropane, 1,2-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Dichlorobenzene, 1,3-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Dichlorobenzene, 1,4-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Acetone	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Benzene	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Bromodichloromethane	GC-MS	2024-07-26	2024-07-27	SS	V 8260B

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Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463648	Bromoform	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Bromomethane	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Dichloroethylene, 1,2-cis-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Dichloropropene,1,3-cis-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Carbon Tetrachloride	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Chloroform	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Dibromochloromethane	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Dichlorodifluoromethane	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Methylene Chloride	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Ethylbenzene	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Ethylene dibromide	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Hexane (n)	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Xylene, m/p-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Methyl Ethyl Ketone	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Methyl Isobutyl Ketone	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Methyl tert-Butyl Ether (MTBE)	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Chlorobenzene	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Xylene, o-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Styrene	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Dichloroethylene, 1,2-trans-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Dichloropropene,1,3-trans-	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Tetrachloroethylene	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Toluene	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Trichloroethylene	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Trichlorofluoromethane	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463648	Vinyl Chloride	GC-MS	2024-07-26	2024-07-27	SS	V 8260B
463651	PHC's F1	GC/FID	2024-07-26	2024-07-29	SS	CCME
463662	Xylene Mixture	GC-MS	2024-07-29	2024-07-29	SS	V 8260B
463663	Dichloropropene,1,3-	GC-MS	2024-07-29	2024-07-29	SS	V 8260B
463664	PHC's F1-BTEX	GC/FID	2024-07-29	2024-07-29	SS	CCME
463671	Electrical Conductivity	Electrical Conductivity Mete	2024-07-29	2024-07-29	Z_S	Cond-Soil
463676	Sodium Adsorption Ratio	iCAP OES	2024-07-29	2024-07-29	Z_S	Ag Soil
463680	Cyanide (CN-)	Skalar CN Analyzer	2024-07-29	2024-07-29	Z_S	MOECC E3015

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Client: Groupe ABS
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K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009581
Date Submitted: 2024-07-22
Date Reported: 2024-07-29
Project: 241324
COC #: 228919

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463681	PHC's F2-Napth	GC/FID	2024-07-29	2024-07-29	H_S	CCME
463682	PHC's F3-PAH	GC/FID	2024-07-29	2024-07-29	H_S	CCME
463683	Boron (Hot Water Soluble)	iCAP OES	2024-07-29	2024-07-29	Z_S	MOECC E3470

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Date Reported: 2024-07-29
Project: 241324
COC #: 228919

CWS for Petroleum Hydrocarbons in Soil - Tier 1

Notes:

1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:

   - nC6 and nC10 response factors within 30% of response factor for toluene;
   - nC10, nC16, and nC34 response factors within 10% of each other;
   - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
   - Linearity is within 15%.

7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

eurofins 228919

STANDARD CHAIN-OF-CUSTODY

1 of 2

Eurofins Workorder #: 3009581

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

CLIENT INFORMATION

Company: ABS

Contact: Ata Babakhani

Address: 850 Industrial ave, Ottawa, ON

Telephone: Cell:

Email: #1: AbabakhaniG@Groupe ABS.com

Email: #2: JBrooks@GroupeABS.com

Project: 241324 Quote #: 192463

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☒ NO ☐)

Company: Fax:

Contact: Email: #1:

Address: Email: #2:

Telephone: PO #:

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☒ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.

*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.

**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City:

☐ Storm Sewer, City:

☐ ODWSOG (Use DW CoC if analyzing drinking water)

☐ PWQO

☐ O.Reg 347

☐ Other:

☒ O. Reg 153

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full paramter list only Yes ☐ No ☐

Table # 1 Coarse / Fine, Surface / subsurface

Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment

☐ O. Reg 406 Excess Soils

Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate

Type: Com-Ind /Res-Park /Agri/All Other

Category: Surface /Subsurface

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a $25 surcharge if required information is missing (required fields are shaded in grey).

Sample Details

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only	RN# (Lab Use Only)
MW24-1 SS7	2024.07.22	S	5	X		X	X		X		1736941
MW24-1 SS4			4								Hold Sample 30days
MW24-1 SS8			5								Hold 30 days
MW24-1 SS10			4	X		X	X		X		1736942
MW24-11 SS10		↓	4				✓				Hold 30 days

	PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:	Jim Brooks JB			
Relinquished By:	Jim Brooks JB		1550 2024 07 22	25°C
Received By:	Aithel	JB	7/22/24	

COMMENTS: Hold extra 30 days

CUSTODY SEAL: ☐ YES ☐ NO Ice packs submit ☐ Yes ☐ No

eurofins ~~229262~~ 228919 AS **STANDARD CHAIN-OF-CUSTODY** 2 of 2 Eurofins Workorder #: 3009589

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

CLIENT INFORMATION

Company: ABS

Contact:

Address:

Telephone: Cell:

Email: #1:

Email: #2:

Project: 24/1324 Quote #: 192463

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)

Company: Fax:

Contact: Email: #1:

Address: Email: #2:

Telephone: PO #:

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☐ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City:
☐ Storm Sewer, City:
☐ ODWSOG (Use DW CoC if analyzing drinking water)
☐ PWQO
☐ O.Reg 347
☐ Other:

☐ O. Reg 153
The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full paramter list only Yes ☐ No ☐
Table # ____, Coarse / Fine, Surface / subsurface
Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment

☐ O. Reg 406 Excess Soils
Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate
Type: Com-Ind /Res-Park /Agri/All Other
Category: Surface /Subsurface

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a $25 surcharge if required information is missing (required fields are shaded in grey).

Sample Details

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only	RN# (Lab Use Only)
MW24-1 551	2024-07-22	S	1								1736955
MW24-1 553											956
MW24-1 555											957
MW24-1 556											958
MW24-1 557											959
MW24-1 559											960

	PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:	JIM Brooks JB		~~1550 2024 07 22~~	
Relinquished By:	JIM Brooks JB		1550 2024.07.22	25.3°C
Received By:	Aithel	AS	7/22/24	

COMMENTS: Hold samples 30 days

CUSTODY SEAL: ☐ YES ☐ NO Ice packs submit ☐ Yes ☐ No

Certificate of Analysis

eurofins | Environment Testing

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
Invoice to: Groupe ABS
PO#:

Report Number:	3009765
Date Submitted:	2024-07-26
Date Reported:	2024-08-02
Project:	241324
COC #:	228918
Temperature (C):	8
Custody Seal:	

Dear Ata Babakhani:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Sample Comment Summary

Sample ID: 1736280 MW24-2 SS4 Metals spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

Report Comments:

Emma-Dawn Ferguson, Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated
.
Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at https://directory.cala.ca/

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Certificate of Analysis

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009765
Date Submitted: 2024-07-26
Date Reported: 2024-08-02
Project: 241324
COC #: 228918

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009765
Date Submitted: 2024-07-26
Date Reported: 2024-08-02
Project: 241324
COC #: 228918

Guideline = O.Reg 153-T1-All Other Soils - Res/Par/Ins/Ind/Com/Prop

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1736280 / Sample Matrix Soil153 / Sample Type / Sample Date 2024-07-16 / Sampling Time / Sample I.D. MW24-2 SS4
Antimony	463881	1	ug/g	STD 1.3	<1
Arsenic	463881	1	ug/g	STD 18	1
Barium	463881	1	ug/g	STD 220	17
Beryllium	463881	1	ug/g	STD 2.5	<1
Boron (total)	463881	5	ug/g	STD 36	<5
Cadmium	463881	0.4	ug/g	STD 1.2	<0.4
Chromium Total	463881	1	ug/g	STD 70	8
Cobalt	463881	1	ug/g	STD 21	3
Copper	463881	1	ug/g	STD 92	6
Lead	463881	1	ug/g	STD 120	2
Molybdenum	463881	1	ug/g	STD 2	<1
Nickel	463881	1	ug/g	STD 82	5
Selenium	463881	0.5	ug/g	STD 1.5	0.9
Silver	463881	0.2	ug/g	STD 0.5	<0.2
Thallium	463881	1	ug/g	STD 1	<1
Uranium	463881	0.5	ug/g	STD 2.5	<0.5
Vanadium	463881	2	ug/g	STD 86	17
Zinc	463881	2	ug/g	STD 290	8

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009765
Date Submitted: 2024-07-26
Date Reported: 2024-08-02
Project: 241324
COC #: 228918

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463881	Silver	<0.2 ug/g	121	70-130	107	70-130	0	0-20
463881	Arsenic	<1 ug/g	99	70-130	91	70-130	0	0-20
463881	Boron (total)	<5 ug/g	98	70-130	134	70-130	0	0-20
463881	Barium	<1 ug/g	101	70-130	140	70-130	8	0-20
463881	Beryllium	<1 ug/g	101	70-130	92	70-130	0	0-20
463881	Cadmium	<0.4 ug/g	105	70-130	101	70-130	0	0-20
463881	Cobalt	<1 ug/g	105	70-130	90	70-130	0	0-20
463881	Chromium Total	<1 ug/g	102	70-130	111	70-130	14	0-20
463881	Copper	<1 ug/g	108	70-130	82	70-130	7	0-20
463881	Molybdenum	<1 ug/g	111	70-130	96	70-130	0	0-20
463881	Nickel	<1 ug/g	105	70-130	86	70-130	0	0-20
463881	Lead	<1 ug/g	105	70-130	88	70-130	0	0-20
463881	Antimony	<1 ug/g	101	70-130	94	70-130	0	0-20
463881	Selenium	<0.5 ug/g	106	70-130	102	70-130	0	0-20
463881	Thallium	<1 ug/g	108	70-130	91	70-130	0	0-20
463881	Uranium	<0.5 ug/g	90	70-130	89	70-130	0	0-20
463881	Vanadium	<2 ug/g	103	70-130	132	70-130	9	0-20
463881	Zinc	<2 ug/g	106	70-130	98	70-130	0	0-20

Results relate only to the parameters tested on the samples submitted.
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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009765
Date Submitted: 2024-07-26
Date Reported: 2024-08-02
Project: 241324
COC #: 228918

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463881	Silver	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Arsenic	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Boron (total)	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Barium	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Beryllium	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Cadmium	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Cobalt	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Chromium Total	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Copper	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Molybdenum	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Nickel	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Lead	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Antimony	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Selenium	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Thallium	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Uranium	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Vanadium	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020
463881	Zinc	ICAPQ-MS	2024-08-01	2024-08-01	AaN	EPA 200.8/6020

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009765
Date Submitted: 2024-07-26
Date Reported: 2024-08-02
Project: 241324
COC #: 228918

CWS for Petroleum Hydrocarbons in Soil - Tier 1

Notes:

1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:

   - nC6 and nC10 response factors within 30% of response factor for toluene;
   - nC10, nC16, and nC34 response factors within 10% of each other;
   - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
   - Linearity is within 15%.

7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

eurofins 228918

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

1 of 4

Eurofins Workorder #: 300014469

CLIENT INFORMATION

Company: ABS

Contact: Ata Baba Khani

Address: 750 Industrial Rd

Telephone: Cell:

Email: #1: ABabaKhani@groupeABS.com

Email: #2: JBrooks@groupeABS.com

Project: 241324 Quote #: 192463

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☒ NO ☐)

Company: Fax:

Contact: Email: #1:

Address: Email: #2:

Telephone: PO #:

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☒ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.

*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.

**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City:

☐ Storm Sewer, City:

☐ ODWSOG (Use DW CoC if analyzing drinking water)

☐ PWQO

☐ O.Reg 347

☐ Other:

☒ O. Reg 153

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full paramter list only Yes ☐ No ☐

Table # 1 (Coarse) Fine, Surface / subsurface

Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment

☐ O. Reg 406 Excess Soils

Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate

Type: Com-Ind /Res-Park /Agri/All Other

Category: Surface /Subsurface

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a $25 surcharge if required information is missing (required fields are shaded in grey).

Sample Details

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only	Grain Size Analysis	RN# (Lab Use Only)
BH24-1 SS1 ✓	2024.07.16	S	4	X	X		X		X			17360262
BH24-1 SS6 ✓		S	4	X		X	X		X			63 Hold PAHs
BH24-1 SS8 ✓		S	5	X		X	X		X			66 Hold All analyses
BH24-1 SS2 ✓		S	5	X	X		X		X			Hold All analyses
BH24-2 SS1 ✓		S	5	X	X		X		X			Hold ALL analyses
BH24-2 SS3 ✓		S	4	X			X		X			64 Hold PHC&BTEX
BH24-2 SS7 ✓		S	4	X		X	X		X		X	65 Hold PAH
BH24-3 SS2 ✓		S	5	X	X		X		X			66
BH24-3 SS4 ✓		S	5	X	X		X		X			Hold ALL analyses
BH24-3 SS6 ✓		S	5	X		X	X		X			67 Hold PAH

	PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:	Jim Brooks		2024 07 16	
Relinquished By:	Jim Brooks		2024 07 18 1045	8
Received By:			24/07/18 @ 1045	

COMMENTS: Hold all extra 30days

CUSTODY SEAL: ☐ YES ☐ NO Ice packs submit ☐ Yes ☐ No

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 • 380 Vansickle Road, Unit #630, St. Catharines, ON, L2S 0B5 - Telephone: 905-680-8887 • 608 Norris Court, Kingston, ON, K7P 2R9 - Telephone: 613-634-9307

eurofins 228917

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 30094469

CLIENT INFORMATION

Company:

Contact:

Address:

Telephone: Cell:

Email: #1: ABabaKhani@groupeABS.com

Email: #2:

Project: 241324 Quote #:

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)

Company: Fax:

Contact: Email: #1:

Address: Email: #2:

Telephone: PO #:

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☐ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.

*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.

**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City:

☐ Storm Sewer, City:

☐ ODWSOG (Use DW CoC if analyzing drinking water)

☐ PWQO

☐ O.Reg 347

☐ Other:

☐ O. Reg 153

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full paramter list only Yes ☐ No ☐

Table # ___ Coarse / Fine, Surface / subsurface

Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment

☐ O. Reg 406 Excess Soils

Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate

Type: Com-Ind /Res-Park /Agri/All Other

Category: Surface /Subsurface

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a $25 surcharge if required information is missing (required fields are shaded in grey).

Sample Details

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only	RN# (Lab Use Only)	Notes
MW24-2 S57 ✓	2024.07.16	S	4	X		X	X		X		17360268	Hold PAH
MW24-2 S54 ✓		S	5	X		X	X		X			Hold ALL Analyses
MW24-2 S57 ✓		S	4	X		X	X		X		69	
MW24-2 S58 ✓		S	5	X		X	X		X			Hold ALL analyses.
BH24-12 S57 ✓		S	4	X		X			X		70	
BH24-13 S52 ✓		S	1						X		71	
MW24-12 S57 ✓		S	4	X		X	X				72	
BH24-12 S53		S	1				X				73	

	PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:	Jim Brocks		2024 07 16	
Relinquished By:	Jim Brocks		2024 07 16 10:45	8
Received By:			24/07/18 @10:45	

COMMENTS: Hold all extra 30 days

CUSTODY SEAL: ☐ YES ☐ NO Ice packs submit ☐ Yes ☐ No

eurofins

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 3009470

CLIENT INFORMATION

Company:

Contact:

Address:

Telephone: Cell:

Email: #1: Ababakhani@grouprabs.com

Email: #2:

Project: 241324 Quote #:

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)

Company: Fax:

Contact: Email: #1:

Address: Email: #2:

Telephone: PO #:

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☐ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.
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REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City:
☐ Storm Sewer, City:
☐ ODWSOG (Use DW CoC if analyzing drinking water)
☐ PWQO
☐ O.Reg 347
☐ Other:

☐ O. Reg 153

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full paramter list only Yes ☐ No ☐

Table # ___, Coarse / Fine, Surface / subsurface
Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment

☐ O. Reg 406 Excess Soils

Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate
Type: Com-Ind /Res-Park /Agri/All Other
Category: Surface /Subsurface

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Sample Details

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only	RN# (Lab Use Only)
BH24-3 SS1	2024 07 16	S	1								173628
BH24-3 SS3		S	1								83
BH24-3 SS5		S	1								84
BH24-3 SS7		S	1								85
BH24-3 SS8		S	1								86
BH24-1 SS3		S	1								87
BH24-1 SS4		S	1								88
BH24-1 SS5		S	1								89
BH24-1 SS7		S	1								90
MW24-2 SS2		S	1								91

	PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:	Jim Brooks	JB	2024 07 16	
Relinquished By:	Jim Brooks		2024 07 16 1645	
Received By:			16/07/24 1645	8

COMMENTS: Hold Samples 30 days

CUSTODY SEAL: ☐ YES ☐ NO Ice packs submit ☐ Yes ☐ No

eurofins

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 3009470

CLIENT INFORMATION

Company:

Contact:

Address:

Telephone: Cell:

Email: #1: AbabaKhan@groupeABS.com

Email: #2:

Project: 24134 Quote #:

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)

Company: Fax:

Contact: Email: #1:

Address: Email: #2:

Telephone: PO #:

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☐ 5-7 Days (Standard)

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REGULATION/GUIDELINE REQUIRED

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☐ Storm Sewer, City:

☐ ODWSOG (Use DW CoC if analyzing drinking water)

☐ PWQO

☐ O.Reg 347

☐ Other:

☐ O. Reg 153

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full parameter list only Yes ☐ No ☐

Table # ___ Coarse / Fine, Surface / subsurface

Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment

☐ O. Reg 406 Excess Soils

Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate

Type: Com-Ind /Res-Park /Agri/All Other

Category: Surface /Subsurface

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a $25 surcharge if required information is missing (required fields are shaded in grey).

Sample Details

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only	RN# (Lab Use Only)
MW24-2 553	2024 07 16	S	1								1736292
MW24-2 555		S	1								93
MW24-2 556		S	1								94
MW24-2 559		S	1								95
BH24-2 SS 2		S	1								96
BH24-2 SS 4		S	1								97
BH24-2 SS 5		S	1								98
BH24-2 SS 6		S	1								99
BH24-2 SS 8		S	1								300
		S	1								

	PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:	Jim Brooks		2024 07 18 1045	
Relinquished By:	Jim Brooks		2024 07 18 1045	
Received By:			24/07/18 @ 1045	8

COMMENTS: Hold samples 30 days

CUSTODY SEAL: ☐ YES ☐ NO Ice packs submit ☐ Yes ☐ No

Certificate of Analysis

eurofins | Environment Testing

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
Invoice to: Groupe ABS
PO#:

Report Number:	3009744
Date Submitted:	2024-07-26
Date Reported:	2024-08-06
Project:	241324
COC #:	229281
Temperature (C):	8
Custody Seal:	

Dear Ata Babakhani:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Sample Comment Summary

Sample ID: 1737660 MW20-13 Metals MRL elevated due to matrix interference (dilution was done). Samples from this report were rerun for Cl and Ag upon client request (DQR). Previously, these samples were run for metals on July 30, 2024.Metals spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.
Sample ID: 1737661 MW20-113 Metals MRL elevated due to matrix interference (dilution was done).
Sample ID: 1737663 MW24-2 Metals MRL elevated due to matrix interference (dilution was done).

Report Comments:

Revision 1: This is an amendment and supersedes all other copies of this report issued on 2024-08-02. Results for silver have been corrected after re-analysis. No errors detected with chloride analysis and samples were re-analysed at the client's request. Original results for chloride are 1737660 Cl= 2750000 ug/L, 1737661 Cl= 2720000 ug/L, 1737662 Cl= 1180000 ug/L, 1737663 Cl= 1990000 ug/L.

Emma-Dawn Ferguson, Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated
.
Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at https://directory.cala.ca/

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

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Project: 241324
COC #: 229281

O.Reg 153-T1-Groundwater

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria
Inorganics				
MW20-113	Chloride	2540000	ug/L	STD 790000
MW20-13	Chloride	2430000	ug/L	STD 790000
MW24-1	Chloride	1070000	ug/L	STD 790000
MW24-2	Chloride	1780000	ug/L	STD 790000
Metals				
MW20-113	Silver	0.6	ug/L	STD 0.3
MW20-113	Beryllium	<1	ug/L	STD 0.5
MW20-113	Mercury	<0.2	ug/L	STD 0.1
MW20-113	Sodium	1340000	ug/L	STD 490000
MW20-113	Lead	<2	ug/L	STD 1.9
MW20-13	Silver	0.7	ug/L	STD 0.3
MW20-13	Beryllium	<1	ug/L	STD 0.5
MW20-13	Mercury	<0.2	ug/L	STD 0.1
MW20-13	Sodium	1320000	ug/L	STD 490000
MW20-13	Lead	<2	ug/L	STD 1.9
MW24-1	Mercury	<0.2	ug/L	STD 0.1
MW24-1	Sodium	570000	ug/L	STD 490000
MW24-1	Thallium	0.6	ug/L	STD 0.5
MW24-2	Sodium	974000	ug/L	STD 490000
Volatiles				
MW20-113	Chloroform	15.9	ug/L	STD 2
MW20-13	Chloroform	16.0	ug/L	STD 2
MW24-1	Chloroform	6.4	ug/L	STD 2
MW24-2	Chloroform	6.4	ug/L	STD 2

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Guideline = O.Reg 153-T1-Groundwater

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	1737660 GW153 2024-07-25 MW20-13	1737661 GW153 2024-07-25 MW20-113	1737662 GW153 2024-07-25 MW24-1	1737663 GW153 2024-07-25 MW24-2
Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.								
PHC's F1	463888	20	ug/L	STD 420	<20	<20	<20	<20
PHC's F1-BTEX	463889	20	ug/L		<20	<20	<20	<20
PHC's F2	463898	20	ug/L	STD 150	<20	<20	<20	<20
PHC's F2-Napth	463924	20	ug/L		<20	<20	<20	<20
PHC's F3	463898	50	ug/L	STD 500	<50	<50	<50	<50
PHC's F3-PAH	463925	50	ug/L		<50	<50	<50	<50
PHC's F4	463898	50	ug/L	STD 500	<50	<50	<50	<50

Metals

Analyte	Batch No	MRL	Units	Guideline	1737660 GW153 2024-07-25 MW20-13	1737661 GW153 2024-07-25 MW20-113	1737662 GW153 2024-07-25 MW24-1	1737663 GW153 2024-07-25 MW24-2
Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.								
Antimony	463698	0.5	ug/L	STD 1.5			<0.5	
	463761	1	ug/L	STD 1.5	<1	<1		<1
Arsenic	463698	1	ug/L	STD 13			<1	<1
	463761	2	ug/L	STD 13	<2	<2		
Barium	463698	10	ug/L	STD 610			160	
	463761	20	ug/L	STD 610	410	420		410
Beryllium	463698	0.5	ug/L	STD 0.5			<0.5	<0.5
	463761	1	ug/L	STD 0.5	<1*	<1*		
Boron (total)	463698	10	ug/L	STD 1700			40	40
	463761	20	ug/L	STD 1700	40	40		
Cadmium	463698	0.1	ug/L	STD 0.5			<0.1	
	463761	0.2	ug/L	STD 0.5	<0.2	<0.2		<0.2

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Project: 241324
COC #: 229281

Guideline = O.Reg 153-T1-Groundwater

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1737660	1737661	1737662	1737663
					Sample Matrix GW153	GW153	GW153	GW153
					Sample Type			
					Sample Date 2024-07-25	2024-07-25	2024-07-25	2024-07-25
					Sampling Time			
					Sample I.D. MW20-13	MW20-113	MW24-1	MW24-2
Chromium Total	463698	1	ug/L	STD 11			<1	<1
	463761	2	ug/L	STD 11	<2	<2		
Cobalt	463698	0.2	ug/L	STD 3.8			0.4	2.6
	463761	0.4	ug/L	STD 3.8	<0.4	<0.4		
Copper	463698	1	ug/L	STD 5			2	1
	463761	2	ug/L	STD 5	<2	<2		
Lead	463698	1	ug/L	STD 1.9			<1	<1
	463761	2	ug/L	STD 1.9	<2*	<2*		
Mercury	463779	0.1	ug/L	STD 0.1				<0.1
		0.2	ug/L	STD 0.1	<0.2*	<0.2*	<0.2*	
Molybdenum	463698	5	ug/L	STD 23			5	9
	463761	10	ug/L	STD 23	<10	<10		
Nickel	463698	5	ug/L	STD 14			<5	<5
	463761	10	ug/L	STD 14	<10	<10		
Selenium	463698	1	ug/L	STD 5			<1	<1
	463761	2	ug/L	STD 5	<2	<2		
Silver	464000	0.1	ug/L	STD 0.3			<0.1	
		0.2	ug/L	STD 0.3	0.7*	0.6*		<0.2
Sodium	463706	1000	ug/L	STD 490000	1320000*	1340000*	570000*	974000*
Thallium	463698	0.1	ug/L	STD 0.5			0.6*	0.2
	463761	0.2	ug/L	STD 0.5	<0.2	<0.2		
Uranium	463698	1	ug/L	STD 8.9			4	4
	463761	2	ug/L	STD 8.9	3	3		

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Certificate of Analysis

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Project: 241324
COC #: 229281

Guideline = O.Reg 153-T1-Groundwater

Metals

Analyte	Batch No	MRL	Units	Guideline	1737660 GW153 2024-07-25 MW20-13	1737661 GW153 2024-07-25 MW20-113	1737662 GW153 2024-07-25 MW24-1	1737663 GW153 2024-07-25 MW24-2
Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.								
Vanadium	463698	1	ug/L	STD 3.9			<1	<1
	463761	2	ug/L	STD 3.9	<2	<2		
Zinc	463698	10	ug/L	STD 160			<10	<10
	463761	20	ug/L	STD 160	<20	<20		

Others

Analyte	Batch No	MRL	Units	Guideline	1737660 GW153 2024-07-25 MW20-13	1737661 GW153 2024-07-25 MW20-113	1737662 GW153 2024-07-25 MW24-1	1737663 GW153 2024-07-25 MW24-2
Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.								
Chromium VI	463773	1	ug/L	STD 25	<1	<1	<1	<1

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PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.			
					1737660 GW153 2024-07-25 MW20-13	1737661 GW153 2024-07-25 MW20-113	1737662 GW153 2024-07-25 MW24-1	1737663 GW153 2024-07-25 MW24-2
1+2-methylnaphthalene	463790	0.1	ug/L	STD 2	<0.1	<0.1	<0.1	<0.1
Acenaphthene	463348	0.1	ug/L	STD 4.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	463348	0.1	ug/L	STD 1	<0.1	<0.1	<0.1	<0.1
Anthracene	463348	0.1	ug/L	STD 0.1	<0.1	<0.1	<0.1	<0.1
Benz[a]anthracene	463348	0.1	ug/L	STD 0.2	<0.1	<0.1	<0.1	<0.1
Benzo[a]pyrene	463348	0.01	ug/L	STD 0.01	<0.01	<0.01	<0.01	<0.01
Benzo[b]fluoranthene	463348	0.05	ug/L	STD 0.1	<0.05	<0.05	<0.05	<0.05
Benzo[ghi]perylene	463348	0.1	ug/L	STD 0.2	<0.1	<0.1	<0.1	<0.1
Benzo[k]fluoranthene	463348	0.05	ug/L	STD 0.1	<0.05	<0.05	<0.05	<0.05
Chrysene	463348	0.05	ug/L	STD 0.1	<0.05	<0.05	<0.05	<0.05
Dibenz[a h]anthracene	463348	0.1	ug/L	STD 0.2	<0.1	<0.1	<0.1	<0.1
Fluoranthene	463348	0.1	ug/L	STD 0.4	<0.1	<0.1	<0.1	<0.1
Fluorene	463348	0.1	ug/L	STD 120	<0.1	<0.1	<0.1	<0.1
Indeno[1 2 3-cd]pyrene	463348	0.1	ug/L	STD 0.2	<0.1	<0.1	<0.1	<0.1
Methlynaphthalene, 1-	463348	0.1	ug/L	STD 2	<0.1	<0.1	<0.1	<0.1
Methlynaphthalene, 2-	463348	0.1	ug/L	STD 2	<0.1	<0.1	<0.1	<0.1
Naphthalene	463348	0.1	ug/L	STD 7	<0.1	<0.1	<0.1	<0.1
Phenanthrene	463348	0.1	ug/L	STD 0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	463348	0.1	ug/L	STD 0.2	<0.1	<0.1	<0.1	<0.1

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Guideline = O.Reg 153-T1-Groundwater

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1737660 GW153 2024-07-25 MW20-13	1737661 GW153 2024-07-25 MW20-113	1737662 GW153 2024-07-25 MW24-1	1737663 GW153 2024-07-25 MW24-2	1737664 GW153 2024-07-25 T. Blank
1,3,5-trimethylbenzene	463890	0.3	ug/L		<0.3	<0.3	<0.3		<0.3
	463915	0.3	ug/L					<0.3	
Acetone	463890	5	ug/L	STD 2700	<5	<5	<5		<5
	463915	5	ug/L	STD 2700				<5	
Benzene	463890	0.5	ug/L	STD 0.5	<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L	STD 0.5				<0.5	
Bromodichloromethane	463890	0.3	ug/L	STD 2	<0.3	<0.3	<0.3		<0.3
	463915	0.3	ug/L	STD 2				<0.3	
Bromoform	463890	0.4	ug/L	STD 5	<0.4	<0.4	<0.4		<0.4
	463915	0.4	ug/L	STD 5				<0.4	
Bromomethane	463890	0.5	ug/L	STD 0.89	<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L	STD 0.89				<0.5	
Carbon Tetrachloride	463890	0.2	ug/L	STD 0.2	<0.2	<0.2	<0.2		<0.2
	463915	0.2	ug/L	STD 0.2				<0.2	
Chlorobenzene	463890	0.5	ug/L	STD 0.5	<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L	STD 0.5				<0.5	
Chloroethane	463890	0.5	ug/L		<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L					<0.5	
Chloroform	463890	0.5	ug/L	STD 2	16.0*	15.9*	6.4*		<0.5
	463915	0.5	ug/L	STD 2				6.4*	
Dibromochloromethane	463890	0.3	ug/L	STD 2	<0.3	<0.3	<0.3		<0.3
	463915	0.3	ug/L	STD 2				<0.3	
Dichlorobenzene, 1,2-	463890	0.4	ug/L	STD 0.5	<0.4	<0.4	<0.4		<0.4

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	1737660 GW153 2024-07-25 MW20-13	1737661 GW153 2024-07-25 MW20-113	1737662 GW153 2024-07-25 MW24-1	1737663 GW153 2024-07-25 MW24-2	1737664 GW153 2024-07-25 T. Blank
Lab I.D.					1737660	1737661	1737662	1737663	1737664
Sample Matrix					GW153	GW153	GW153	GW153	GW153
Sample Type					2024-07-25	2024-07-25	2024-07-25	2024-07-25	2024-07-25
Sample Date									
Sampling Time									
Sample I.D.					MW20-13	MW20-113	MW24-1	MW24-2	T. Blank
Dichlorobenzene, 1,2-	463915	0.4	ug/L	STD 0.5				<0.4	
Dichlorobenzene, 1,3-	463890	0.4	ug/L	STD 0.5	<0.4	<0.4	<0.4		<0.4
	463915	0.4	ug/L	STD 0.5				<0.4	
Dichlorobenzene, 1,4-	463890	0.4	ug/L	STD 0.5	<0.4	<0.4	<0.4		<0.4
	463915	0.4	ug/L	STD 0.5				<0.4	
Dichlorodifluoromethane	463890	0.5	ug/L	STD 590	<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L	STD 590				<0.5	
Dichloroethane, 1,1-	463890	0.4	ug/L	STD 0.5	<0.4	<0.4	<0.4		<0.4
	463915	0.4	ug/L	STD 0.5				<0.4	
Dichloroethane, 1,2-	463890	0.5	ug/L	STD 0.5	<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L	STD 0.5				<0.5	
Dichloroethylene, 1,1-	463890	0.5	ug/L	STD 0.5	<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L	STD 0.5				<0.5	
Dichloroethylene, 1,2-cis-	463890	0.4	ug/L	STD 1.6	<0.4	<0.4	<0.4		<0.4
	463915	0.4	ug/L	STD 1.6				<0.4	
Dichloroethylene, 1,2-trans-	463890	0.4	ug/L	STD 1.6	<0.4	<0.4	<0.4		<0.4
	463915	0.4	ug/L	STD 1.6				<0.4	
Dichloropropane, 1,2-	463890	0.5	ug/L	STD 0.5	<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L	STD 0.5				<0.5	
Dichloropropene,1,3-	463894	0.5	ug/L	STD 0.5	<0.5	<0.5	<0.5		<0.5
	463920	0.5	ug/L	STD 0.5				<0.5	
Dichloropropene,1,3-cis-	463890	0.5	ug/L		<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L					<0.5	

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Invoice to: Groupe ABS

Report Number: 3009744
Date Submitted: 2024-07-26
Date Reported: 2024-08-06
Project: 241324
COC #: 229281

Guideline = O.Reg 153-T1-Groundwater

Volatiles

Analyte	Batch No	MRL	Units	Guideline	1737660 GW153 2024-07-25 MW20-13	1737661 GW153 2024-07-25 MW20-113	1737662 GW153 2024-07-25 MW24-1	1737663 GW153 2024-07-25 MW24-2	1737664 GW153 2024-07-25 T. Blank
Lab I.D.					1737660	1737661	1737662	1737663	1737664
Sample Matrix					GW153	GW153	GW153	GW153	GW153
Sample Type					2024-07-25	2024-07-25	2024-07-25	2024-07-25	2024-07-25
Sample Date									
Sampling Time									
Sample I.D.					MW20-13	MW20-113	MW24-1	MW24-2	T. Blank
Dichloropropene,1,3-trans-	463890	0.5	ug/L		<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L					<0.5	
Ethylbenzene	463890	0.5	ug/L	STD 0.5	<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L	STD 0.5				<0.5	
Ethylene dibromide	463890	0.2	ug/L	STD 0.2	<0.2	<0.2	<0.2		<0.2
	463915	0.2	ug/L	STD 0.2				<0.2	
Hexane (n)	463890	5	ug/L	STD 5	<5	<5	<5		<5
	463915	5	ug/L	STD 5				<5	
Methyl Ethyl Ketone	463890	2	ug/L	STD 400	<2	<2	<2		<2
	463915	2	ug/L	STD 400				<2	
Methyl Isobutyl Ketone	463890	5	ug/L	STD 640	<5	<5	<5		<5
	463915	5	ug/L	STD 640				<5	
Methyl tert-Butyl Ether (MTBE)	463890	2	ug/L	STD 15	<2	<2	<2		<2
	463915	2	ug/L	STD 15				<2	
Methylene Chloride	463890	4.0	ug/L	STD 5	<4.0	<4.0	<4.0		<4.0
	463915	4.0	ug/L	STD 5				<4.0	
Styrene	463890	0.5	ug/L	STD 0.5	<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L	STD 0.5				<0.5	
Tetrachloroethane, 1,1,1,2-	463890	0.5	ug/L	STD 1.1	<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L	STD 1.1				<0.5	
Tetrachloroethane, 1,1,2,2-	463890	0.5	ug/L	STD 0.5	<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L	STD 0.5				<0.5	
Tetrachloroethylene	463890	0.3	ug/L	STD 0.5	<0.3	<0.3	<0.3		<0.3

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1737660 GW153 2024-07-25 MW20-13	1737661 GW153 2024-07-25 MW20-113	1737662 GW153 2024-07-25 MW24-1	1737663 GW153 2024-07-25 MW24-2	1737664 GW153 2024-07-25 T. Blank
Tetrachloroethylene	463915	0.3	ug/L	STD 0.5				<0.3	
Toluene	463890	0.4	ug/L	STD 0.8	<0.4	<0.4	<0.4		<0.4
	463915	0.4	ug/L	STD 0.8				<0.4	
Trichloroethane, 1,1,1-	463890	0.4	ug/L	STD 0.5	<0.4	<0.4	<0.4		<0.4
	463915	0.4	ug/L	STD 0.5				<0.4	
Trichloroethane, 1,1,2-	463890	0.4	ug/L	STD 0.5	<0.4	<0.4	<0.4		<0.4
	463915	0.4	ug/L	STD 0.5				<0.4	
Trichloroethylene	463890	0.3	ug/L	STD 0.5	<0.3	<0.3	<0.3		<0.3
	463915	0.3	ug/L	STD 0.5				<0.3	
Trichlorofluoromethane	463890	0.5	ug/L	STD 150	<0.5	<0.5	<0.5		<0.5
	463915	0.5	ug/L	STD 150				<0.5	
Vinyl Chloride	463890	0.2	ug/L	STD 0.5	<0.2	<0.2	<0.2		<0.2
	463915	0.2	ug/L	STD 0.5				<0.2	
Xylene Mixture	463892	0.5	ug/L	STD 72	<0.5	<0.5	<0.5		<0.5
	463918	0.5	ug/L	STD 72				<0.5	
Xylene, m/p-	463890	0.4	ug/L		<0.4	<0.4	<0.4		<0.4
	463915	0.4	ug/L					<0.4	
Xylene, o-	463890	0.4	ug/L		<0.4	<0.4	<0.4		<0.4
	463915	0.4	ug/L					<0.4	

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Project: 241324
COC #: 229281

Guideline = O.Reg 153-T1-Groundwater

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1737665 / Sample Matrix GW153 / Sample Type / Sample Date 2024-07-25 / Sampling Time / Sample I.D. F. Blank
1,3,5-trimethylbenzene	463890	0.3	ug/L		<0.3
Acetone	463890	5	ug/L	STD 2700	<5
Benzene	463890	0.5	ug/L	STD 0.5	<0.5
Bromodichloromethane	463890	0.3	ug/L	STD 2	<0.3
Bromoform	463890	0.4	ug/L	STD 5	<0.4
Bromomethane	463890	0.5	ug/L	STD 0.89	<0.5
Carbon Tetrachloride	463890	0.2	ug/L	STD 0.2	<0.2
Chlorobenzene	463890	0.5	ug/L	STD 0.5	<0.5
Chloroethane	463890	0.5	ug/L		<0.5
Chloroform	463890	0.5	ug/L	STD 2	<0.5
Dibromochloromethane	463890	0.3	ug/L	STD 2	<0.3
Dichlorobenzene, 1,2-	463890	0.4	ug/L	STD 0.5	<0.4
Dichlorobenzene, 1,3-	463890	0.4	ug/L	STD 0.5	<0.4
Dichlorobenzene, 1,4-	463890	0.4	ug/L	STD 0.5	<0.4
Dichlorodifluoromethane	463890	0.5	ug/L	STD 590	<0.5
Dichloroethane, 1,1-	463890	0.4	ug/L	STD 0.5	<0.4
Dichloroethane, 1,2-	463890	0.5	ug/L	STD 0.5	<0.5
Dichloroethylene, 1,1-	463890	0.5	ug/L	STD 0.5	<0.5
Dichloroethylene, 1,2-cis-	463890	0.4	ug/L	STD 1.6	<0.4
Dichloroethylene, 1,2-trans-	463890	0.4	ug/L	STD 1.6	<0.4
Dichloropropane, 1,2-	463890	0.5	ug/L	STD 0.5	<0.5
Dichloropropene,1,3-	463894	0.5	ug/L	STD 0.5	<0.5
Dichloropropene,1,3-cis-	463890	0.5	ug/L		<0.5

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Guideline = O.Reg 153-T1-Groundwater

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1737665 Sample Matrix GW153 Sample Type Sample Date 2024-07-25 Sampling Time Sample I.D. F. Blank
Dichloropropene,1,3-trans-	463890	0.5	ug/L		<0.5
Ethylbenzene	463890	0.5	ug/L	STD 0.5	<0.5
Ethylene dibromide	463890	0.2	ug/L	STD 0.2	<0.2
Hexane (n)	463890	5	ug/L	STD 5	<5
Methyl Ethyl Ketone	463890	2	ug/L	STD 400	<2
Methyl Isobutyl Ketone	463890	5	ug/L	STD 640	<5
Methyl tert-Butyl Ether (MTBE)	463890	2	ug/L	STD 15	<2
Methylene Chloride	463890	4.0	ug/L	STD 5	<4.0
Styrene	463890	0.5	ug/L	STD 0.5	<0.5
Tetrachloroethane, 1,1,1,2-	463890	0.5	ug/L	STD 1.1	<0.5
Tetrachloroethane, 1,1,2,2-	463890	0.5	ug/L	STD 0.5	<0.5
Tetrachloroethylene	463890	0.3	ug/L	STD 0.5	<0.3
Toluene	463890	0.4	ug/L	STD 0.8	<0.4
Trichloroethane, 1,1,1-	463890	0.4	ug/L	STD 0.5	<0.4
Trichloroethane, 1,1,2-	463890	0.4	ug/L	STD 0.5	<0.4
Trichloroethylene	463890	0.3	ug/L	STD 0.5	<0.3
Trichlorofluoromethane	463890	0.5	ug/L	STD 150	<0.5
Vinyl Chloride	463890	0.2	ug/L	STD 0.5	<0.2
Xylene Mixture	463892	0.5	ug/L	STD 72	<0.5
Xylene, m/p-	463890	0.4	ug/L		<0.4
Xylene, o-	463890	0.4	ug/L		<0.4

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Inorganics

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.			
					1737660 GW153 2024-07-25 MW20-13	1737661 GW153 2024-07-25 MW20-113	1737662 GW153 2024-07-25 MW24-1	1737663 GW153 2024-07-25 MW24-2
Chloride	463974	1000	ug/L	STD 790000	2430000*	2540000*	1070000*	1780000*
Conductivity	463741	5	uS/cm		8240	8300	3970	6270
Cyanide (CN-)	463950	5	ug/L	STD 5	<5	<5	<5	<5
pH	463741	1.00			7.70	7.69	7.91	7.86

PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.			
					1737660 GW153 2024-07-25 MW20-13	1737661 GW153 2024-07-25 MW20-113	1737662 GW153 2024-07-25 MW24-1	1737663 GW153 2024-07-25 MW24-2
Alpha-androstrane	463898	0	%		112	110	116	121

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VOCs Surrogates

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1737660 GW153 2024-07-25 MW20-13	1737661 GW153 2024-07-25 MW20-113	1737662 GW153 2024-07-25 MW24-1	1737663 GW153 2024-07-25 MW24-2	1737664 GW153 2024-07-25 T. Blank
1,2-dichloroethane-d4	463890	0	%		125	129	124		124
	463915	0	%					124	
4-bromofluorobenzene	463890	0	%		79	78	77		76
	463915	0	%					77	
Toluene-d8	463890	0	%		90	90	92		91
	463915	0	%					92	

VOCs Surrogates

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.
					1737665 GW153 2024-07-25 F. Blank
1,2-dichloroethane-d4	463890	0	%		125
4-bromofluorobenzene	463890	0	%		77
Toluene-d8	463890	0	%		90

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463348	Methlynaphthalene, 1-	<0.1 ug/L	80	50-140		50-140		0-30
463348	Methlynaphthalene, 2-	<0.1 ug/L	76	50-140		50-140		0-30
463348	Acenaphthene	<0.1 ug/L	78	50-140		50-140		0-30
463348	Acenaphthylene	<0.1 ug/L	83	50-140		50-140		0-30
463348	Anthracene	<0.1 ug/L	77	50-140		50-140		0-30
463348	Benz[a]anthracene	<0.1 ug/L	73	50-140		50-140		0-30
463348	Benzo[a]pyrene	<0.01 ug/L	84	50-140		50-140		0-30
463348	Benzo[b]fluoranthene	<0.05 ug/L	57	50-140		50-140		0-30
463348	Benzo[ghi]perylene	<0.1 ug/L	77	50-140		50-140		0-30
463348	Benzo[k]fluoranthene	<0.05 ug/L	60	50-140		50-140		0-30
463348	Chrysene	<0.05 ug/L	84	50-140		50-140		0-30
463348	Dibenz[a h]anthracene	<0.1 ug/L	80	50-140		50-140		0-30
463348	Fluoranthene	<0.1 ug/L	80	50-140		50-140		0-30
463348	Fluorene	<0.1 ug/L	70	50-140		50-140		0-30
463348	Indeno[1 2 3-cd]pyrene	<0.1 ug/L	80	50-140		50-140		0-30
463348	Naphthalene	<0.1 ug/L	73	50-140		50-140		0-30
463348	Phenanthrene	<0.1 ug/L	74	50-140		50-140		0-30
463348	Pyrene	<0.1 ug/L	82	50-140		50-140		0-30
463698	Arsenic	<1 ug/L	101	80-120	96	70-130	0	0-20
463698	Boron (total)	<10 ug/L	108	80-120	112	80-120	0	0-20
463698	Barium	<10 ug/L	98	80-120	96	70-130	0	0-20
463698	Beryllium	<0.5 ug/L	111	80-120	115	70-130	0	0-20
463698	Cadmium	<0.1 ug/L	108	80-120	104	70-130	0	0-20
463698	Cobalt	<0.2 ug/L	107	80-120	95	70-130	0	0-20
463698	Chromium Total	<1 ug/L	118	80-120	99	70-130	0	0-20
463698	Copper	<1 ug/L	110	80-120	71	70-130	0	0-20
463698	Molybdenum	<5 ug/L	97	80-120	92	70-130	0	0-20
463698	Nickel	<5 ug/L	109	80-120	99	70-130	0	0-20
463698	Lead	<1 ug/L	109	80-120	100	70-130	0	0-20
463698	Antimony	<0.5 ug/L	100	80-120	93	70-130	0	0-20
463698	Selenium	<1 ug/L	105	80-120	104	70-130	0	0-20
463698	Thallium	<0.1 ug/L	109	80-120	99	70-130	0	0-20

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463698	Uranium	<1 ug/L	104	80-120	100	70-130	0	0-20
463698	Vanadium	<1 ug/L	104	80-120	96	70-130	0	0-20
463698	Zinc	<10 ug/L	112	80-120	102	70-130	0	0-20
463706	Sodium	<1000 ug/L	103	82-118		80-120	0	0-20
463741	Conductivity	<5 uS/cm	101	90-110			0	0-5
463741	pH		99	90-110			0	0-5
463761	Arsenic	<2 ug/L	100	80-120	100	70-130	0	0-20
463761	Boron (total)	<20 ug/L	106	80-120	109	80-120	0	0-20
463761	Barium	<20 ug/L	100	80-120	99	70-130	0	0-20
463761	Beryllium	<1 ug/L	107	80-120	108	70-130	0	0-20
463761	Cadmium	<0.2 ug/L	103	80-120	102	70-130	0	0-20
463761	Cobalt	<0.4 ug/L	102	80-120	101	70-130	0	0-20
463761	Chromium Total	<2 ug/L	106	80-120	101	70-130	0	0-20
463761	Copper	<2 ug/L	106	80-120	102	70-130	0	0-20
463761	Molybdenum	<10 ug/L	97	80-120	91	70-130	0	0-20
463761	Nickel	<10 ug/L	109	80-120	100	70-130	0	0-20
463761	Lead	<2 ug/L	104	80-120	100	70-130	0	0-20
463761	Antimony	<1 ug/L	84	80-120	93	70-130	0	0-20
463761	Selenium	<2 ug/L	106	80-120	106	70-130	0	0-20
463761	Thallium	<0.2 ug/L	106	80-120	99	70-130	0	0-20
463761	Uranium	<2 ug/L	96	80-120	98	70-130	0	0-20
463761	Vanadium	<2 ug/L	102	80-120	98	70-130	0	0-20
463761	Zinc	<20 ug/L	109	80-120	105	70-130	0	0-20
463773	Chromium VI	<1 ug/L	99	80-120	111	70-130	0	0-20
463779	Mercury	<0.2 ug/L	85	80-120	73	70-130	0	0-20
463790	1+2-methylnaphthalene							
463888	PHC's F1	<20 ug/L	103	60-140	106	60-140	0	0-30
463889	PHC's F1-BTEX							
463890	Tetrachloroethane, 1,1,1,2-	<0.5 ug/L	91	60-130	109	50-140	0	0-30
463890	Trichloroethane, 1,1,1-	<0.4 ug/L	101	60-130	113	50-140	0	0-30
463890	Tetrachloroethane, 1,1,2,2-	<0.5 ug/L	92	60-130	110	50-140	0	0-30
463890	Trichloroethane, 1,1,2-	<0.4 ug/L	94	60-130	107	50-140	0	0-30
463890	Dichloroethane, 1,1-	<0.4 ug/L	99	60-130	119	50-140	0	0-30

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COC #: 229281

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463890	Dichloroethylene, 1,1-	<0.5 ug/L	100	60-130	112	50-140	0	0-30
463890	Dichlorobenzene, 1,2-	<0.4 ug/L	95	60-130	102	50-140	0	0-30
463890	Dichloroethane, 1,2-	<0.5 ug/L	105	60-130	124	50-140	0	0-30
463890	Dichloropropane, 1,2-	<0.5 ug/L	91	60-130	120	50-140	0	0-30
463890	1,3,5-trimethylbenzene	<0.3 ug/L	92	60-130	104	50-140	0	0-30
463890	Dichlorobenzene, 1,3-	<0.4 ug/L	93	60-130	101	50-140	0	0-30
463890	Dichlorobenzene, 1,4-	<0.4 ug/L	93	60-130	101	50-140	0	0-30
463890	Acetone	<5 ug/L	99	60-130	92	50-140	0	0-30
463890	Benzene	<0.5 ug/L	96	60-130	120	50-140	0	0-30
463890	Bromodichloromethane	<0.3 ug/L	94	60-130	121	50-140	0	0-30
463890	Bromoform	<0.4 ug/L	86	60-130	101	50-140	0	0-30
463890	Bromomethane	<0.5 ug/L	107	60-130	112	50-140	0	0-30
463890	Dichloroethylene, 1,2-cis-	<0.4 ug/L	92	60-130	120	50-140	0	0-30
463890	Dichloropropene,1,3-cis-	<0.5 ug/L	92	60-130	112	50-140	0	0-30
463890	Carbon Tetrachloride	<0.2 ug/L	100	60-130	113	50-140	0	0-30
463890	Chloroethane	<0.5 ug/L	104	60-130	113	50-140	0	0-30
463890	Chloroform	<0.5 ug/L	102	60-130	119	50-140	0	0-30
463890	Dibromochloromethane	<0.3 ug/L	93	60-130	103	50-140	0	0-30
463890	Dichlorodifluoromethane	<0.5 ug/L	91	60-130	101	50-140	0	0-30
463890	Methylene Chloride	<4.0 ug/L	106	60-130	122	50-140	0	0-30
463890	Ethylbenzene	<0.5 ug/L	92	60-130	112	50-140	0	0-30
463890	Ethylene dibromide	<0.2 ug/L	92	60-130	100	50-140	0	0-30
463890	Hexane (n)	<5 ug/L	91	60-130	109	50-140	0	0-30
463890	Xylene, m/p-	<0.4 ug/L	98	60-130	112	50-140	0	0-30
463890	Methyl Ethyl Ketone	<2 ug/L	97	60-130	121	50-140	0	0-30
463890	Methyl Isobutyl Ketone	<5 ug/L	97	60-130	107	50-140	0	0-30
463890	Methyl tert-Butyl Ether (MTBE)	<2 ug/L	93	60-130	119	50-140	0	0-30
463890	Chlorobenzene	<0.5 ug/L	94	60-130	109	50-140	0	0-30
463890	Xylene, o-	<0.4 ug/L	92	60-130	113	50-140	0	0-30
463890	Styrene	<0.5 ug/L	95	60-130	111	50-140	0	0-30
463890	Dichloroethylene, 1,2-trans-	<0.4 ug/L	95	60-130	118	50-140	0	0-30
463890	Dichloropropene,1,3-trans-	<0.5 ug/L	93	60-130	111	50-140	0	0-30
463890	Tetrachloroethylene	<0.3 ug/L	97	60-130	112	50-140	0	0-30

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Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009744
Date Submitted: 2024-07-26
Date Reported: 2024-08-06
Project: 241324
COC #: 229281

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463890	Toluene	<0.4 ug/L	94	60-130	126	50-140	0	0-30
463890	Trichloroethylene	<0.3 ug/L	91	60-130	112	50-140	0	0-30
463890	Trichlorofluoromethane	<0.5 ug/L	92	60-130	105	50-140	0	0-30
463890	Vinyl Chloride	<0.2 ug/L	97	60-130	111	50-140	0	0-30
463892	Xylene Mixture							
463894	Dichloropropene,1,3-							
463898	PHC's F2	<20 ug/L	110	60-140		60-140		0-30
463898	PHC's F3	<50 ug/L	110	60-140		60-140		0-30
463898	PHC's F4	<50 ug/L	110	60-140		60-140		0-30
463915	Tetrachloroethane, 1,1,1,2-	<0.5 ug/L	91	60-130	109	50-140	0	0-30
463915	Trichloroethane, 1,1,1-	<0.4 ug/L	101	60-130	113	50-140	0	0-30
463915	Tetrachloroethane, 1,1,2,2-	<0.5 ug/L	92	60-130	110	50-140	0	0-30
463915	Trichloroethane, 1,1,2-	<0.4 ug/L	94	60-130	107	50-140	0	0-30
463915	Dichloroethane, 1,1-	<0.4 ug/L	99	60-130	119	50-140	0	0-30
463915	Dichloroethylene, 1,1-	<0.5 ug/L	100	60-130	112	50-140	0	0-30
463915	Dichlorobenzene, 1,2-	<0.4 ug/L	95	60-130	102	50-140	0	0-30
463915	Dichloroethane, 1,2-	<0.5 ug/L	105	60-130	124	50-140	0	0-30
463915	Dichloropropane, 1,2-	<0.5 ug/L	91	60-130	120	50-140	0	0-30
463915	1,3,5-trimethylbenzene	<0.3 ug/L	92	60-130	104	50-140	0	0-30
463915	Dichlorobenzene, 1,3-	<0.4 ug/L	93	60-130	101	50-140	0	0-30
463915	Dichlorobenzene, 1,4-	<0.4 ug/L	93	60-130	101	50-140	0	0-30
463915	Acetone	<5 ug/L	99	60-130	92	50-140	0	0-30
463915	Benzene	<0.5 ug/L	96	60-130	120	50-140	0	0-30
463915	Bromodichloromethane	<0.3 ug/L	94	60-130	121	50-140	0	0-30
463915	Bromoform	<0.4 ug/L	86	60-130	101	50-140	0	0-30
463915	Bromomethane	<0.5 ug/L	107	60-130	112	50-140	0	0-30
463915	Dichloroethylene, 1,2-cis-	<0.4 ug/L	92	60-130	120	50-140	0	0-30
463915	Dichloropropene,1,3-cis-	<0.5 ug/L	92	60-130	112	50-140	0	0-30
463915	Carbon Tetrachloride	<0.2 ug/L	100	60-130	113	50-140	0	0-30
463915	Chloroethane	<0.5 ug/L	104	60-130	113	50-140	0	0-30
463915	Chloroform	<0.5 ug/L	102	60-130	119	50-140	0	0-30
463915	Dibromochloromethane	<0.3 ug/L	93	60-130	103	50-140	0	0-30
463915	Dichlorodifluoromethane	<0.5 ug/L	91	60-130	101	50-140	0	0-30

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Invoice to: Groupe ABS

Report Number: 3009744
Date Submitted: 2024-07-26
Date Reported: 2024-08-06
Project: 241324
COC #: 229281

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
463915	Methylene Chloride	<4.0 ug/L	106	60-130	122	50-140	0	0-30
463915	Ethylbenzene	<0.5 ug/L	92	60-130	112	50-140	0	0-30
463915	Ethylene dibromide	<0.2 ug/L	92	60-130	100	50-140	0	0-30
463915	Hexane (n)	<5 ug/L	91	60-130	109	50-140	0	0-30
463915	Xylene, m/p-	<0.4 ug/L	98	60-130	112	50-140	0	0-30
463915	Methyl Ethyl Ketone	<2 ug/L	97	60-130	121	50-140	0	0-30
463915	Methyl Isobutyl Ketone	<5 ug/L	97	60-130	107	50-140	0	0-30
463915	Methyl tert-Butyl Ether (MTBE)	<2 ug/L	93	60-130	119	50-140	0	0-30
463915	Chlorobenzene	<0.5 ug/L	94	60-130	109	50-140	0	0-30
463915	Xylene, o-	<0.4 ug/L	92	60-130	113	50-140	0	0-30
463915	Styrene	<0.5 ug/L	95	60-130	111	50-140	0	0-30
463915	Dichloroethylene, 1,2-trans-	<0.4 ug/L	95	60-130	118	50-140	0	0-30
463915	Dichloropropene,1,3-trans-	<0.5 ug/L	93	60-130	111	50-140	0	0-30
463915	Tetrachloroethylene	<0.3 ug/L	97	60-130	112	50-140	0	0-30
463915	Toluene	<0.4 ug/L	94	60-130	126	50-140	0	0-30
463915	Trichloroethylene	<0.3 ug/L	91	60-130	112	50-140	0	0-30
463915	Trichlorofluoromethane	<0.5 ug/L	92	60-130	105	50-140	0	0-30
463915	Vinyl Chloride	<0.2 ug/L	97	60-130	111	50-140	0	0-30
463918	Xylene Mixture							
463920	Dichloropropene,1,3-							
463924	PHC's F2-Napth							
463925	PHC's F3-PAH							
463950	Cyanide (CN-)	<5 ug/L	89	75-125	105	80-120	0	0-20
463974	Chloride	<1000 ug/L	97	90-110	102	80-120	0	0-20
464000	Silver	<0.2 ug/L	91	80-120	39	70-130	0	0-20

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Certificate of Analysis

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Project: 241324
COC #: 229281

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463348	Methlynaphthalene, 1-	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Methlynaphthalene, 2-	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Acenaphthene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Acenaphthylene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Anthracene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Benz[a]anthracene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Benzo[a]pyrene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Benzo[b]fluoranthene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Benzo[ghi]perylene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Benzo[k]fluoranthene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Chrysene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Dibenz[a h]anthracene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Fluoranthene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Fluorene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Indeno[1 2 3-cd]pyrene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Naphthalene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Phenanthrene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463348	Pyrene	GC-MS	2024-07-30	2024-07-30	C_M	P 8270
463698	Arsenic	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Boron (total)	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Barium	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Beryllium	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Cadmium	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Cobalt	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Chromium Total	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Copper	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Molybdenum	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Nickel	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Lead	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Antimony	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Selenium	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Thallium	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8

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Certificate of Analysis

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Attention: Mr. Ata Babakhani
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Report Number: 3009744
Date Submitted: 2024-07-26
Date Reported: 2024-08-06
Project: 241324
COC #: 229281

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463698	Uranium	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Vanadium	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463698	Zinc	ICAPQ-MS	2024-07-29	2024-07-29	AaN	EPA 200.8
463706	Sodium	ICP-OES	2024-07-30	2024-07-30	Z_S	M SM3120B-3500C
463741	Conductivity	Auto Titrator	2024-07-30	2024-07-30	AsA	SM2320,2510,4500H/F
463741	pH	Auto Titrator	2024-07-30	2024-07-30	AsA	SM2320,2510,4500H/F
463761	Arsenic	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Boron (total)	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Barium	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Beryllium	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Cadmium	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Cobalt	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Chromium Total	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Copper	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Molybdenum	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Nickel	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Lead	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Antimony	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Selenium	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Thallium	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Uranium	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Vanadium	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463761	Zinc	ICAPQ-MS	2024-07-30	2024-07-30	AaN	EPA 200.8
463773	Chromium VI	Ion Chromatography	2024-07-30	2024-07-30	AnK	SM3500-CR C
463779	Mercury	ICAPQ-MS	2024-07-31	2024-07-31	AaN	EPA 200.8
463790	1+2-methylnaphthalene	GC-MS	2024-07-31	2024-07-31	C_M	P 8270
463888	PHC's F1	GC/FID	2024-08-01	2024-08-01	ZhL	CCME O.Reg 153/04
463889	PHC's F1-BTEX	GC/FID	2024-08-01	2024-08-01	ZhL	CCME O.Reg 153/04
463890	Tetrachloroethane, 1,1,1,2-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Trichloroethane, 1,1,1-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Tetrachloroethane, 1,1,2,2-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Trichloroethane, 1,1,2-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Dichloroethane, 1,1-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260

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Project: 241324
COC #: 229281

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463890	Dichloroethylene, 1,1-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Dichlorobenzene, 1,2-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Dichloroethane, 1,2-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Dichloropropane, 1,2-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	1,3,5-trimethylbenzene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Dichlorobenzene, 1,3-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Dichlorobenzene, 1,4-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Acetone	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Benzene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Bromodichloromethane	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Bromoform	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Bromomethane	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Dichloroethylene, 1,2-cis-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Dichloropropene,1,3-cis-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Carbon Tetrachloride	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Chloroethane	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Chloroform	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Dibromochloromethane	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Dichlorodifluoromethane	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Methylene Chloride	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Ethylbenzene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Ethylene dibromide	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Hexane (n)	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Xylene, m/p-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Methyl Ethyl Ketone	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Methyl Isobutyl Ketone	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Methyl tert-Butyl Ether (MTBE)	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Chlorobenzene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Xylene, o-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Styrene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Dichloroethylene, 1,2-trans-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Dichloropropene,1,3-trans-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Tetrachloroethylene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260

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Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: Groupe ABS
850 Industrial Ave (Suite B)
Ottawa, ON
K1G 4H3
Attention: Mr. Ata Babakhani
PO#:
Invoice to: Groupe ABS

Report Number: 3009744
Date Submitted: 2024-07-26
Date Reported: 2024-08-06
Project: 241324
COC #: 229281

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463890	Toluene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Trichloroethylene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Trichlorofluoromethane	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463890	Vinyl Chloride	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463892	Xylene Mixture	GC-MS	2024-08-01	2024-08-01	ZhL	EPA 8260
463894	Dichloropropene,1,3-	GC-MS	2024-08-01	2024-08-01	ZhL	EPA 8260
463898	PHC's F2	GC/FID	2024-08-01	2024-08-01	H_S	CCME O.Reg 153/04
463898	PHC's F3	GC/FID	2024-08-01	2024-08-01	H_S	CCME O.Reg 153/04
463898	PHC's F4	GC/FID	2024-08-01	2024-08-01	H_S	CCME O.Reg 153/04
463915	Tetrachloroethane, 1,1,1,2-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Trichloroethane, 1,1,1-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Tetrachloroethane, 1,1,2,2-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Trichloroethane, 1,1,2-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Dichloroethane, 1,1-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Dichloroethylene, 1,1-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Dichlorobenzene, 1,2-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Dichloroethane, 1,2-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Dichloropropane, 1,2-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	1,3,5-trimethylbenzene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Dichlorobenzene, 1,3-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Dichlorobenzene, 1,4-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Acetone	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Benzene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Bromodichloromethane	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Bromoform	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Bromomethane	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Dichloroethylene, 1,2-cis-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Dichloropropene,1,3-cis-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Carbon Tetrachloride	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Chloroethane	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Chloroform	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Dibromochloromethane	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Dichlorodifluoromethane	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260

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Certificate of Analysis

Client: Groupe ABS
850 Industrial Ave (Suite B)
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Attention: Mr. Ata Babakhani
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Invoice to: Groupe ABS

Report Number: 3009744
Date Submitted: 2024-07-26
Date Reported: 2024-08-06
Project: 241324
COC #: 229281

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
463915	Methylene Chloride	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Ethylbenzene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Ethylene dibromide	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Hexane (n)	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Xylene, m/p-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Methyl Ethyl Ketone	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Methyl Isobutyl Ketone	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Methyl tert-Butyl Ether (MTBE)	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Chlorobenzene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Xylene, o-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Styrene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Dichloroethylene, 1,2-trans-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Dichloropropene,1,3-trans-	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Tetrachloroethylene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Toluene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Trichloroethylene	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Trichlorofluoromethane	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463915	Vinyl Chloride	GC-MS	2024-07-31	2024-08-01	ZhL	EPA 8260
463918	Xylene Mixture	GC-MS	2024-08-02	2024-08-02	ZhL	EPA 8260
463920	Dichloropropene,1,3-	GC-MS	2024-08-02	2024-08-02	ZhL	EPA 8260
463924	PHC's F2-Napth	GC/FID	2024-08-02	2024-08-02	H_S	CCME O.Reg 153/04
463925	PHC's F3-PAH	GC/FID	2024-08-02	2024-08-02	H_S	CCME O.Reg 153/04
463950	Cyanide (CN-)	Skalar CN Analyzer	2024-08-02	2024-08-02	Z_S	SM4500-CNC/MOE E3015
463974	Chloride	IC	2024-08-06	2024-08-06	IP	SM 4110
464000	Silver	ICAPQ-MS	2024-08-06	2024-08-06	AaN	EPA 200.8

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Report Number: 3009744
Date Submitted: 2024-07-26
Date Reported: 2024-08-06
Project: 241324
COC #: 229281

CWS for Petroleum Hydrocarbons in Soil - Tier 1

Notes:

1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:

   - nC6 and nC10 response factors within 30% of response factor for toluene;
   - nC10, nC16, and nC34 response factors within 10% of each other;
   - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
   - Linearity is within 15%.

7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Votre # de commande: 3260
Votre # du projet: 3260
Votre # Bordereau: N-A

Attention: Info Enviro

Enviro-Experts
2064 boul Curé-Labelle
Suite 20.03
Laval, QC
CANADA H7T 1V6

Date du rapport: 2020/12/10
Rapport: R2626166
Version: 3 - Révisé

CERTIFICAT D'ANALYSE – RÉVISÉ

 # DE DOSSIER LAB BV: C049079
Reçu: 2020/10/09, 13:45

Matrice: Sol
Nombre d'échantillons reçus: 10

Analyses	Quantité	Date de l' extraction	Date Analysé	Méthode de laboratoire	Méthode d'analyse
CCME F1/BTEX - MeOH sur le terrain (1)	2	N/A	2020/10/21	STL SOP-00131	CCME PHC-CWS m
Hydrocarbures pétroliers (F2-F4) (2)	6	2020/10/20	2020/10/21	STL SOP-00170	CCME PHC-CWS m
Métaux extractibles totaux par ICP	3	2020/10/20	2020/10/21	STL SOP-00069	MA.200–Mét. 1.2 R5 m
Hydrocarbures aromatiques polycycliques	4	2020/10/20	2020/10/21	STL SOP-00178	MA.400–HAP 1.1 R5 m
pH	4	2020/10/20	2020/10/20	STL SOP-00016	MA.100–pH 1.1 R3 m

Remarques:

Laboratoires Bureau Veritas sont certifiés ISO/IEC 17025 pour certains paramètres précis des portées d'accréditation. Sauf indication contraire, les méthodes d'analyses utilisées par Labs BV s'inspirent des méthodes de référence d'organismes provinciaux, fédéraux et américains, tels que le CCME, le MELCC, l'EPA et l'APHA.

Toutes les analyses présentées ont été réalisées conformément aux procédures et aux pratiques relatives à la méthodologie, à l'assurance qualité et au contrôle de la qualité généralement appliqués par les employés de Labs BV (sauf s'il en a été convenu autrement par écrit entre le client et Labs BV). Toutes les données de laboratoire rencontrent les contrôles statistiques et respectent tous les critères de CQ et les critères de performance des méthodes, sauf s'il en a été signalé autrement. Tous les blancs de méthode sont rapportés, toutefois, les données des échantillons correspondants ne sont pas corrigées pour la valeur du blanc, sauf indication contraire. Le cas échéant, sauf indication contraire, l'incertitude de mesure n'a pas été prise en considération lors de la déclaration de la conformité à la norme de référence.

Les responsabilités de Labs BV sont restreintes au coût réel de l'analyse, sauf s'il en a été convenu autrement par écrit. Il n'existe aucune autre garantie, explicite ou implicite. Le client a fait appel à Labs BV pour l'analyse de ses échantillons conformément aux méthodes de référence mentionnées dans ce rapport. L'interprétation et l'utilisation des résultats sont sous l'entière responsabilité du client et ne font pas partie des services offerts par Labs BV, sauf si convenu autrement par écrit. Labs BV ne peut pas garantir l'exactitude des résultats qui dépendent des renseignements fournis par le client ou son représentant.

Les résultats des échantillons solides, sauf les biotes, sont rapportés en fonction de la masse sèche, sauf indication contraire. Les analyses organiques ne sont pas corrigées en fonction de la récupération, sauf pour les méthodes de dilution isotopique.
Les résultats s'appliquent seulement aux échantillons analysés. Si l'échantillonnage n'est pas effectué par Labs BV, les résultats se rapportent aux échantillons fournis pour analyse.
Le présent rapport ne doit pas être reproduit, sinon dans son intégralité, sans le consentement écrit du laboratoire.

Lorsque la méthode de référence comprend un suffixe « m », cela signifie que la méthode d'analyse du laboratoire contient des modifications validées et appliquées afin d'améliorer la performance de la méthode de référence.

Notez: Les données brutes sont utilisées pour le calcul du RPD (% d'écart relatif). L'arrondissement des résultats finaux peut expliquer la variation apparente.

(1) Tous les résultats pour le CCME répondent aux critères exigés, sauf indication contraire dans le rapport. Les méthodes du SP-HCP utilisées par Lab BV respectent tous les

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tel: (514) 448-9001 Fax: (514) 448-9199 Ligne sans frais : 1-877-462-9926

Votre # de commande: 3260
Votre # du projet: 3260
Votre # Bordereau: N-A

Attention: Info Enviro

Enviro-Experts
2064 boul Curé-Labelle
Suite 20.03
Laval, QC
CANADA H7T 1V6

Date du rapport: 2020/12/10
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CERTIFICAT D'ANALYSE – RÉVISÉ

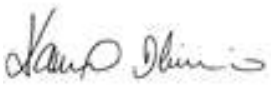
 # DE DOSSIER LAB BV: C049079

Reçu: 2020/10/09, 13:45

éléments imposés par la méthode de référence et les éléments se rapportant à la performance ont été validés. Toutes les modifications ont été validées et jugées équivalentes d'après l'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. La documentation est fournie sur demande. Différence par rapport à la Méthode de référence pour le standard pancanadien relatif aux hydrocarbures pétroliers dans le sol – méthode du 1er volet : les résultats pour les fractions F2/F3/F4 sont rapportés à l'aide d'une extraction à froid par solvant au lieu d'une extraction avec un appareil Soxhlet.

Aucune date d'extraction n'est fournie pour les analyses de F1/BTEX et COV lorsque les sols sont conservés dans le méthanol sur le terrain. La date d'extraction correspond à la date d'échantillonnage à moins d'indication contraire.
(2) Tous les résultats pour le CCME répondent aux critères exigés, sauf indication contraire dans le rapport. Les méthodes du SP-HCP utilisées par Lab BV respectent tous les éléments imposés par la méthode de référence et les éléments se rapportant à la performance ont été validés. Toutes les modifications ont été validées et jugées équivalentes d'après l'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. La documentation est fournie sur demande. Différence par rapport à la Méthode de référence pour le standard pancanadien relatif aux hydrocarbures pétroliers dans le sol – méthode du 1er volet : les résultats pour les fractions F2/F3/F4 sont rapportés à l'aide d'une extraction à froid par solvant au lieu d'une extraction avec un appareil Soxhlet.

Note : Les paramètres inclus dans le présent certificat sont accrédités par le MELCC, à moins d'indication contraire.

clé de cryptage 

Karima Dlimi
Chargée de projets
10 Dec 2020 12:23:11

Veuillez adresser toute question concernant ce certificat d'analyse à votre chargé(e) de projets
Karima Dlimi, B.Sc., chimiste, Chargée de projets
Courriel: Karima.DLIMI@bvlabs.com
Téléphone (514)448-9001 Ext:7066270

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Lab BV a mis en place des procédures qui protègent contre l'utilisation non autorisée de la signature électronique et emploie les «signataires» requis, conformément à l'ISO/CEI 17025. Veuillez vous référer à la page des signatures de validation pour obtenir les détails des validations pour chaque division.

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HYDROCARBURES PÉTROLIERS F1BTEX (SOL)

ID Lab BV				IK5422		IK5424		
Date d'échantillonnage				2020/09/25		2020/09/25		
# Bordereau				N-A		N-A		
	Unités	B	C	F1 CF2	LDR	F2 CF2	LDR	Lot CQ
% HUMIDITÉ	%	-	-	3.9	N/A	12	N/A	N/A
VOLATILS								
Benzène	mg/kg	0.21	0.32	<0.0050	0.0050	<0.010	0.010	2136085
Toluène	mg/kg	2.3	68	<0.050	0.050	<0.10	0.10	2136085
Éthylbenzène	mg/kg	2	9.5	<0.010	0.010	<0.020	0.020	2136085
p+m-Xylène	mg/kg	-	-	0.081	0.040	<0.080	0.080	2136085
o-Xylène	mg/kg	-	-	0.022	0.020	<0.040	0.040	2136085
Xylènes (o,m,p) †	mg/kg	3.1	26	0.10	0.040	<0.080	0.080	2136085
F1 (C6-C10) †	mg/kg	55	55	12	10	<20	20	2136085
F1 (C6-C10) - BTEX †	mg/kg	55	55	12	10	<20	20	2136085
Récupération des Surrogates (%)								
1,4-Difluorobenzène	%	-	-	103	N/A	105	N/A	2136085
4-Bromofluorobenzène	%	-	-	97	N/A	93	N/A	2136085
D10-Ethylbenzène	%	-	-	129	N/A	116	N/A	2136085
D4-1,2-Dichloroéthane	%	-	-	98	N/A	94	N/A	2136085

LDR = Limite de détection rapportée
Lot CQ = Lot contrôle qualité
N/A = Non Applicable
† Accréditation non existante pour ce paramètre

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HAP PAR GCMS (SOL)

ID Lab BV				IK5422	IK5424	IK5426	IK5428		
Date d'échantillonnage				2020/09/25	2020/09/25	2020/09/25	2020/09/25		
# Bordereau				N-A	N-A	N-A	N-A		
	Unités	**B**	**C**	**F1 CF2**	**F2 CF2**	**F3 CF2**	**F4 CF1**	**LDR**	**Lot CQ**
% HUMIDITÉ	%	-	-	3.9	12	4.1	5.4	N/A	N/A
HAP									
Acénaphtène	mg/kg	7.9	96	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Acénaphtylène	mg/kg	0.15	0.15	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Anthracène	mg/kg	0.74	0.74	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Benzo(a)anthracène	mg/kg	0.5	0.96	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Benzo(a)pyrène	mg/kg	0.3	0.3	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Benzo(b)fluoranthène †	mg/kg	0.78	0.96	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Benzo(j)fluoranthène †	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Benzo(k)fluoranthène †	mg/kg	0.78	0.96	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Benzo(c)phénanthrène	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Benzo(ghi)pérylène	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Chrysène	mg/kg	7	9.6	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Dibenzo(a,h)anthracène	mg/kg	0.1	0.1	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Dibenzo(a,i)pyrène	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Dibenzo(a,h)pyrène	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Dibenzo(a,l)pyrène	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	0.10	2135698
7,12-Diméthylbenzanthracène	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Fluoranthène	mg/kg	0.69	9.6	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Fluorène	mg/kg	62	62	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Indéno(1,2,3-cd)pyrène	mg/kg	0.38	0.76	<0.10	<0.10	<0.10	<0.10	0.10	2135698
3-Méthylcholanthrène	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Naphtalène	mg/kg	0.6	9.6	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Phénanthrène	mg/kg	6.2	12	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Pyrène	mg/kg	78	96	<0.10	<0.10	<0.10	<0.10	0.10	2135698
2-Méthylnaphtalène	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	0.10	2135698
1-Méthylnaphtalène	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	0.10	2135698
1,3-Diméthylnaphtalène	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	0.10	2135698
2,3,5-Triméthylnaphtalène	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	0.10	2135698
Récupération des Surrogates (%)									
D10-Anthracène	%	-	-	96	94	96	98	N/A	2135698
D12-Benzo(a)pyrène	%	-	-	94	94	94	96	N/A	2135698
D14-Terphenyl	%	-	-	96	98	96	94	N/A	2135698
D8-Acenaphthylene	%	-	-	90	90	90	94	N/A	2135698
D8-Naphtalène	%	-	-	88	86	86	88	N/A	2135698

LDR = Limite de détection rapportée
Lot CQ = Lot contrôle qualité
N/A = Non Applicable
† Accréditation non existante pour ce paramètre

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HYDROCARBURES PAR GCFID (SOL)

ID Lab BV				IK5423	IK5425	IK5427	IK5428	IK5430	IK5431		
Date d'échantillonnage				2020/09/25	2020/09/25	2020/09/25	2020/09/25	2020/09/25	2020/09/25		
# Bordereau				N-A	N-A	N-A	N-A	N-A	N-A		
	Unités	**B**	**C**	**F1 CF4**	**F2 CF6**	**F3 CF4**	**F4 CF1**	**D1**	**D2**	**LDR**	**Lot CQ**
% HUMIDITÉ	%	-	-	6.0	5.1	3.5	5.4	5.5	5.5	N/A	N/A
HYDROCARBURES PÉTROLIERS											
F2 (C10-C16) †	mg/kg	98	230	<10	<10	<10	<10	<10	<10	10	2135674
F3 (C16-C34) †	mg/kg	300	1700	72	<50	<50	<50	<50	89	50	2135674
F4 (C34-C50) †	mg/kg	2800	3300	100	<50	<50	<50	<50	140	50	2135674
Ligne de base atteinte à C50 †	mg/kg	-	-	OUI	OUI	OUI	OUI	OUI	OUI	N/A	2135674
Récupération des Surrogates (%)											
O-Terphenyl	%	-	-	94	111	110	109	115	117	N/A	2135674

LDR = Limite de détection rapportée
Lot CQ = Lot contrôle qualité
N/A = Non Applicable
† Accréditation non existante pour ce paramètre

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MÉTAUX EXTRACTIBLES TOTAUX (SOL)

ID Lab BV				IK5425	IK5425	IK5427	IK5429		
Date d'échantillonnage				2020/09/25	2020/09/25	2020/09/25	2020/09/25		
# Bordereau				N-A	N-A	N-A	N-A		
	Unités	B	C	F2 CF6	F2 CF6 Dup. de Lab.	F3 CF4	F4 CF2	LDR	Lot CQ
% HUMIDITÉ	%	-	-	5.1	5.1	3.5	5.2	N/A	N/A
MÉTAUX									
Argent (Ag)	mg/kg	20	40	<0.50	<0.50	<0.50	<0.50	0.50	2135778
Arsenic (As)	mg/kg	18	18	<5.0	<5.0	<5.0	<5.0	5.0	2135778
Baryum (Ba)	mg/kg	390	670	31	27	16	33	5.0	2135778
Cadmium (Cd)	mg/kg	1.2	1.9	<0.50	<0.50	<0.50	<0.50	0.50	2135778
Chrome (Cr)	mg/kg	160	160	12	8.1	4.7	12	2.0	2135778
Cobalt (Co)	mg/kg	22	80	5.0	4.4	2.2	4.6	2.0	2135778
Cuivre (Cu)	mg/kg	140	230	12	11	4.9	7.9	2.0	2135778
Etain (Sn)	mg/kg	-	-	<4.0	<4.0	<4.0	<4.0	4.0	2135778
Manganèse (Mn)	mg/kg	-	-	230	250	71	150	2.0	2135778
Molybdène (Mo)	mg/kg	6.9	40	<1.0	<1.0	<1.0	<1.0	1.0	2135778
Nickel (Ni)	mg/kg	100	270	11	9.1	4.4	9.4	1.0	2135778
Plomb (Pb)	mg/kg	120	120	5.8	<5.0	<5.0	<5.0	5.0	2135778
Sélénium (Se)	mg/kg	2.4	5.5	<1.0	<1.0	<1.0	<1.0	1.0	2135778
Zinc (Zn)	mg/kg	340	340	17	15	<10	12	10	2135778

LDR = Limite de détection rapportée
Lot CQ = Lot contrôle qualité
Duplicata de laboratoire
N/A = Non Applicable

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PARAMÈTRES CONVENTIONNELS (SOL)

ID Lab BV		IK5423	IK5424	IK5426	IK5429	
Date d'échantillonnage		2020/09/25	2020/09/25	2020/09/25	2020/09/25	
# Bordereau		N-A	N-A	N-A	N-A	
	Unités	**F1 CF4**	**F2 CF2**	**F3 CF2**	**F4 CF2**	**Lot CQ**
% HUMIDITÉ	%	6.0	12	4.1	5.2	N/A
CONVENTIONNELS						
pH	pH	10.2	8.27	8.71	8.99	2135860

Lot CQ = Lot contrôle qualité
N/A = Non Applicable

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REMARQUES GÉNÉRALES

Hydrocarbures aromatiques polycycliques: Délai maximum de conservation dépassé sur réception.: IK5422
Hydrocarbures pétroliers (F2-F4): Délai maximum de conservation dépassé sur réception.: IK5423
Hydrocarbures aromatiques polycycliques: Délai maximum de conservation dépassé sur réception.: IK5424
Hydrocarbures pétroliers (F2-F4): Délai maximum de conservation dépassé sur réception.: IK5425
Hydrocarbures aromatiques polycycliques: Délai maximum de conservation dépassé sur réception.: IK5426
Hydrocarbures pétroliers (F2-F4): Délai maximum de conservation dépassé sur réception.: IK5427, IK5428
Hydrocarbures aromatiques polycycliques: Délai maximum de conservation dépassé sur réception.: IK5428
Hydrocarbures pétroliers (F2-F4): Délai maximum de conservation dépassé sur réception.: IK5430, IK5431

Rév2 : Ajout de critères
B,C: Ces critères proviennent du " Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, July 1, 2011, Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition" et s'appliquent à un sol de texture grossière.

RES = Residential/Parkland/Institutional Property Use
IND = Industrial/Commercial/Community Property Use

- = Ce composé ne fait pas partie de la réglementation.

HYDROCARBURES PÉTROLIERS F1BTEX (SOL)

Dû à la faible quantité d'échantillon, les limites de détection sont ajustées pour l'échantillon IK5424.

Veuillez noter que les résultats ci-dessus ont été corrigés pour le blanc d'instrument.

Les résultats bruts non-arrondis sont utilisés dans le calcul du total des Xylènes (o,m,p). Ces résultats totaux sont alors arrondis à deux chiffres significatifs.

Délai d'analyse non respecté:IK5422 et IK5424

PARAMÈTRES CONVENTIONNELS (SOL)

Veuillez noter que le valeur de l'echantillon IK5423 est en dehors de la courbe de calibration, mais a l'interieur des limites de linearite.

Les résultats ne se rapportent qu'aux échantillons soumis pour analyse

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RAPPORT ASSURANCE QUALITÉ

Lot AQ/CQ	Init	Type CQ	Groupe	Date Analysé	Valeur	Réc	Unités
2135674	CG2	Blanc fortifié	O-Terphenyl	2020/10/21		102	%
			F2 (C10-C16)	2020/10/21		105	%
			F3 (C16-C34)	2020/10/21		105	%
			F4 (C34-C50)	2020/10/21		105	%
2135674	CG2	Blanc de méthode	O-Terphenyl	2020/10/21		113	%
			F2 (C10-C16)	2020/10/21	<10		mg/kg
			F3 (C16-C34)	2020/10/21	<50		mg/kg
			F4 (C34-C50)	2020/10/21	<50		mg/kg
2135698	JRM	Blanc fortifié	D10-Anthracène	2020/10/21		98	%
			D12-Benzo(a)pyrène	2020/10/21		98	%
			D14-Terphenyl	2020/10/21		96	%
			D8-Acenaphthylene	2020/10/21		92	%
			D8-Naphtalène	2020/10/21		88	%
			Acénaphtène	2020/10/21		85	%
			Acénaphtylène	2020/10/21		92	%
			Anthracène	2020/10/21		94	%
			Benzo(a)anthracène	2020/10/21		91	%
			Benzo(a)pyrène	2020/10/21		87	%
			Benzo(b)fluoranthène	2020/10/21		96	%
			Benzo(j)fluoranthène	2020/10/21		91	%
			Benzo(k)fluoranthène	2020/10/21		92	%
			Benzo(c)phénanthrène	2020/10/21		96	%
			Benzo(ghi)pérylène	2020/10/21		87	%
			Chrysène	2020/10/21		95	%
			Dibenzo(a,h)anthracène	2020/10/21		89	%
			Dibenzo(a,i)pyrène	2020/10/21		65	%
			Dibenzo(a,h)pyrène	2020/10/21		67	%
			Dibenzo(a,l)pyrène	2020/10/21		94	%
			7,12-Diméthylbenzanthracène	2020/10/21		72	%
			Fluoranthène	2020/10/21		90	%
			Fluorène	2020/10/21		90	%
			Indéno(1,2,3-cd)pyrène	2020/10/21		91	%
			3-Méthylcholanthrène	2020/10/21		72	%
			Naphtalène	2020/10/21		85	%
			Phénanthrène	2020/10/21		87	%
			Pyrène	2020/10/21		91	%
			2-Méthylnaphtalène	2020/10/21		83	%
			1-Méthylnaphtalène	2020/10/21		83	%
			1,3-Diméthylnaphtalène	2020/10/21		83	%
			2,3,5-Triméthylnaphtalène	2020/10/21		94	%
2135698	JRM	Blanc de méthode	D10-Anthracène	2020/10/21		102	%
			D12-Benzo(a)pyrène	2020/10/21		102	%
			D14-Terphenyl	2020/10/21		96	%
			D8-Acenaphthylene	2020/10/21		94	%
			D8-Naphtalène	2020/10/21		92	%
			Acénaphtène	2020/10/21	<0.10		mg/kg
			Acénaphtylène	2020/10/21	<0.10		mg/kg
			Anthracène	2020/10/21	<0.10		mg/kg
			Benzo(a)anthracène	2020/10/21	<0.10		mg/kg
			Benzo(a)pyrène	2020/10/21	<0.10		mg/kg
			Benzo(b)fluoranthène	2020/10/21	<0.10		mg/kg
			Benzo(j)fluoranthène	2020/10/21	<0.10		mg/kg

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RAPPORT ASSURANCE QUALITÉ (SUITE)

Lot AQ/CQ	Init	Type CQ	Groupe	Date Analysé	Valeur	Réc	Unités
			Benzo(k)fluoranthène	2020/10/21	<0.10		mg/kg
			Benzo(c)phénanthrène	2020/10/21	<0.10		mg/kg
			Benzo(ghi)pérylène	2020/10/21	<0.10		mg/kg
			Chrysène	2020/10/21	<0.10		mg/kg
			Dibenzo(a,h)anthracène	2020/10/21	<0.10		mg/kg
			Dibenzo(a,i)pyrène	2020/10/21	<0.10		mg/kg
			Dibenzo(a,h)pyrène	2020/10/21	<0.10		mg/kg
			Dibenzo(a,l)pyrène	2020/10/21	<0.10		mg/kg
			7,12-Diméthylbenzanthracène	2020/10/21	<0.10		mg/kg
			Fluoranthène	2020/10/21	<0.10		mg/kg
			Fluorène	2020/10/21	<0.10		mg/kg
			Indéno(1,2,3-cd)pyrène	2020/10/21	<0.10		mg/kg
			3-Méthylcholanthrène	2020/10/21	<0.10		mg/kg
			Naphtalène	2020/10/21	<0.10		mg/kg
			Phénanthrène	2020/10/21	<0.10		mg/kg
			Pyrène	2020/10/21	<0.10		mg/kg
			2-Méthylnaphtalène	2020/10/21	<0.10		mg/kg
			1-Méthylnaphtalène	2020/10/21	<0.10		mg/kg
			1,3-Diméthylnaphtalène	2020/10/21	<0.10		mg/kg
			2,3,5-Triméthylnaphtalène	2020/10/21	<0.10		mg/kg
2135778	NET	Blanc fortifié	Argent (Ag)	2020/10/21		97	%
			Arsenic (As)	2020/10/21		102	%
			Baryum (Ba)	2020/10/21		99	%
			Cadmium (Cd)	2020/10/21		99	%
			Chrome (Cr)	2020/10/21		101	%
			Cobalt (Co)	2020/10/21		100	%
			Cuivre (Cu)	2020/10/21		101	%
			Etain (Sn)	2020/10/21		106	%
			Manganèse (Mn)	2020/10/21		105	%
			Molybdène (Mo)	2020/10/21		99	%
			Nickel (Ni)	2020/10/21		101	%
			Plomb (Pb)	2020/10/21		108	%
			Sélénium (Se)	2020/10/21		101	%
			Zinc (Zn)	2020/10/21		94	%
2135778	NET	Blanc de méthode	Argent (Ag)	2020/10/21	<0.50		mg/kg
			Arsenic (As)	2020/10/21	<5.0		mg/kg
			Baryum (Ba)	2020/10/21	<5.0		mg/kg
			Cadmium (Cd)	2020/10/21	<0.50		mg/kg
			Chrome (Cr)	2020/10/21	<2.0		mg/kg
			Cobalt (Co)	2020/10/21	<2.0		mg/kg
			Cuivre (Cu)	2020/10/21	<2.0		mg/kg
			Etain (Sn)	2020/10/21	<4.0		mg/kg
			Manganèse (Mn)	2020/10/21	<2.0		mg/kg
			Molybdène (Mo)	2020/10/21	<1.0		mg/kg
			Nickel (Ni)	2020/10/21	<1.0		mg/kg
			Plomb (Pb)	2020/10/21	<5.0		mg/kg
			Sélénium (Se)	2020/10/21	<1.0		mg/kg
			Zinc (Zn)	2020/10/21	<10		mg/kg
2135860	DY3	MRC	pH	2020/10/20		100	%
2135860	DY3	Blanc fortifié	pH	2020/10/20		103	%
2136085	ABE	Blanc fortifié	1,4-Difluorobenzène	2020/10/21		102	%
			4-Bromofluorobenzène	2020/10/21		98	%

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RAPPORT ASSURANCE QUALITÉ (SUITE)

Lot AQ/CQ	Init	Type CQ	Groupe	Date Analysé	Valeur	Réc	Unités
			D10-Ethylbenzène	2020/10/21		111	%
			D4-1,2-Dichloroéthane	2020/10/21		101	%
			Benzène	2020/10/21		73	%
			Toluène	2020/10/21		112	%
			Éthylbenzène	2020/10/21		109	%
			p+m-Xylène	2020/10/21		106	%
			o-Xylène	2020/10/21		98	%
			Xylènes (o,m,p)	2020/10/21		102	%
			F1 (C6-C10)	2020/10/21		90	%
2136085	ABE	Blanc de méthode	1,4-Difluorobenzène	2020/10/21		101	%
			4-Bromofluorobenzène	2020/10/21		98	%
			D10-Ethylbenzène	2020/10/21		111	%
			D4-1,2-Dichloroéthane	2020/10/21		101	%
			Benzène	2020/10/21	<0.0050		mg/kg
			Toluène	2020/10/21	<0.050		mg/kg
			Éthylbenzène	2020/10/21	<0.010		mg/kg
			p+m-Xylène	2020/10/21	<0.040		mg/kg
			o-Xylène	2020/10/21	<0.020		mg/kg
			Xylènes (o,m,p)	2020/10/21	<0.040		mg/kg
			F1 (C6-C10)	2020/10/21	<10		mg/kg
			F1 (C6-C10) - BTEX	2020/10/21	<10		mg/kg

MRC: Un échantillon de concentration connue préparé dans des conditions rigoureuses par un organisme externe. Utilisé pour vérifier la justesse de la méthode.

Blanc fortifié: Un blanc, d'une matrice exempte de contaminants, auquel a été ajouté une quantité connue d'analyte provenant généralement d'une deuxième source. Utilisé pour évaluer la précision de la méthode.

Blanc de méthode: Une partie aliquote de matrice pure soumise au même processus analytique que les échantillons, du prétraitement au dosage. Sert à évaluer toutes contaminations du laboratoire.

Surrogate: Composé se comportant de façon similaire aux composés analysés et ajouté à l'échantillon avant l'analyse. Sert à évaluer la qualité de l'extraction.

Réc = Récupération

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PAGE DES SIGNATURES DE VALIDATION

Les résultats analytiques ainsi que les données de contrôle-qualité contenus dans ce rapport furent vérifiés et validés par les personnes suivantes:

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